

PATLITE®

New Frontiers in Safety, Security and Comfort.



Product Index

B	BD	133
	BDV	141
	BK	135
	BKV	143
	BM	131

C	CLB	125
	CLE	126
	CLF	123
	CLM	127
	CLT	124
	CT	148

E	EDLM	77
	EDWM	77
	EWB	137
	EWHS	137

F	FV-127JP	145
----------	----------	-----

H	HP	109
	HSST	72

K	KG	110
	KHE	82
	KJ	119
	KJB	119
	KJPV	151
	KJS	117
	KJSB	117
	KP-A	105
	KPE	90
	KUS	115
	KX	87

L	LAS	128
	LCE	35
	LCE-U	35
	LCS	37
	LE	39
	LE-C3	21
	LE-D3	17
	LE-K3	19
	LEL	41
	LES	39
	LGE	73
	LHE	59
	LHE-C3	21
	LHE-D3	17
	LKEH	75
	LME	51
	LME-U	51
	LME-S	53
	LME-Q	53
	LMS	57
	LU5	43
	LU7	61
	LU7-V1	67
	LU7-XE	68

M	ME-A	29
	MES-A	29
	MP	31
	MPS	31
	MV	147

N	NE	81
	NHC	27
	NHE	27
	NHM	27

P	PES	83
	PEW	83
	PHC	26
	PHE	25
	PHU	23
	PS	85
	PSF	85
	PSX	86
	PVW	149

R	RES-A	114
	RFT	153
	RFV	155
	RH-A	100
	RHE	94
	RK-A	100
	RHE	94
	RLE	95
	RLR	97
	RT	159
	RU	99
	RS	99
	RV-A	112

S	SE-D	47
	SKC-A	111
	SKH-A	103
	SKHB-1006D	106
	SKHE	93
	SKH-EA	101
	SKL-A	107
	SKLB-A	108
	SKP-A	104
	SKV-A	113
	STD	49

W	WD	15
	WE	33
	WEP	33
	WEP-C3	21
	WEP-D3	17
	WEP-K3	19
	WG	157
	WH-A	102
	WK-A	102
	WME-A	69
	WSST	71

X	XL	89
	XP	88

	Optional Parts	161
	Replacement Bulbs	165
	Wiring Diagrams	166
	Sound Selection Chart	178

PATLITE is Number 1 for Signaling Technology.

Combining innovative LED technology and advanced optical design, PATLITE's signaling products deliver the highest level of illumination and reliability with protection up to IP-65*. Featuring a broad selection of models, sizes, designs and optional accessories, you can find the best solution for specific requirements. PATLITE's quality standard guarantees long-term customer satisfaction in diversified applications.

There is no better choice for signaling products than PATLITE for now and the future. PATLITE is number one in the world for signaling solutions.

Note: *Some models are not IP 65-rated.

Outstanding Illumination

PATLITE's high-intensity LEDs and innovative lens design ensures outstanding illumination and exceptional brightness from any direction and distance.

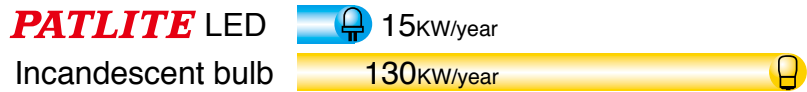


Patented Reflection System

PATLITE's patented reflection system is optimized for full illumination over the entire lens.

Low Power Consumption

PATLITE's high-intensity LEDs are eight times more efficient than conventional incandescent bulbs.



Note: For one LED module and one bulb with continuous operation

Long Service Life and Reliability

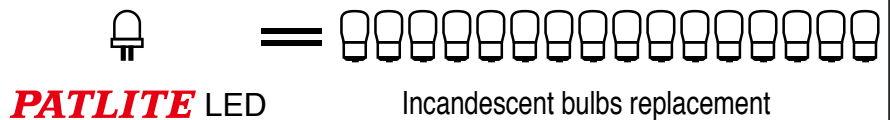
PATLITE's high-intensity LEDs guarantees an extended service life of 100,000 hours. That is more than 11 years of continuous operation!



Note: Both with continuous operation

Reduced Maintenance and Labor

PATLITE's high-intensity LEDs drastically reduces costly maintenance requirements for replacing bulbs. The life of PATLITE's high intensity LEDs is over 16 times longer than conventional incandescent bulbs.



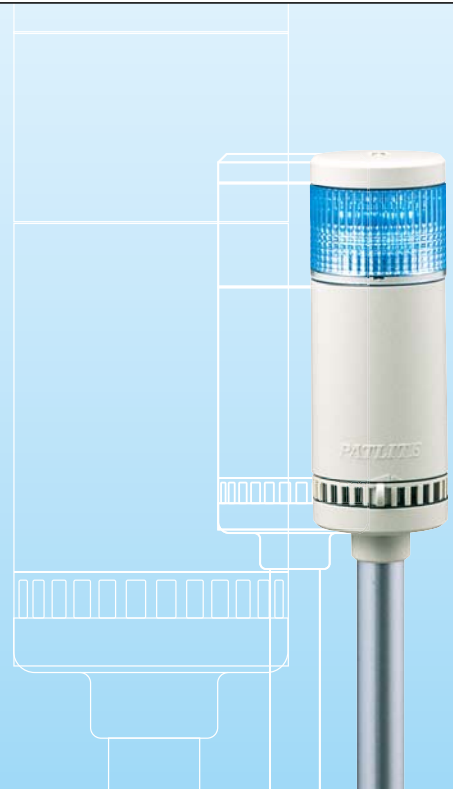
Environmentally Responsible

Many PATLITE products use lead-free technology, and are RoHS compliant. In addition, long-life LEDs reduce waste compared to conventional incandescent bulbs.



Rugged and Robust Design

PATLITE's design with a center shaft in its signal tower ensures the structural integrity of the modules, promising protection against vibration and mishandling. Yet, it offers modularity and flexibility for changing the LED modules. The smooth-finished body surface prevents collection and adhesion of dust, making our products easy to clean. PATLITE's signaling products are constructed using world-class quality materials to withstand harsh production environments.

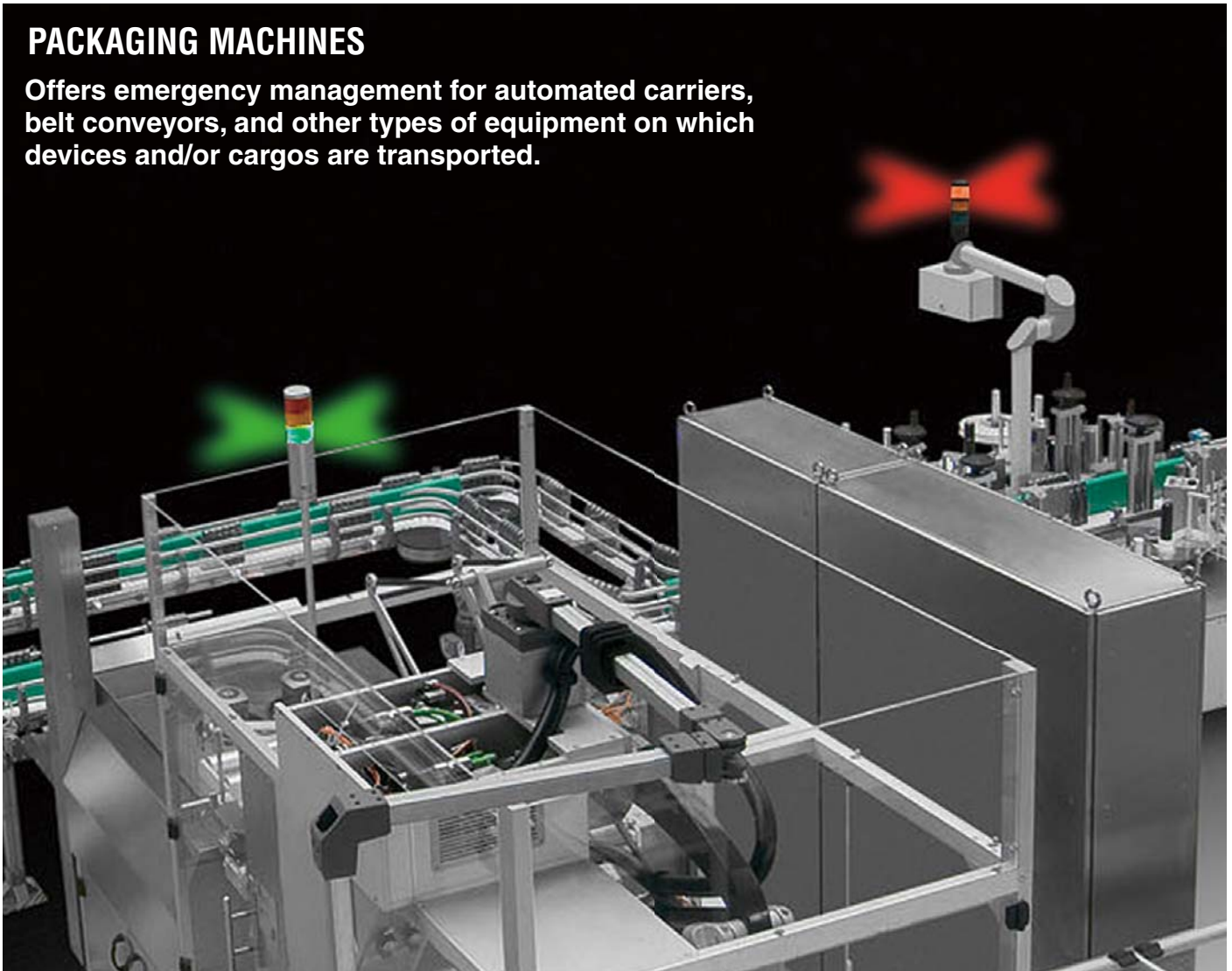


INTRODUCTION TO VISUAL & AUDIBLE SIGNAL APPLICATIONS

Since 1947, PATLITE has been at the forefront in developing and innovating a variety of signaling products. PATLITE's extensive product range covers highly advanced LED signal towers, beacons, audible alarms, annunciators, and work lights for industrial automation and security applications. As a top brand manufacturer, we aspire to become the global standard for signaling products.

PACKAGING MACHINES

Offers emergency management for automated carriers, belt conveyors, and other types of equipment on which devices and/or cargos are transported.

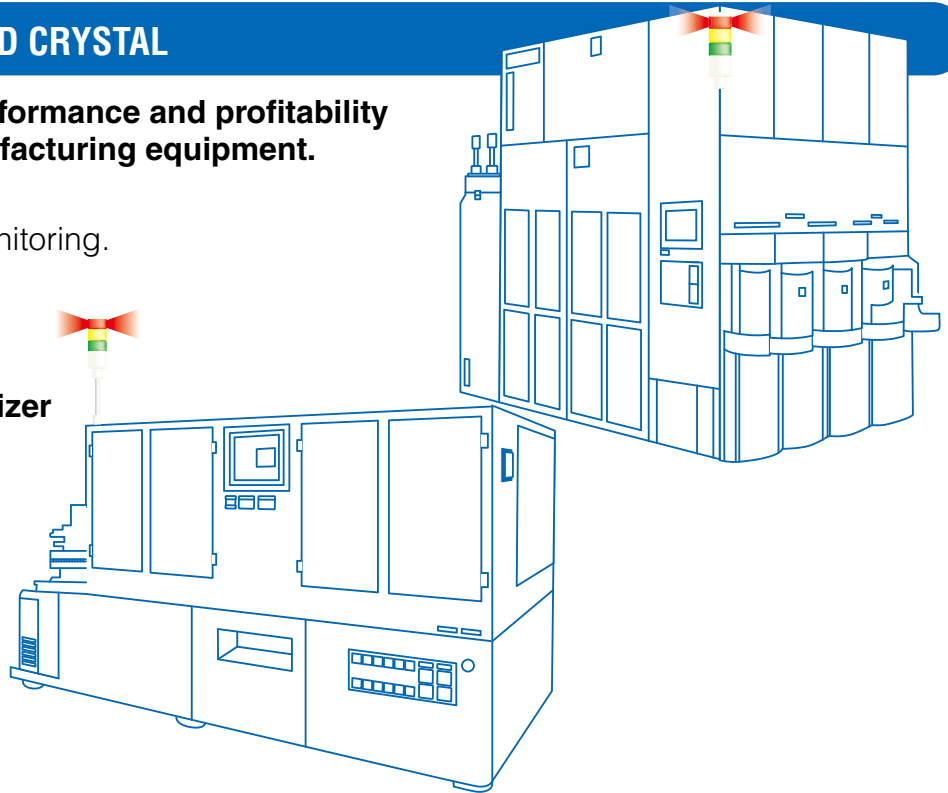


SEMICONDUCTOR / LIQUID CRYSTAL

Achieve high levels of performance and profitability with semiconductor manufacturing equipment.

Real-time tool-condition monitoring.

Signal tower
Signal horn
Recordable voice synthesizer
Voice synthesizer

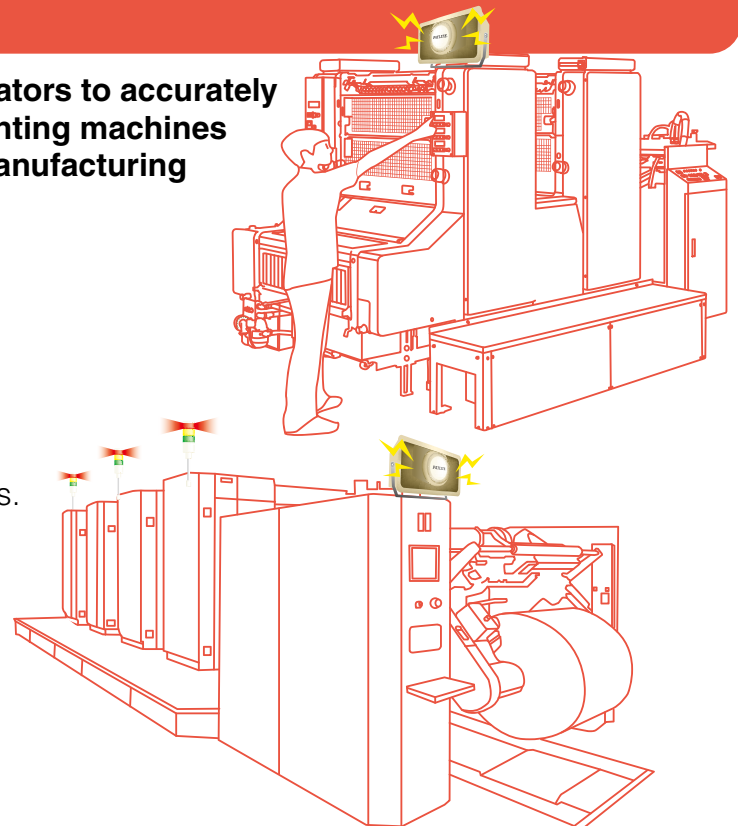


PRINTING

Ensures safe operation by allowing operators to accurately ascertain the operating conditions of printing machines and sounding an alarm in the event of manufacturing losses or machine failure.

Enables operators of printing machines running at a high speed to quickly recognize manufacturing losses and equipment malfunctions by providing them with guidance on resolving paper-feed failures, replenishing ink at suitable times, and other such matters.

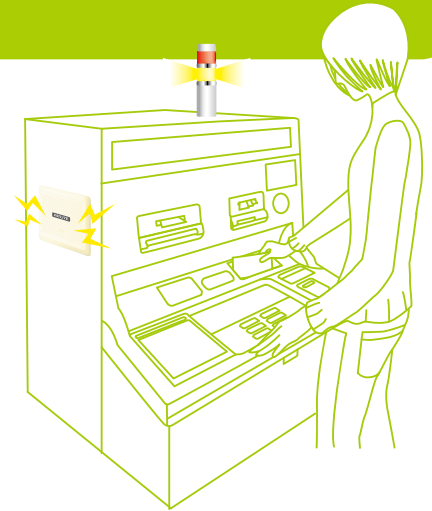
Signal tower
Signal horn
Recordable voice synthesizer
Voice synthesizer



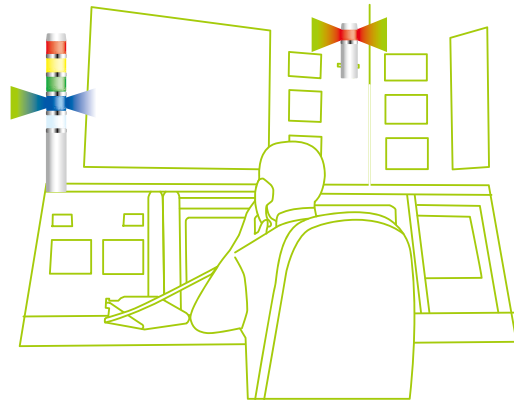
INFORMATION COMMUNICATION

Enables appropriate actions to be taken at call centers, control rooms, and other information control centers.

Indicates the existence of incoming calls, system errors, and the like at call centers and other facilities. Also enables malfunctions at remote locations to be quickly recognized and resolved by displaying such information on the displays for systems installed in control rooms at transport facilities and other sites.



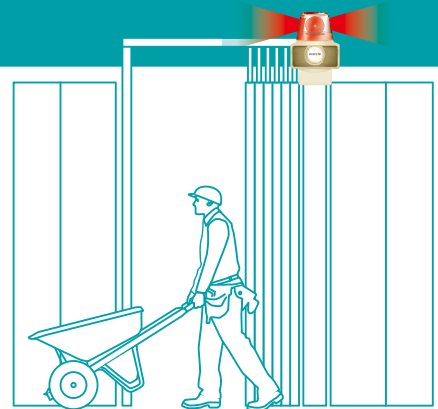
Signal tower
Signal horn
Recordable voice synthesizer
Voice synthesizer



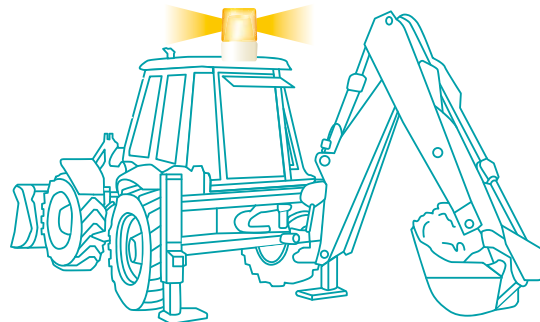
CONSTRUCTION MACHINES

Prevents accidents involving construction machinery and other accidents occurring at dangerous locations such as construction sites.

Helps to mitigate the effects of blind spots on large construction vehicles and machines with the use of LED beacons and other alarm devices. Our broad lineup of products, such as loud-voice synthesizers, ensures that workers are aware of alarms even on noisy construction sites.



Signal tower
Signal horn
Recordable voice synthesizer
Voice synthesizer



Index of ingress protection defined by CEI / IEC 529

IP

First digit: Protection level against human body and solid foreign objects

Code No.

Second digit: Protection level against water intrusion

No protection.	0	No protection.
Protection against solid objects larger than $\varnothing 50\text{mm}$.	1	Protection against vertical falling drops of water.
Protection against solid objects larger than $\varnothing 12\text{mm}$.	2	Protection against dripping water when tilted up to 15°
Protection against solid objects larger than $\varnothing 2.5\text{mm}$.	3	Protection against spraying water.
Protection against solid objects larger than $\varnothing 1\text{mm}$.	4	Protection against splashing water.
Protection against dust-limited ingress (dust-protected).	5	Protection against water jets.
Total protection against dust (dust-tight).	6	Protection against heavy seas.
	7	Protection against the effects of immersion.
	8	Protection against submersion.

Symbols Used in this Catalog

Light Source

LED



High intensity LEDs with 100,000 hours service life and low power consumption.

Xenon



Xenon bulb provides high visibility.

Halogen



Small, bright, and long-life halogen bulb.

Bulb



Economical. Readily available from PATLITE.

Sound

Electronic Sound 1

Alarm sound: Easy to recognize and gentle on the ears.

85dB at 1m

Max. sound pressure level will change based on the recorded contents such as melodies, alarms or messages.

4 Channels

The total recording time can be divided by the number of channels for making several different messages.



Messages conveyed audibly.



Easy to hear alarms, chimes and melodies, but gentle on the ears.

PATLITE's audible alarm products may contain copyrighted music or songs. Patlite has not applied for permission to use the music or songs outside Japan, so please contact your local copyright association before using certain audible products. This disclaimer may not apply if the copyright association has not claimed the copyright of the music or songs in a particular country or jurisdiction.

Types of Protection

Drip-proof

Sealed housing protects against water, including rain. Suitable for outdoor use.

Water-proof

Provides imperviousness even to direct water jet.

Dust-proof

Highly sealed design keeps dust and dirt out. Suitable for outdoor use.

Explosion-proof

Meets the explosion- proof standard.

Specifications

IP65

Classification of dust-proof, jet flow-proof. Refer to the list above for details.

NPN/PNP Open collector

Open collector allows direct connection to a PLC without using contacts.

Dual-face reflector

The symmetrical dual-face reflectors emit a powerful rotating light.



Use of lead-free solders in consideration of the environment.








RoHS compliant products.



CAUTION

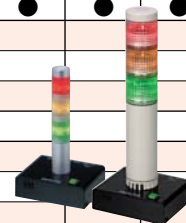
To ensure correct use of these products, read the Instruction Manual prior to use. Failure to follow all safeguards can result in fire, electric shock or other accidents. Specifications are subject to change without notice.

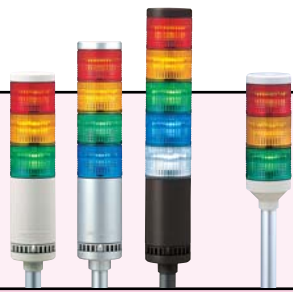
Signal Tower

																
Size(Diameter)		25mm	30mm	40mm				50mm				57mm				
Model		MES	ME	MPS	MP	LCE	LCE-U	LCS	LCS-U	LU5	LU5-U	LE	LEL	LES	SE-D	STD
Look at page		29-30		31-32		35-36		37-38		43-44		39-40		47-48		49-50
Voltage	24V DC	●●●	●●●							●●●	●●●					
	12V AC/DC											●●●				
	12V AC												●●●			
	24V AC/DC			●●●	●●●	●●●	●●●	●●●	●●●			●●●	●●●	●●●	●●●	●●●
	90-250V AC					◎	◎									
	100V AC											●			●	●
	120V AC											●	●		●	●
	220V AC											●			●	●
230V AC												●		●		
Body Color	Ivory White					●		●		●		●	●	●	●	
	Silver	●	●	●	●		●		●		●					
	Black															●
Flashing Function						●	●			●	●	●	●		●	●
Alarm Function	dB					85	85			85	85	85	85		85	
	Tones					2	2			2	2	2	2		2	
Open Collector	PNP															
	NPN	●	●										●			
	PNP & NPN			●	●	●	●	●	●	●	●	●		●	●	
IP Protection		42	42 (65)	65	65	65	65	54	54	65	65	54	54	54	54	20
Prewired	Flying leads	●	●	●	●	●		●				●	●	●	●	●
	Cabletyre			▲	▲	▲	3meter		3meter			▲				
Industrial Standard	CE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	RoHS	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	UL, c-UL	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	NEMA					▲	▲	●	●							

Network

Model		LE-D3	LHE-D3	WEP-D3	LE-C3	LHE-C3	WEP-C3	LE-K3	WEP-K3	PHU-3	NHE-3FB	NHC-3FB	NHM-3FB	PHE-3FBE1	PHC-100A
Look at page		17-18			21-22			19-20		23-24	27-28			25	26
Voltage	24V DC	●	●	●	●	●	●	●	●						
Network	DeviceNet	●	●	●											
	CompoNet							●	●						
	CC-Link				●	●	●								
Connect	Ethernet										●	●	●	●	●
	USB					◎	◎			●					
Body Color	RS-232C													●	●
	Ivory White	●	●	●	●	●	●	●	●	●		●	●	●	●
	Silver										●				
Mount	Black														
	Pole	●			●			●							
	Direct		●			●									
Alarm Function	Wall			●		●		●							
	dB	85	90	90	85	90	90	85	90		80	80	80		
	Tones	2	2	1	2	2	1	2	1		2	2	2		
Light	Bulb														
	LED	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Open Collector	PNP														
	NPN														
	PNP & NPN														
IP Protection		23	65	23	23	65	23	23	23	20					
Industrial Standard	CE														
	RoHS														
	UL, c-UL													●	





60mm					70mm											100mm		
LME	LME-U	LME-N	LME-S	LME-Q	LMS	LMS-U	LU7-02S	LU7-02SU	LU7-02SK	LU7-02	LU7-02U	LU7-02K	LU7-M2	LU7-M2U	LU7-M2K	LHE	LGE	
51-52		53-54			57-58		61-62									59-60	73-74	
			●●●●	●●●●			●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●					
●●●●	●●●●	●●●●			●●●●	●●●●									○	○	○	
●	●		●	●													●	●
●	●	●															●	●
●	●		●	●													●	●
●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●
90	90	90	90	90			90	90	90	90	90	90	90	90	90	90	90	90
2	2	2	2	2			2	2	2	2	2	2	2	2	2	2	2	2
			▲	▲														
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	54
●		●	●	●	●	●												●
●	●	●	▲	▲	▲	▲	●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Signal Light

Size(Diameter)	57mm	82mm					100mm		162mm		
Model	NE	PS	PSF	PSX	PEW	PES	KHE	KX	XP	XL	KPE
Look at page	81	85		86	83-84		82	87	88	89	90
Voltage	12V DC	●	●					●	●	●	
	24V DC				●	●	●	●	●	●	
	24V AC				●	●					
	48V DC							●			
	100V AC				●	●			●	●	●
	200V AC				●	●					
220V AC				●	●			●	●	●	●
Body color	Ivory White	●	●	●	●	●	●	●	●	●	●
	Silver				●(SP)	▲				●	●
Flashing Function(per minute)	ON	ON	60	60-180	60-180	60-180	3patten	30-90	110	70-90	
Alarm Function	dB										
	Tones	●			85	1					
Light	Bulb	●	●		●	●	●				●
	LED	●									
	Xenon				●			●	●	●	
Mounting Place	Inside	●	●	●	●	●	●	●	●	●	●
	Outside		●	●	●	●	●	●	●	●	●
Open Collector					NPN	NPN					
IP Protection	65	23	23	23	54	55	23	23	23		23
	With Gasket		55	55	55		55	55			
Prewired	Cabtyre		●	●	●	●	●	●	●	●	●
	Terminal	●									
Drip-proof		●	●	●	●	●	●	●	●	●	●
Industrial Standard	CE	●	●	●	●	●	●	●	●	●	●
	RoHS	●			●	●	●	●	●	●	●
	UL, c-UL				●	●	●	●	●	●	●

LED Lights

		100mm	200mm	300mm			100mm	200mm	300mm	Φ 71		Φ 85	
Model		CLF		CLT			CLB			CLE		CLM	LAS
		CLF10	CLF20	CLT30-24S	CLT30-24L	CLT30-24T	CLB-24N1	CLB-24N2	CLB-24N	CLE-24	CLE-24N	CLM-24	LAS-M1VK
Look at page		123		124			125			126		127	128
Voltage	24V DC	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
	12/24V DC												⊙
Light color	Daylight color	●	●	●	●	●	●	●	●	●	●	●	●
	Yellow	●	●									●	●
	Red	●	●				●	●	●			●	●
	Warm White	●	●									●	
	Blue												●
Housing Material	Aluminum	●	●	●	●	●				●	●	●	
	Polycarbonate						●	●	●				●
Cover	Glass			●	●	●				●	●	●	
	Polycarbonate	●	●										●
IP Protection		67	67	66G/67G	66G/67G	66G/67G	42	42	42	65F	65F	67F	
Proof	Water	●	●	●	●	●							
	Oil			●	●	●							
	Dust	●	●	●	●	●							
Industrial Standard	CE	●	●	●	●	●	●	●	●	●	●	●	
	RoHS	●	●	●	●	●	●	●	●	●	●	●	
	UL, c-UL	●	●									●	

Wall Mount Signal Tower

Model		WE/WEP		WME
Look at page		33-34		69-70
Voltage	24V AC/DC	● ● ●		● ● ●
	90-250V AC			⊙
Body Color	Ivory White	●		●
	Silver	●		
Flashing Function		●		●
Alarm Function	dB	90		90
	Tones	2		2
Open Collector	PNP & NPN	●		●
IP Protection		65 (54 with alarm)		65 (54 with alarm)
Industrial Standard	CE	●		●
	RoHS	●		●
	UL, c-UL	●		●

Audible Alarms & Annunciators

dB		85		87	90			95		
Model		BM	MV	BDV	BD	RFT	WG	BK	CT	RFV
Look at page		131-132	147	141-142	133-134	153-154	157-158	135-136	148	155-156
Voltage	12V DC		●●●	●●●	●●●			●●●	●●●	
	24V DC		●●●	●●●	●●●	●●●		●●●	●●●	●●●
	12-24V AC/DC									
	24V AC/DC	●●●								
	48V DC									
	100V AC	●		●	●	●	●	●		●
	120V AC	▲								
	200V AC									
220V AC	●		●	●	●		●		●	
Body Color	Ivory White			●	●	●	●	●		●
	Black	●	●	●					●	
Sound	Patterns	2			8	8		8	●	●
	Melodies				32	32			●	●
	Chimes	2							●	●
Voice	Recordable						●			●
	Channel		4	15			3		2	15
	Duration		32sec.	63sec.			32sec.		16sec.	63sec.
Open Collector	PNP				●					
	NPN		●	●	●	●	●	●	●	●
	PNP & NPN	●								
IP Protection		34	20	54	54	54		54	53	54
Prewired	Flying leads		●							
	Cabletyre					●				●
Industrial Standard	CE	●		●	●	●		●		●
	RoHS			●	●	●		●		●
	UL, c-UL			●	●	●				●



dB		95		105							
Model		KJPV	BKV	EWV	EWHS	PVW	LKEH-F□	LKEH-FV	RT	FV-127JP	
Look at page		151-152	143-144	137-138		149-150	75-76		159-160	145-146	
Voltage	12V DC		●●●								
	24V DC		●●●				●●●	●●●	●●●	●●●	
	12-24V AC/DC			●●●	●●●	●●●					
	24V AC/DC	●●●									
	48V DC			○	○	○					
	100V AC	●	●	●	●	●	●	●	●		
	120V AC										
	200V AC			○	○	○					
220V AC	●	●				●	●	●			
Body Color	Ivory White	●	●	●	●	●	●	●	●		
	Black		●	Red/Yellow	Red/Yellow						
Sound	Patterns			8	4		8		4		
	Melodies										
	Chimes			32	32		32		32		
Voice	Recordable							●		●	
	Channel	4	31			4		31		127	
	Duration	16sec.	63sec.			60sec.		63sec.		480sec.	
Open Collector	PNP										
	NPN	●	●	●	●	●	●	●	●	●	
	PNP & NPN										
IP Protection		23	54	53(65)	53(65)	53	53	53	23(65)		
Prewired	Flying leads										
	Cabletyre	●		●	●	●	●	●	●	●	
Industrial Standard	CE		●	●	●	●	●	●		●	
	RoHS		●				●	●		●	
	UL, c-UL									●	

Signal Tower



Wireless Data Acquisition System

Wireless LED Signal Towers
for Data Acquisition
and Remote MonitoringIEEE802.15.4
2.4GHz

AirGRID

Data Acquisition and Remote Monitoring via
Wireless Network of PATLITE Signal Towers

PATLITE wireless add-on modules and receivers make PATLITE signal towers capable of sending electrical signals over a wireless network to a data center. PATLITE' s unique wireless add-on modules and receivers are a practical and economical solution for data acquisition, machine status remote monitoring, and supervisory control of industrial processes. The AirGRID is an effective solution for lean manufacturing and the visual factory. PATLITE wireless add-on modules comply with IEEE802.15.4, operating in the 2.4 GHz band.

1)Simply add to a PATLITE signal tower

Operating conditions of Patlite signal towers installed on production machines or process systems can be transmitted wirelessly to a data center. Data acquisition and remote monitoring are possible instantly and economically.

2)Wireless technology eliminates tedious wire installation

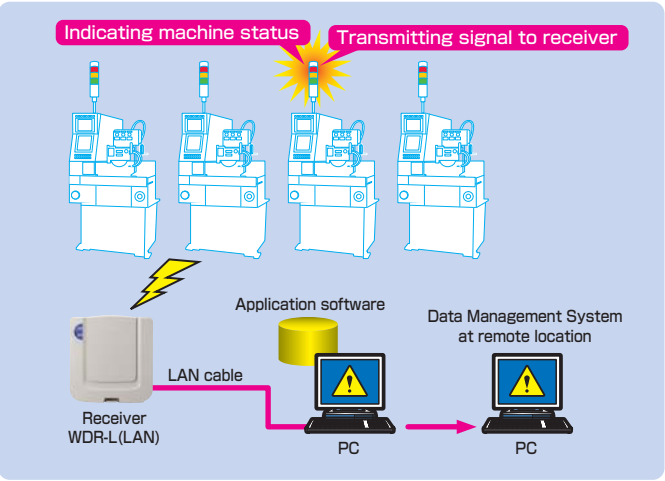
Wireless add-on modules source power from PATLITE signal towers and transmit electrical signals to the data center. Therefore wiring, component installation and related costs are minimal.

3)Multi-hopping topology and high transmitting reliability

With wireless multi-hopping topology, which can minimize potential transmitting failures or errors, a high level of stable operation and transmitting reliability are expected.

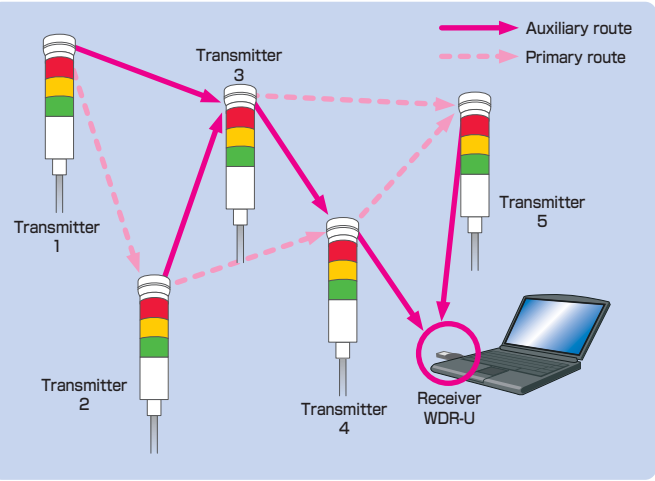
Typical Application

Multiple stand-alone machines can be networked by the AirGrid for data archiving and remote monitoring. The status and condition of the machines are indicated by the PATLITE signal towers.





Wireless Concept IEEE 802.15.4 2.4GHz

- Wireless hopping/routing functions and mesh topology can make flexible and reliable wireless network configurations possible.
- Data archived by the AirGRID is stored in a file format CSV which any off-the-shelf data management software e.g, SCADA can handle.



Specifications

Transmitters

	WDT-6M	WDT-5E
Model		
Applicable Signal Tower	LME series	LE series (only 24VDC)
Rated Voltage	24VDC no polarity	
Volatge Range	20.4VDC - 26.4VDC	
Current Consumption	70mA	
Operating Temperature	-10°C~60°C (No condensation)	
Environment Humidity	85% RH or less	
Environment Temperature	-20°C~70°C (No freezing)	
Installation	Upright position (indoor use only)	
IP Protection	Determined by PATLITE signal towers	
Dimension	φ 65xheight 36.9mm	φ 65xheight 38.5mm
Mass	55 grams	



(*)Ask PATLITE sales representatives for specific models of PATLITE signal towers which are compatible with the WDT-6M and WDT-5E.

Features

Wireless Standard	IEEE 802. 15. 4
Frequency Band	2400MHz-2483.5MHz (16 channels by 5MHz step from 2405MHz)
Installation	up to 20 units (*1)
Wireless Output	Max. 1mW
Compliance	FCC, R&TTE, CE, RoHS

(*1) Numbers of units to install are determined by wireless environment and installation location

Receivers

	WDR-L (LAN)	WDR-U (USB)
Model		
Rated Voltage	24VDC (Power supply not included)	5VDC(with USB bus power)
Volatge Range	20.4VDC-26.4VDC	4.5VDC-5.5VDC
Current Consumption	150mA	70mA
Operating Temperature	-10°C~60°C (No condensation)	5°C~40°C (No condensation)
Environment Humidity	85% RH or less	85% RH or less
Environment Temperature	-20°C~70°C (No freezing)	-5°C~50°C (No condensation)
Installation	horizontal , wall mount (indoor use only)	USB port of PC (no USB hub) (indoor use only)
IP Protection	IP20	-
Dimension	height 131mmxwidth 125mmxdeep 38.5mm	height 11mmxwidth 28.5mmxDeep 66.5m
Mass	165g	15g



Application software(supplied free) WDS-AU

The software WDS-AU stores datas which the WDR-L/U receives from WDT-6M/5E in the file format of CSV.

DeviceNet Supported

LHE-D3 / LE-D3 / WEP-D3

DeviceNet™

LED



90dB at 1m
(LE type: 85dB at 1m)

Electronic Sound 2
(WEP type: 1 sound)

IP23



LHE-D3 type

LE-D3 type

WEP-D3 type

DeviceNet Supported Signal Tower for Open-field Network

- Single Cable: Uses DeviceNet cable only, which transfers power and signals for control.
- Easy Connection: Directly connect up to 64 linked DeviceNet units with DeviceNet cable, without I/O terminals.
- Required Device: DeviceNet-type controller (i.e. DeviceNet Master).
- Data Storage: Addresses set by dip switch.
- Light Pattern: Continuous only, no flashing.
- B type: Built-in alarm; LHE: 90dB at 1m (adjustable), LE: 85dB at 1m (adjustable), WEP: 90dB at 1m.
- Sound Pattern: LHE / LE: Intermittent tone, Alarm 1: short beep, Alarm 2: long beep. WEP: 1 alarm, continuous tone only.
- Interchangeable modules*: No re-wiring even after installation, except for WEP type.

*Refer to the standard non-field bus model for details.

ø70 IP23

**LHE-D3
LHE-D3B**

- Sound Pattern: Short beep or long beep up to 90dB at 1m.
- Installation: Upright and indoors only.

ø50 IP23

Direct Mount
**LE-D3
LE-D3B**

Pole Mount
**LE-D3P
LE-D3BP**

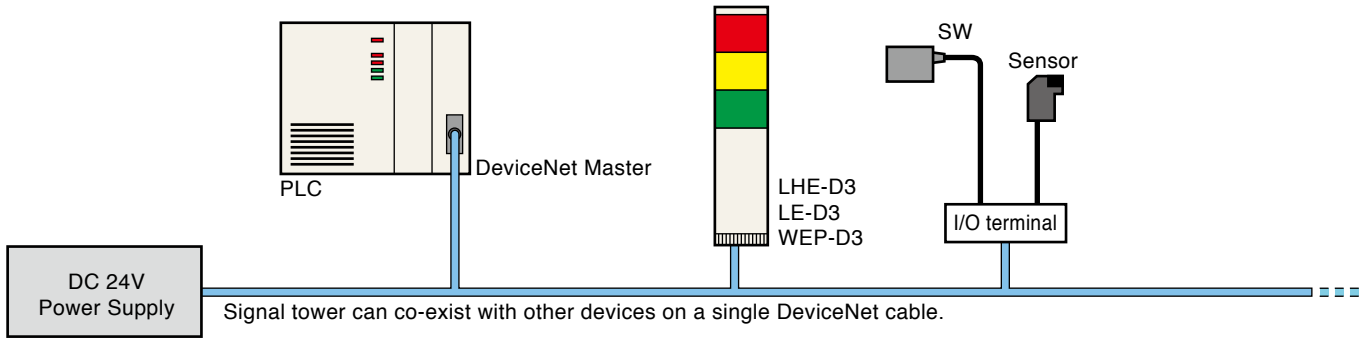
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- LE-D3B: Intermittent tone, up to 85dB at 1m.
2 Selections: 1) fast beep; 2) slow beep
- Installation: Indoors and upright only.
- Options Available: Direct or pole mount.

**Profile
37.5mm**

**WEP-D3
WEP-D3B**

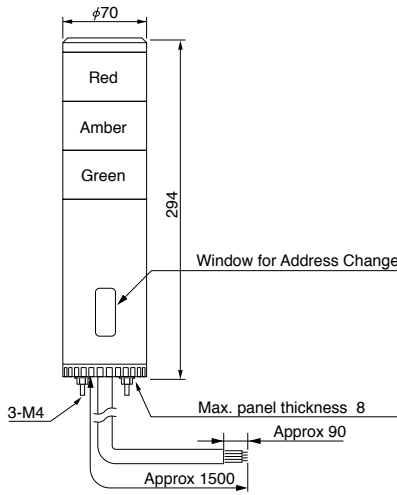
- Clear Vertical Cut Lens: For enhanced illumination over a wide perspective.
- Sound Pattern: Continuous tone up to 90dB at 1m.
- Installation: Indoors only, vertical or horizontal, either direction except for alarm (B) type: alarm exit must face downward.

Application Example



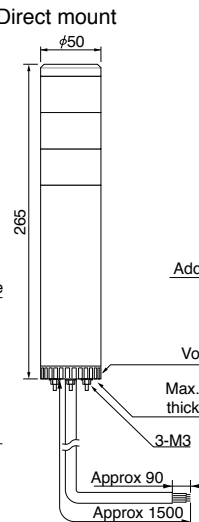
Dimensions

LHE-D3

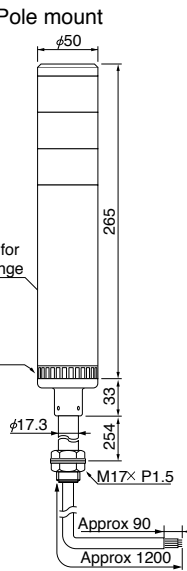


LE-D3

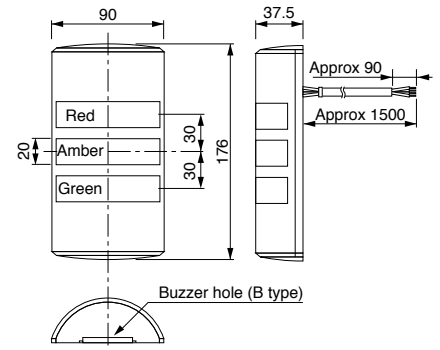
Direct mount



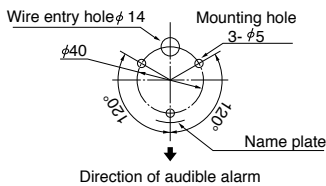
Pole mount



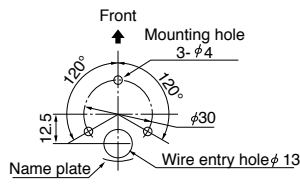
WEP-D3



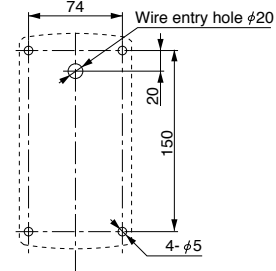
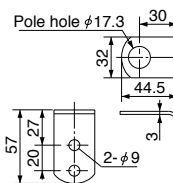
Mounting Dimension



Mounting Dimension



Side-Mount Bracket



Buzzer type must be installed vertically with the buzzer outlet downward. (mm)

Wire Color	Signal
RED	V+ (24V DC)
WHITE	CAN - H
(NONE)	DRAIN
BLUE	CAN - L
BLACK	V- (0V)

LHE-D3 / LE-D3 / WEP-D3 Type

Number of Stacks	Model	Audible Alarm	Signal Line	Current Consumption		
				DeviceNet PCB (Max.)	LED Element (Max.)	Audible Alarm (Max.)
3 Lights Red Amber Green	LHE-D3	N/A	V+ (24V DC), CAN - H, DRAIN, CAN - L, V- (0V)	60mA	50mA (Red, Amber) 40mA (Green)	—
	LHE-D3B	available			—	40mA
	LE-D3W/LE-D3P	N/A			—	—
	LE-D3BW/LE-D3BP	available			25mA (Red, Amber) 20mA (Green)	40mA
	WEP-D3	N/A			—	—
	WEP-D3B	available			30mA (Red, Amber) 25mA (Green)	40mA

Electric power is supplied by DeviceNet cable. Patlite's standard signal tower for field bus application is the 3-light style.

CompoNet Supported

LE-K3 / WEP-K3



LED



90dB at 1m
(LE type: 85dB at 1m)

Electronic Sound 2
(WEP type: 1 sound)

IP23



LE-K3 type

WEP-K3 type

DeviceNet Supported Signal Tower for Open-field Network

- Single Cable: Uses DeviceNet cable only, which transfers power and signals for control.
- Easy Connection: Directly connect up to 64 linked DeviceNet units with DeviceNet cable, without I/O terminals.
- Required Device: CompoNet-type controller (i.e. CompoNet Master).
- Data Storage: Addresses set by dip switch.
- Light Pattern: Continuous only, no flashing.
- B type: Built-in alarm; LHE: 90dB at 1m (adjustable), LE: 85dB at 1m (adjustable), WEP: 90dB at 1m.
- Sound Pattern: LHE / LE: Intermittent tone, Alarm 1: short beep, Alarm 2: long beep. WEP: 1 alarm, continuous tone only.
- Interchangeable modules*: No re-wiring even after installation, except for WEP type.

*Refer to the standard non-field bus model for details.

Ø50 IP23

Direct Mount

**LE-K3
LE-K3B**

Pole Mount

**LE-K3P
LE-K3BP**

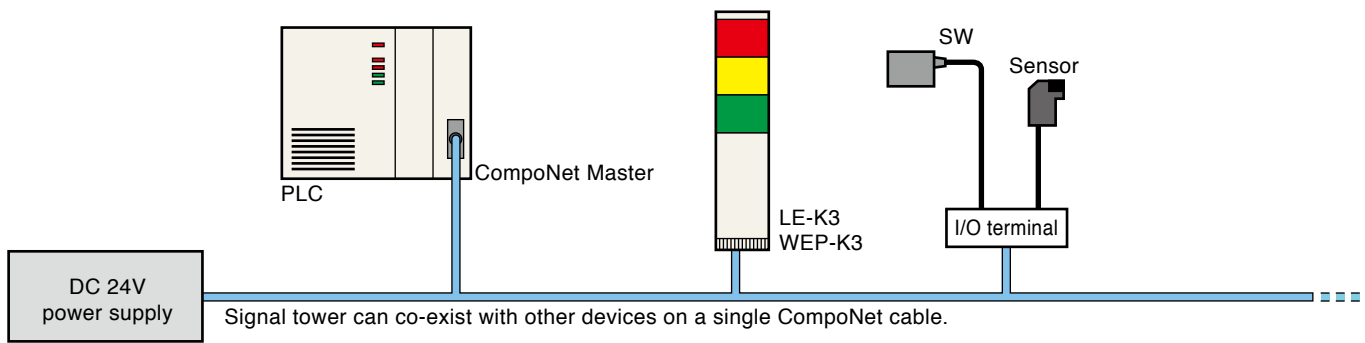
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- LE-D3B: Intermittent tone, up to 85dB at 1m.
2 Selections: 1) fast beep; 2) slow beep
- Installation: Indoors and upright only.
- Options Available: Direct or pole mount.

**Profile
37.5mm**

**WEP-K3
WEP-K3B**

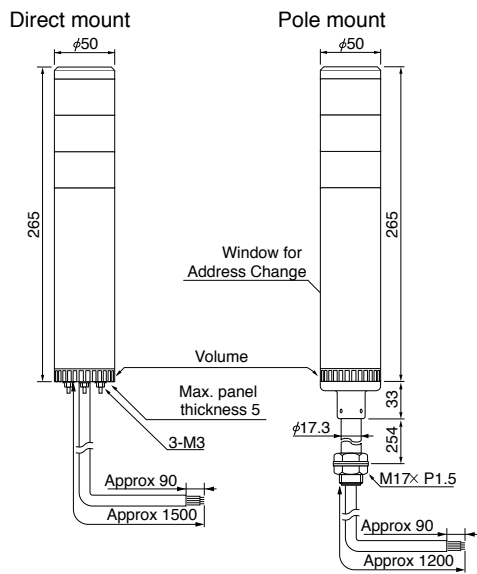
- Clear Vertical Cut Lens: For enhanced illumination over a wide perspective.
- Sound Pattern: Continuous tone up to 90dB at 1m.
- Installation: Indoors only, vertical or horizontal, either direction except for alarm (B) type: alarm exit must face downward.

Application Example

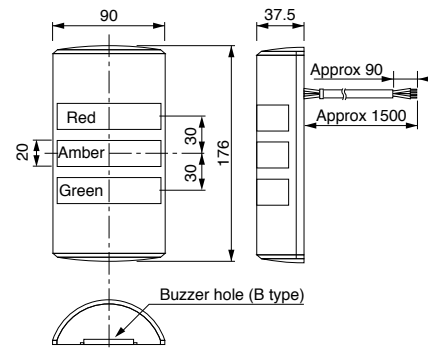


Dimensions

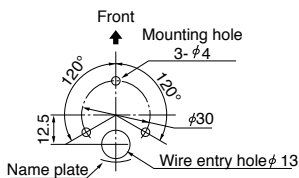
LE-K3



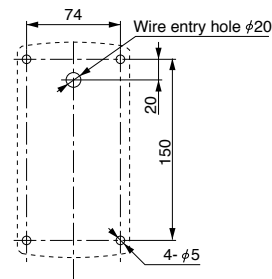
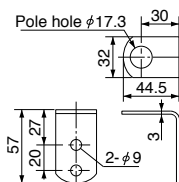
WEP-K3



Mounting Dimension



Side-Mount Bracket



Buzzer type must be installed vertically with the buzzer outlet downward. (mm)

Wire Color	Signal
BROWN	BS ⁺ (24V DC)
BLACK	BS ⁻ (0V)
WHITE	BDH (H)
BLUE	BDL (L)

LE-K3 / WEP-K3 Type

Number of Stacks	Model	Audible Alarm	Signal Line	Power Line	Current Consumption			
					CompoNet PCB (Max.)	LED Element (Max.)	Audible Alarm (Max.)	
3 Lights (Red Amber Green)	LE-K3W/LE-K3P	N/A	BDH BDL	BS ⁺ (24V DC) BS ⁻ (0V)	60mA	25mA (Red, Amber) 20mA (Green)		—
	LE-K3BW/LE-K3BP	available				30mA (Red, Amber) 25mA (Green)		40mA
	WEP-K3	N/A						—
	WEP-K3B	available						40mA

Electric power is supplied by CompoNet cable. Patlite's standard signal tower for field bus application is the 3-light style.

CC-Link Supported

LHE-C3 / LE-C3 / WEP-C3

CC-Link

LED



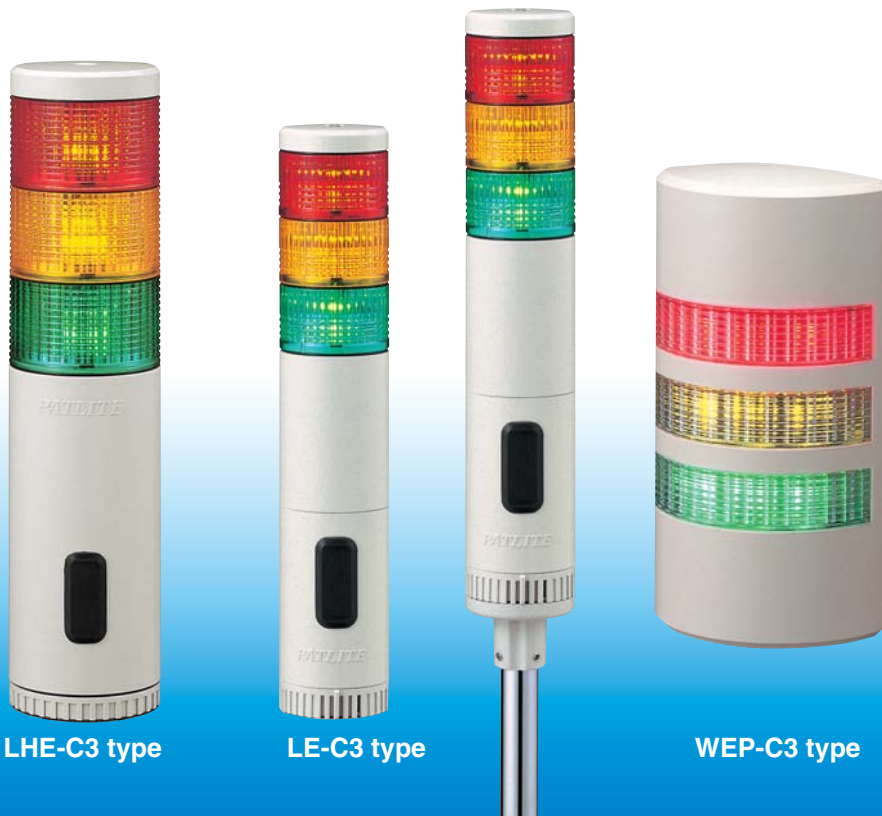
90dB at 1m

(LE type: 85dB at 1m)

Electronic Sound 2

(WEP type: 1 sound)

IP23



LHE-C3 type

LE-C3 type

WEP-C3 type

CC-Link supported Signal Tower for Open-field Network

- Single Cable: Regulates electrical power and control signals.
- Easy Connection: Direct connection to a linked CC-Link interface with CC-Link cable, without I/O terminals, up to 64 units.
- Required Device: CC-Link-type controller (i.e. CC-Link master).
- Data Storage: Addresses set by dip switch.
- Lighting Pattern: Continuous only, no flashing.
- B type: Built-in alarm; LHE: 90dB at 1m (adjustable), LE: 85dB at 1m (adjustable), WEP: 90dB at 1m,
- Interchangeable modules*: No re-wiring even after installation, except for WEP type.

*Refer to the standard non-field bus model for details.

ø70 IP23

LHE-C3
LHE-C3B

- Sound Pattern: Intermittent tone, up to 90dB at 1m.
- 2 Selections: 1) fast beep; 2) slow beep
- Installation: Upright and indoors only.

ø50 IP23

Direct Mount
LE-C3W
LE-C3BW
Pole Mount
LE-C3P
LE-C3BP

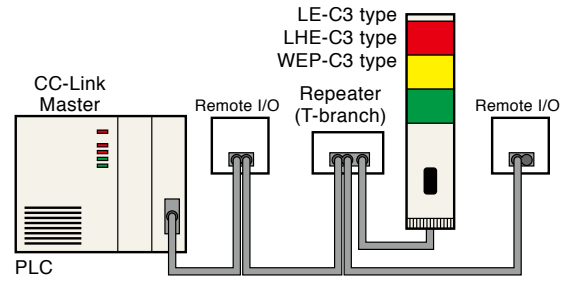
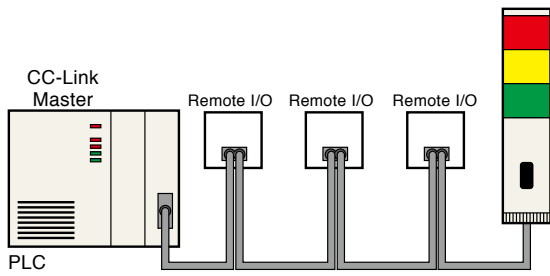
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- Sound Pattern: Intermittent tone, up to 85dB at 1m.
- 2 Selections: 1) fast beep; 2) slow beep
- Installation: Indoors and upright only.
- Options Available: Direct or pole mount.

Profile 37.5mm

WEP-C3
WEP-C3B

- Clear Vertical Cut Lens: For enhanced illumination over a wide perspective.
- Sound Pattern: Continuous up to 90dB at 1m.
- Installation: Indoors only, vertical or horizontal, either direction except for alarm (B) type: alarm exit must face downward.

Application Example



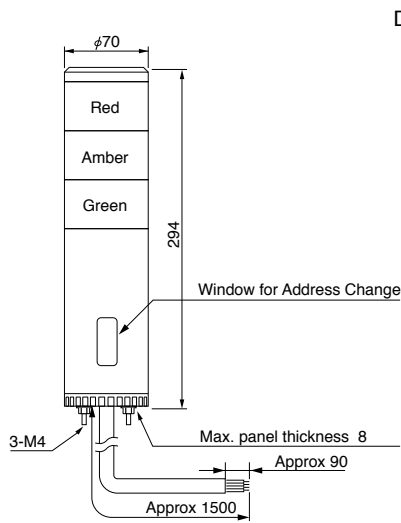
CC-Link stack light without terminating resistor can be branched using a terminal block in case a repeater is not used.

Dimensions

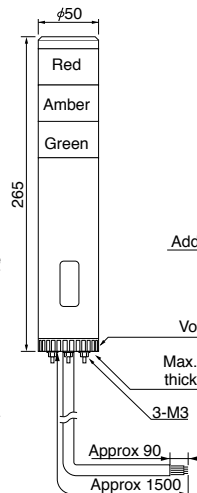
LHE-C3
LHE-CT3

LE-C3
LE-CT3

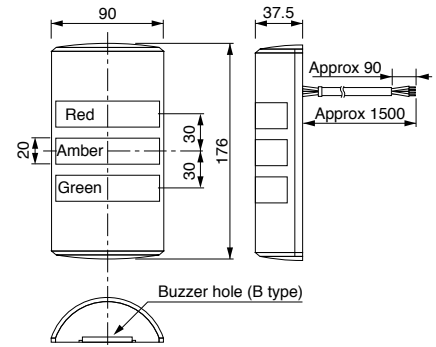
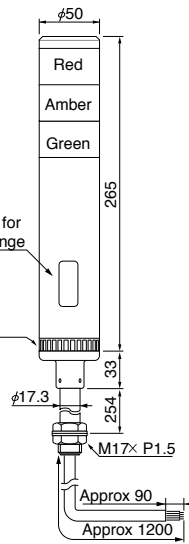
WEP-C3
WEP-CT3



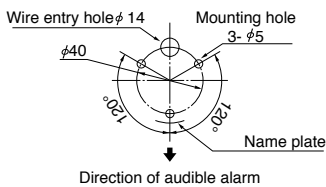
Direct mount



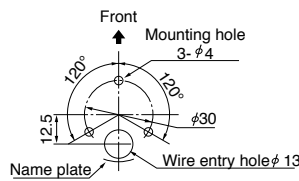
Pole mount



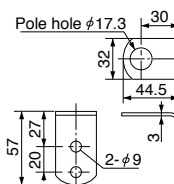
Mounting Dimension



Mounting Dimension



Side-Mount Bracket



Buzzer type required to be installed vertically with the buzzer outlet downward. (mm)

C3: Without terminal resistor
CT3: Built-in terminal resistor

Wire Color	Signal
BLUE	DA
WHITE	DB
YELLOW	DG
(NONE)	SLD

LHE-C3 / LE-C3 / WEP-C3 Type

Number of Stacks	Model	Audible Alarm	Signal Line	Current Consumption		
				CC-Link PCB (Max.)	LED Element (Max.)	Audible alarm (Max.)
3 Lights Red Amber Green	LHE-C(T)3	N/A	DA, DB, DG, SLD	50mA	25mA (Red, Amber) 20mA (Green)	—
	LHE-C(T)3B	available			40mA	
	LE-C(T)3W/LE-C(T)3P	N/A			—	
	LE-C(T)3BW/LE-C(T)3BP	available			40mA	
	WEP-C(T)3	N/A			—	
	WEP-C(T)3B	available			40mA	

Patlite's standard signal tower for field bus application is the 3-light style.

PHU-3

Signal Tower

Available
in Spring 2010

LED



∅25

IP20

USB



<Standard Color>
PHU-3-RYG...Red,Amber,Green
PHU-3-RYB...Red,Amber,Blue

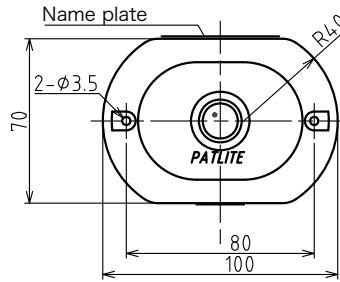
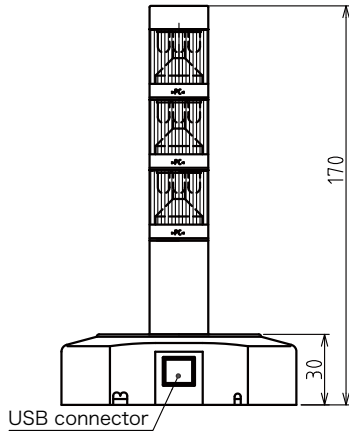


Lighting

USB Controlled LED Signal Tower

- Signal Tower can be controlled directly by PC through USB.
- 25mm Signal Tower with three LED module colors.
- The power source of PHU is USB bus power.

Model		PHU-3
General	Rated Voltage	5V DC (USB bus power)
	Operating Voltage Range	DC4.4V~5.25V
	Rated Consumption Current (Power Source)	25mA in a standby mode Max.230mA in an operating mode
	Operating Temperature Range	-10~+55°C
	Relative Temperature	Under 90%RH (Non condensing)
	Intensity of Electric Noise	Equivalent to VCCI Class-B
	Indicating Lamp	Installation
Protection Rating		IP20
Insulation Resistance		To be measured by an insulation measuring device of 500V DC between the terminals and the chassis. :More than 1MΩ
Withstanding Voltage		500V AC being applied between the terminals and the chassis for 1 minute. Not breaking insulation
Interface	Mass	0.18kg
	Input-Output	Input:USB Output:Lighting(Red,Amber,Green,Blue) of Indicatin Lamp
	Physical Specification	Connector for input:Series-B receptacle(compliant with USB Rev.1.1)



(mm)

● Logical Specification

Action	Bit data
Lighting"Red"	00000001
Lighting"Amber"	00000010
Lighting"Green"	00000100
Lighting"Blue"	00001000
Lighting"Red" and "Amber" Lighting out"Green" and "Blue"	00000011
Lighting"Red" and "Green" Lighting out"Amber" and "Blue"	00000101
Lighting"Amber" and "Green" Lighting out"Red" and "Blue"	00000110
Lighting"Amber" and "Blue" Lighting out"Red" and "Green"	00001010
Lighting"Red", "Amber", "Green" and "Blue"	00001111
Lighting out"Red", "Amber", "Green" and "Blue"	00000000

● Transfer Mode

Bulk Transfer

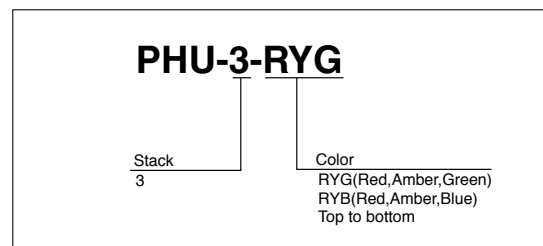
● Data Error Detection Criterion

By CRC(Cyclic redundancy check)

● Packet Command

- Token Packet(SOF,SETUP,OUT,IN)
- Data Packet
- Handshake Packet

How to Order



PHE-3FBE1

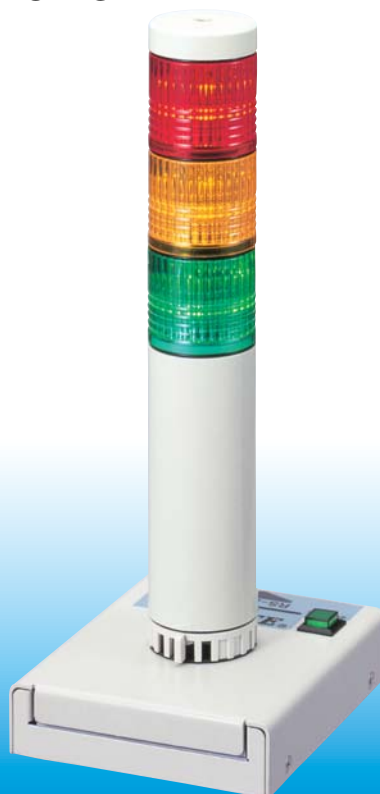
RS-232C Controlled Signal Tower



85dB at 1m

2 Sound Patterns

∅40



This product requires the knowledge to program the ASCII command to output through RS-232C port.

Signal Tower can be controlled directly by PC through RS-232C.

Alarm is adjustable up to 85dB at 1m

- High-volume alarms (two patterns) can be heard even in a noisy factory.

Bright LED signal tower

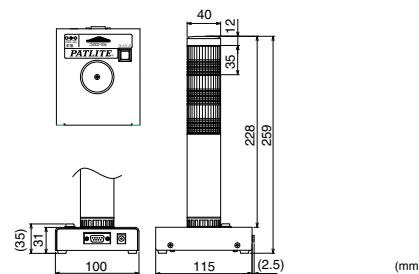
- PATLITE's original double reflection system with its exclusive hybrid prism-cut lens and 3 color LED modules create distinctive illumination that is bright and even.

Light and alarm functions can be turned off by pressing the reset switch on the base.

Specifications

	Model	PHE-3FBE1
Communication Settings	Communication Interface	RS-232C (Based on EIA)
	Communication Method	Half Duplex, Start-Stop, Asynchronous
	Communication Speed	9,600bps
	Data Bit	8bit
	Stop Bit	1bit
	Parity Bit	None
	Flow Control	None
	I/O Port	D-Sub9P Male Connector
Signal Tower Section	Flashing Rate	60 times per minute
	Sound Level	Adjustable from 70 to 85dB (at 1m)
	Sound Alarm	2 alarms (Slow intermittent tone, fast intermittent tone)
Base Section	Dimensions	100×259×115mm
	Supply Power Source	AC Adaptor (Sold separately)
	Power Consumption	7.1W
	Operating Temperature Range	0-40°C
	Humidity	20-80%RH (w/o dew condensation)

Dimensions

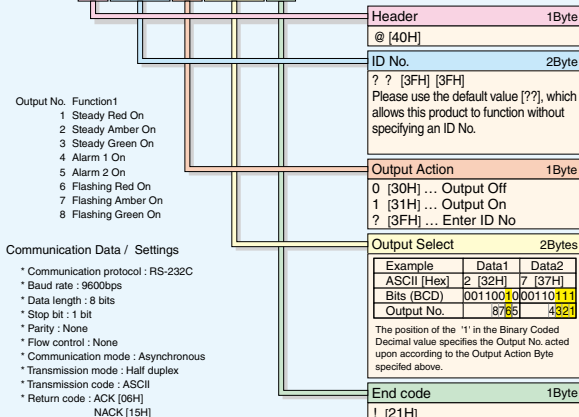


RS-232C straight through cable is not included.

Control of PHE-3FBE1 / PHC-100A

ASCII Command String

@ ?? 1 2 7 !



• The above example shows how to turn on the following Output Nos : 6, 3, 2, 1

PHC-100A

Interface Converter

Contact Output **8** RS232C

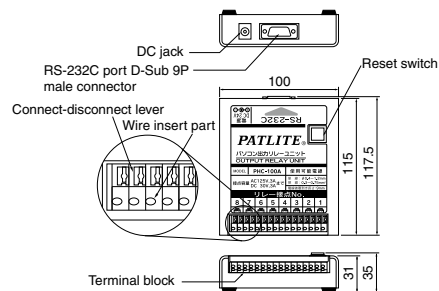


This product requires the knowledge to program the ASCII command to output through RS-232C port.

The PHC-100A Interface Converter can be connected to the RS-232C port on your programmed PC to control most PATLITE products, both visual and audible.

- 16 terminals provide 8 isolated non-voltage contact outputs.
- Reset pushbutton provided to reset all outputs to the off state.

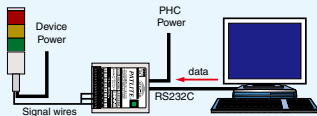
Dimensions



Specifications

	Model	PHC-100A
Communication Settings	Communication Interface	RS-232C (Based on EIA)
	Communication Method	Half Duplex, Start-Stop, Asynchronous
	Communication Speed	9,600bps
	Data Bit	8bit
	Stop Bit	1bit
Base Section Contacts	Parity Bit	none
	Flow Control	none
	I/O Port	D-Sub9P Male connector
Base Section	Contact Style	Non Voltage Contact
	Number of Contacts	8
	Output Contact Capacity	AC125V 3A/DC30V 3A
	Connector	Screwless terminal
Base Section	Applicable Wire	Solid Wire 0.4-1.2mm (AWG26-18) Stranded Wire 0.3-0.75mm (AWG22-20)
	Dimensions	100(W)x31(H)x115(D)mm
	Supply Power Source	AC adaptor (Sold separately)
	Power Consumption	4W
	Operating Temperature Range	0-40°C
	Humidity	85%RH or less (w/o dew condensation)

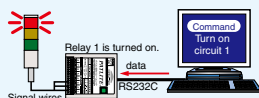
●Basic Connections



●Application Examples

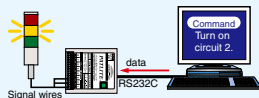
Transfer data to turn on relay circuit 1 from PC.

Data @??10!



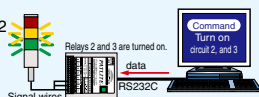
Transfer data to turn on relay circuit 2 from PC.

Data @??102!



Transfer data to turn on relay circuits 2 and 3 from PC.

Data @??106!

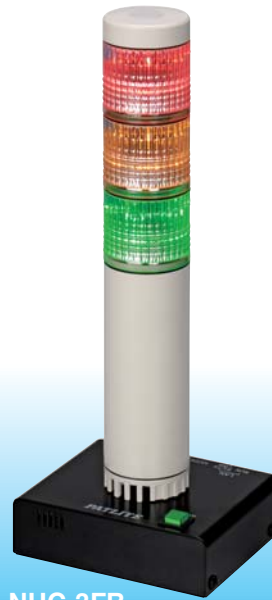


PHC-100A

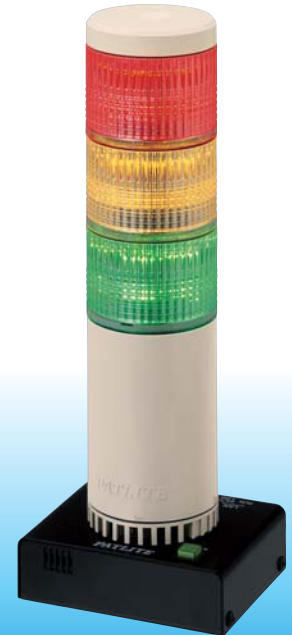
Network Monitor Signal Tower



NHE-3FB



NHC-3FB



NHM-3FB

setting by **WEB** **SNMP V1-2** **E-mail** **RSH** **PING 16** **Ethernet**

Ø25 / Ø40 / Ø60
(NHE-3FB) (NHC-3FB) (NHM-3FB)

Function of SNMP V1 is limited.

Included: AC Adaptor

Warning light, buzzer and E-mail report to network manager immediately when network event occurs!

Correspond to SNMP Protocol

- Cooperate with various kinds of network devices that support SNMP protocol
- Possible to send SNMP Trap

Exclusive MIB loaded

- Network Monitor Signal Tower loads the exclusive MIB to control itself with SNMP

Ping Monitoring

- Monitor the health of (up to) 16 network devices using Ping

Corresponds to RSH Command

- Warning light, flashing, buzzer can be easily activated by RSH command

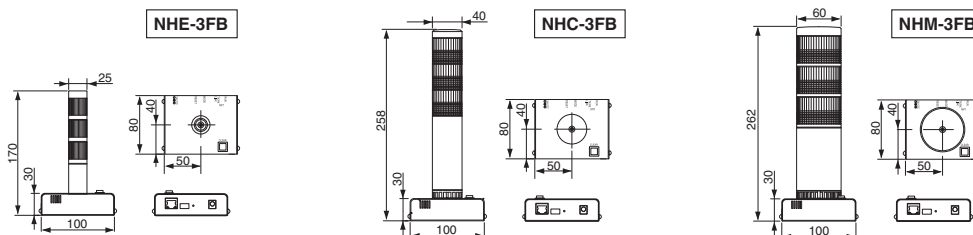
Prevent unauthorized access and information leakage

- By cooperating with an Asset Management Software, warning light, flashing and buzzer can be activated as warning when unauthorized access is attempted

Specifications

Model		NHE-3FB	NHC-3FB	NHM-3FB
Network Protocols	Physical Layer	Ethernet (Based on IEEE802.3)		
	Data Link Layer	CSMA/CD		
	Network Layer	IP-ICMP-ARP		
	Transport Layer	TCP-UDP		
	Application Layer	HTTP-SMTP-SNMP-TFTP-RSH-SNTP		
General Function	I/O	10BASE-T/100BASE-TX (Selected automatically)		
	Reset Switch	Mounted on the base (All functions are turned off when pressed)		
	Self-diagnostic Function	Available		
	Number of Stacks	3		
Signal Tower Section	Color Order	Optional (Can be changed after purchase)		
	LED / Lens Color	LED: Red, Amber, Green Lens color: Clear		
	Flashing Rate	60 times or 120 times per minute (Controlled by command)		
	Sound Level	Adjustable 70 or 80dB (at 1m)		
	Sound Alarm	2 alarms (Slow intermittent tone, fast intermittent tone)		
Base Section	Supply Power Source	AC Adaptor (Included)		
	Supply Power	Unit: 24V DC / AC adaptor: 100-240V AC		
	Operating Temperature Range	0-50		
	Humidity	20-80%RH (w/o dew condensation)		
Dimensions		100x80x170mm	100x80x258mm	100x80x262mm
Mass (w/o AC Adaptor)		0.37kg	0.47kg	0.85kg

Dimensions

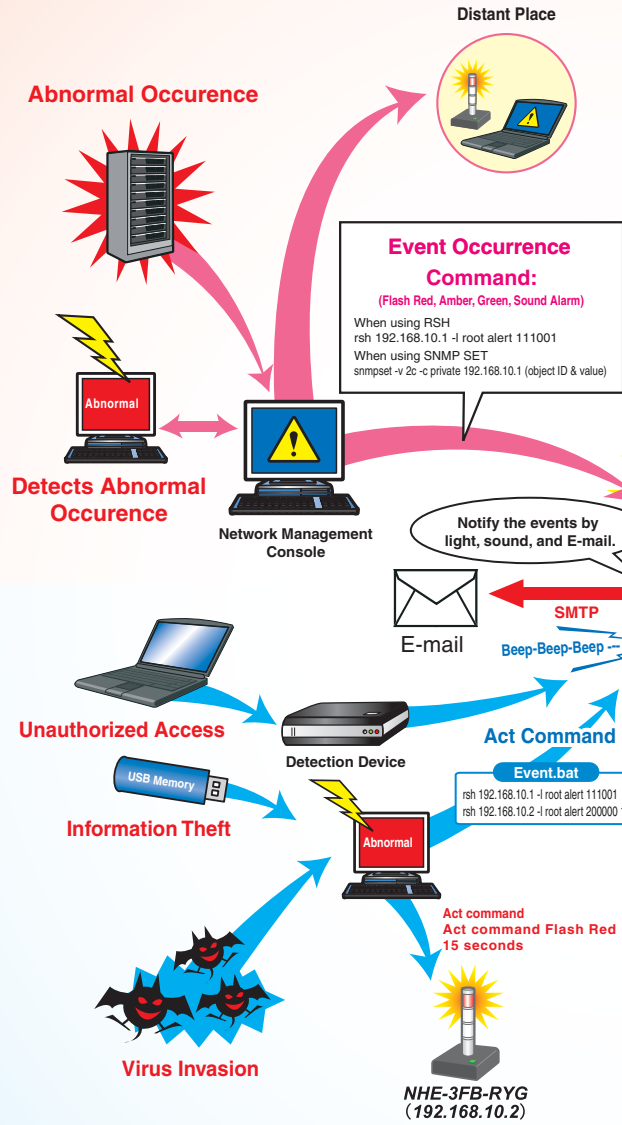


(Unit: mm)

RSH

Network Node Management Solution

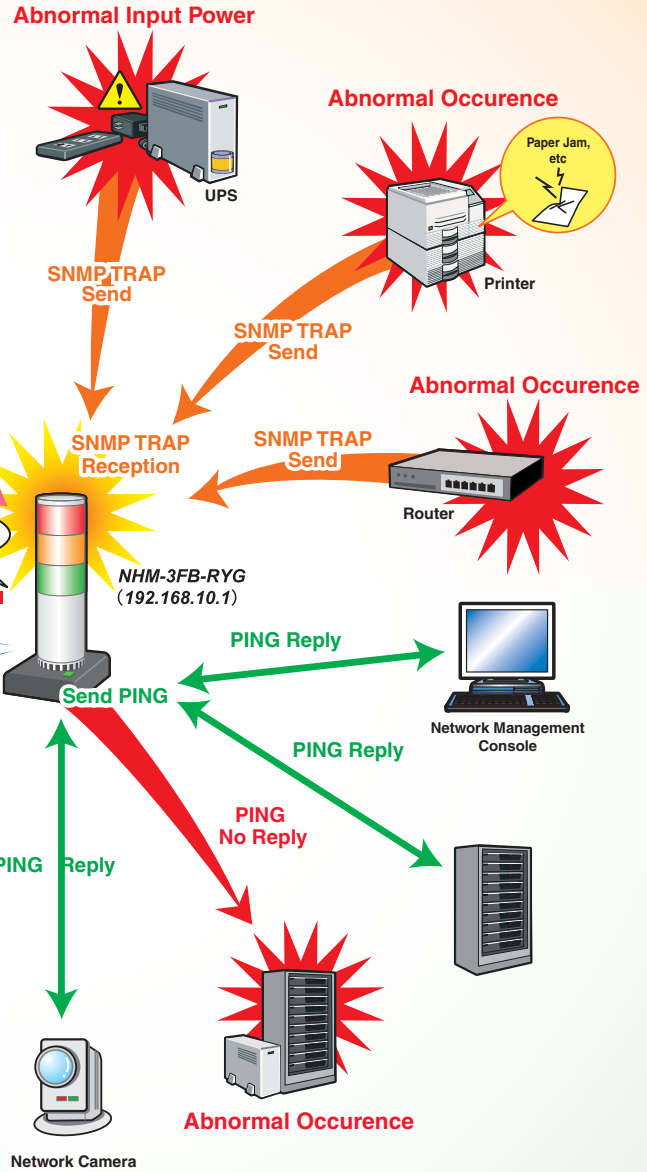
Network Monitor Signal Tower can be controlled with RSH command and SNMP protocol easily. Possible to cooperate with a commercial NMS, and report an event to a network manager visually and audibly.



SNMP

SNMP Trap Monitoring Solution

Network Monitor Signal Tower receives SNMP Trap from network devices (UPS, printer, router, switch, etc), and report the event quickly to a network manager.



SECURITY

Cyber Security Solution

By cooperating with a commercial information or virus protection software, various events can be reported to a network manager. Unauthorized access to the classified information or illegal copy or manipulation of information can also be detected.

PING

Network Device Health Check Solution

Possible to manage the health of up to 16 nodes. When Signal Tower does not receive a reply from network devices or network is disconnected, Signal Tower detects the events and report to a network manager.

ME-A / MES-A

Signal Tower



LED



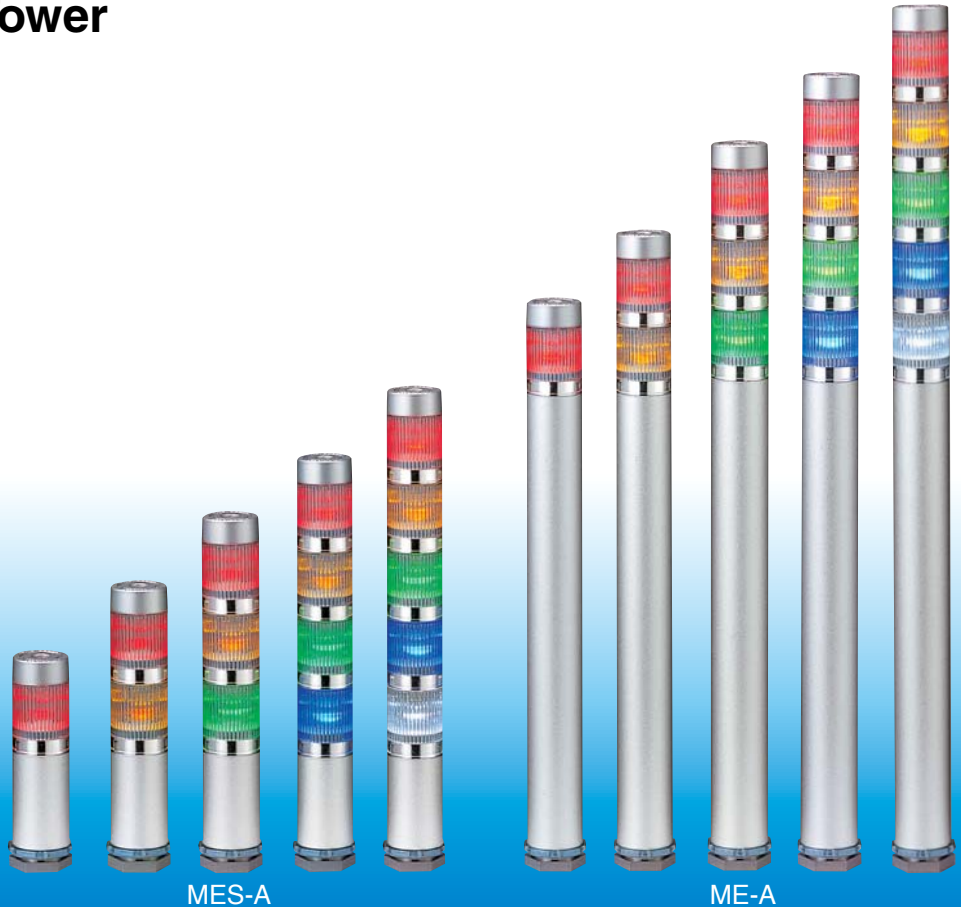
Cabtyre
(Special order)



Ø25

IP42

NPN
Open collector



MES-A

ME-A

Super slim 25mm Signal Tower with aluminum body, ideal for small devices.

- PATLITE's Exclusive Hybrid Prism-Cut Lens: For enhanced visibility from any direction and distance.
- Enhanced Illumination: Special high intensity illumination design.
- Installation: Direct mount with a single hole.
- Interchangeable Modules: No re-wiring even after installation.
- Main Body: Corrosion resistant anodized aluminum for retaining its external beauty.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Colors: Red, Amber, Green, Blue, Clear/White.
- Body Length: MES 40mm, ME 200mm.

Available by Special Order

- Cabtyre Cable: Versatile and flexible 3m cable.
- Body Length: MEL 500mm.
- IP54 (for MES / ME / MEL).
- PNP compatible: ME 24V type.
- UL type (E215660).

Interchangeable LED modules

- Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.
- Note: LED modules of the same color will light up simultaneously.

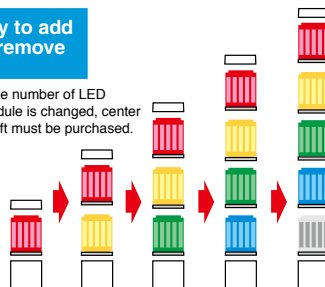
The wiring remains the same.

Each color of LED module corresponds to the lead wire color.

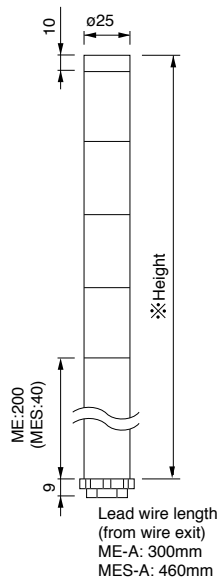


Easy to add or remove

If the number of LED module is changed, center shaft must be purchased.



Dimensions

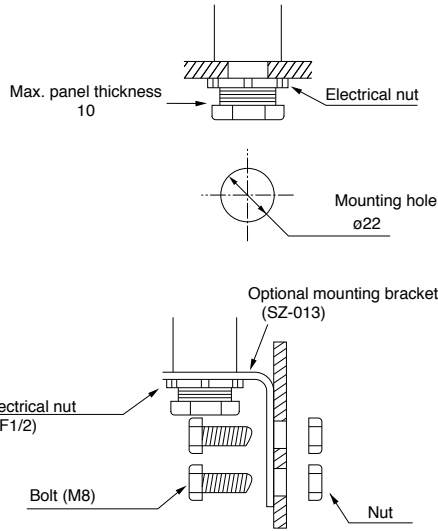


ME-A type

※ Height (mm)
1 Light: 240
2 Lights: 270
3 Lights: 300
4 Lights: 330
5 Lights: 360

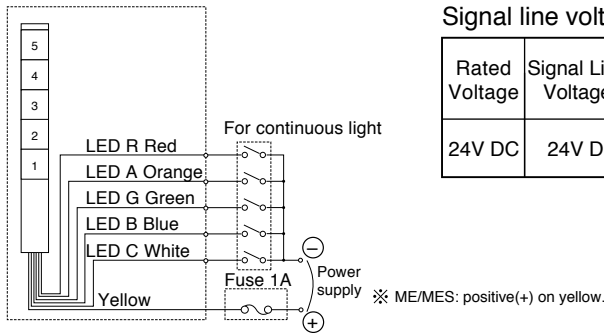
MES-A type

※ Height (mm)
1 Light: 80
2 Lights: 110
3 Lights: 140
4 Lights: 170
5 Lights: 200



(mm)

Wiring Diagram



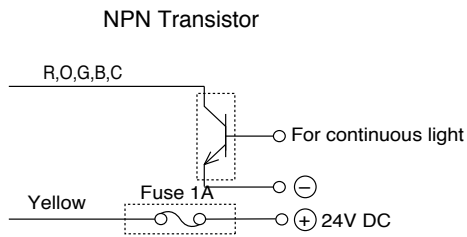
Signal line voltage and current per LED module

Rated Voltage	Signal Line Voltage	ME-A/MES-A Signal Line Current
24V DC	24V DC	R, A: 25mA G, B, C: 20mA

Color of LED Unit	Color of Lead Wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear	White

Note: See page 166 for wiring diagram

24V DC: NPN Transistor



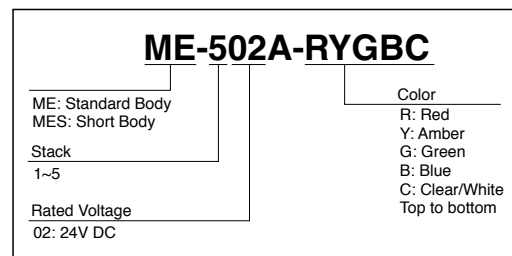
Transistor Capacity

Model	ME/MES
	Transistor (NPN)
Current Capacity	$I_c \geq 0.1A$
Withstand Voltage	$V_c \geq 35V$
Current Leakage	$I_l < 0.1mA$

ME-A / MES-A Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	ME/MES-102A-R	24V DC	0.6W
	ME/MES-102A-Y		0.6W
	ME/MES-102A-G		0.5W
	ME/MES-102A-B		0.5W
	ME/MES-102A-C		0.5W
2 Lights	ME/MES-202A-RY	24V DC	1.2W
	ME/MES-202A-RG		1.1W
	ME/MES-202A-RB		1.1W
	ME/MES-202A-RC		1.1W
3 Lights	ME/MES-302A-RYG	24V DC	1.7W
	ME/MES-302A-RYB		1.7W
	ME/MES-302A-RYC		1.7W
4 Lights	ME/MES-402A-RYGB	24V DC	2.3W
	ME/MES-402A-RYGC		2.3W
5 Lights	ME/MES-502A-RYGBC	24V DC	2.8W

How to Order



MP / MPS

Signal Tower



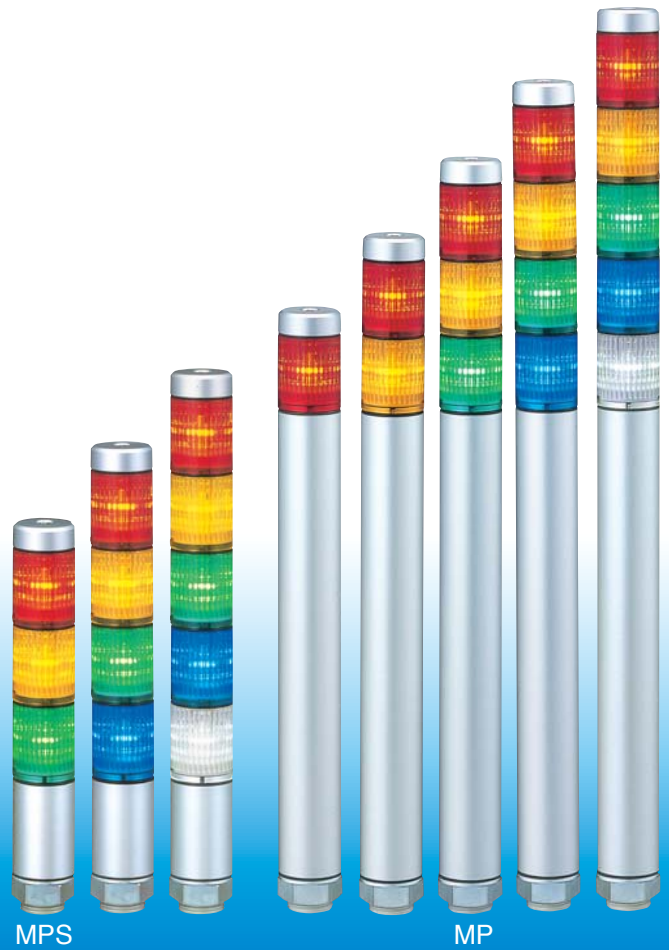
LED 

Cabtyre
(Special order) 

∅30

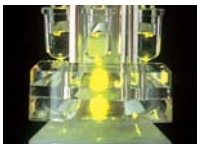
IP65

NPN/PNP
Open collector



Patented reflection system increases visibility.

Super slim 30mm silver body Signal Tower ideal for small devices.



High intensity LED



Good visibility from any direction

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Double Insulation: For enhanced durability and safety in the work environment.
- Installation: Direct mount with a single hole.
- Interchangeable LED module: No re-wiring even after installation.
- Main Body: Superior impact and heat resistant ABS resin.
- Lens: Superior weather resistant and light translucent AS resin.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

- Cabtyre Cable: Versatile and flexible 3m cable.
- All Clear Lens: Distinctive color recognition when operated (B0438 type).
- UL type (E215660).
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Interchangeable LED modules

- Changeable color sequence: Easy to add/remove up to 5 colored modules even after installation.
- Note: LED modules of the same color will light up simultaneously.

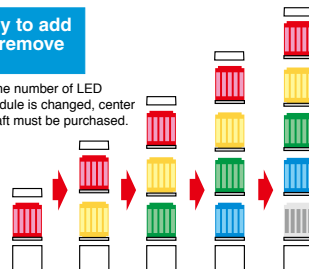
The wiring remains the same.

Each color of LED module corresponds to the lead wire color.

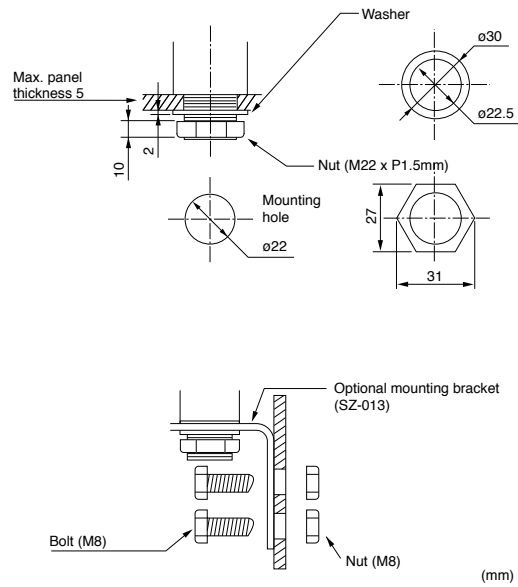
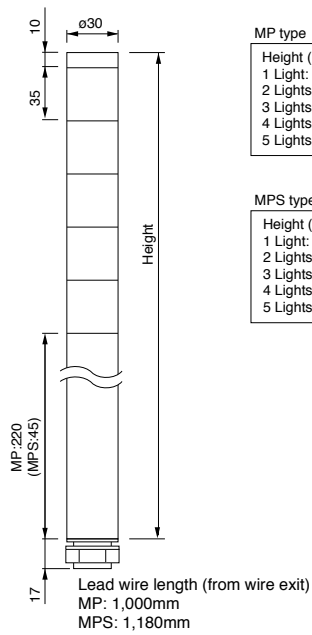


Easy to add or remove

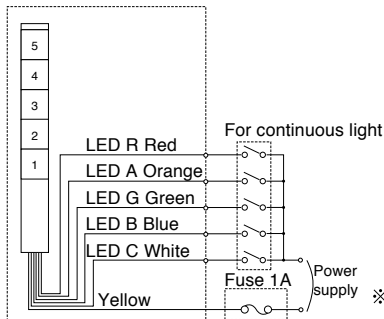
If the number of LED module is changed, center shaft must be purchased.



Dimensions



Wiring Diagram

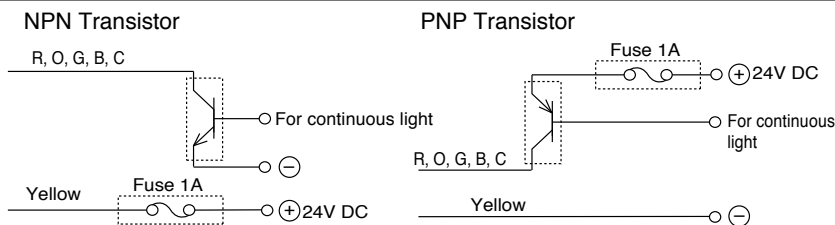


Signal line voltage and current per LED module

Rated Voltage	Signal Line Voltage	MP/MPS Signal Line Current	Color of LED Unit	Color of Lead Wire
24V AC/DC	24V DC	R,A: 30mA G,B,C: 25mA	Red	Red
			Amber	Orange
			Green	Green
			Blue	Blue
			Clear	White

Note: See page 166 for wiring diagram

24V DC: NPN / PNP Transistor



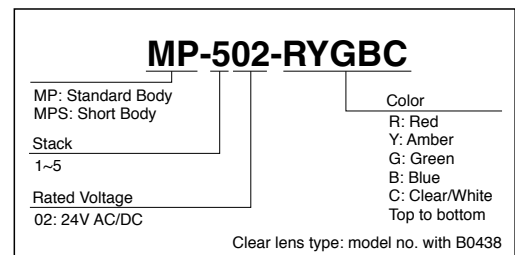
Transistor Capacity

Model	MP/MPS Transistor (NPN/PNP)
Current Capacity	$I_c \geq 50\text{mA}$
Withstanding Voltage	$V_c \geq 35\text{V}$
Current Leakage	$I_L < 0.1\text{mA}$

MP / MPS Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	MP/MPS-102	24V AC/DC	0.7W
2 Lights	MP/MPS-202	24V AC/DC	1.4W
3 Lights	MP/MPS-302	24V AC/DC	2.0W
4 Lights	MP/MPS-402	24V AC/DC	2.6W
5 Lights	MP/MPS-502	24V AC/DC	3.2W

How to Order



WE / WEP

Slim Wall-Mount Signal Tower



LED

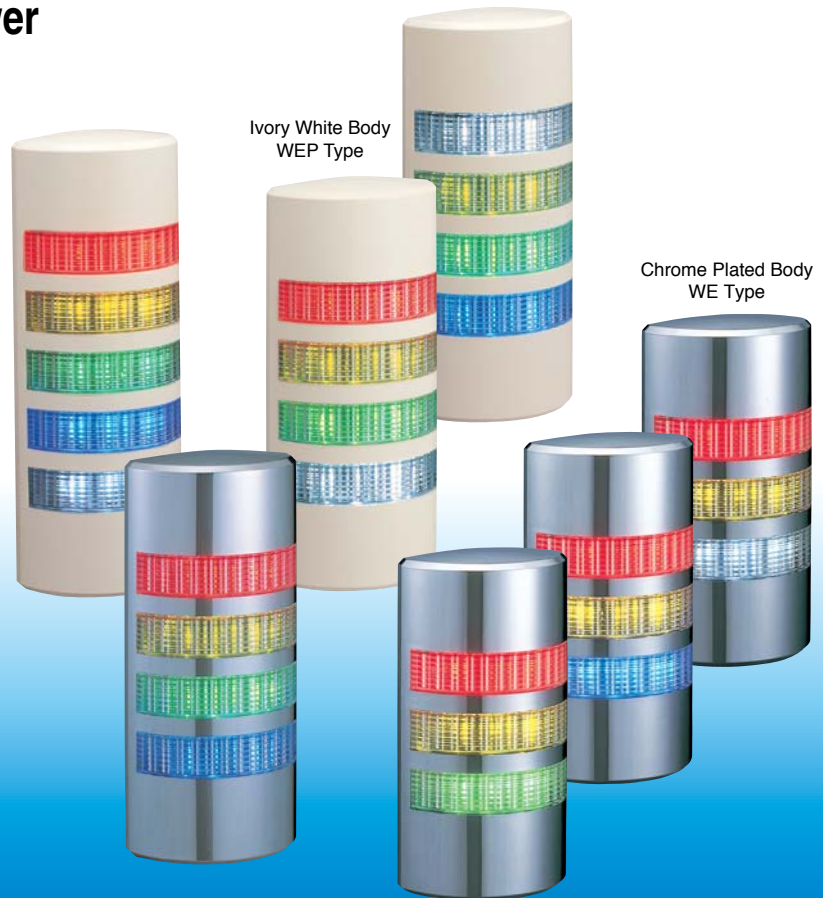


90dB at 1m (FB type)

Electronic Sound 2 (FB type)

IP65 (FB type: IP54)

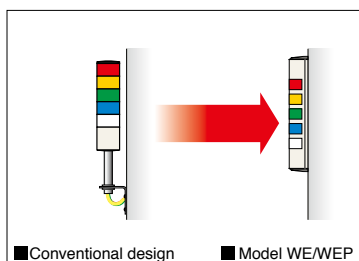
NPN/PNP
Open collector



Ultra slim half-moon shaped Signal Tower offers seamless integration with most equipment.

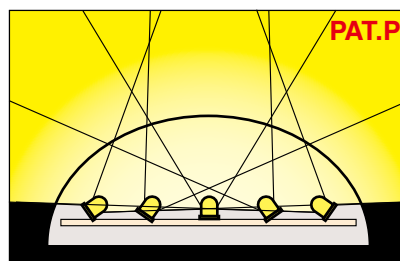
- Clear Vertical Cut Lens: For enhanced illumination over a wide perspective.
- FB type: Built-in audible alarm with 90dB at 1m.
- Installation: Vertical and horizontal.
- Body Color: Chrome plated or ivory white.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- NPN/PNP Compatible: Direct connection to PLC (24V DC ONLY)
- Lighting Pattern: Flashing and Continuous.
- Dust-proof and waterproof IP65 (except for FB type: IP54).
- UL type: Available as special order (E215660)
- Available Colors: Red, Amber, Green, Blue, Clear/White.

37.5 mm Super-thin design !



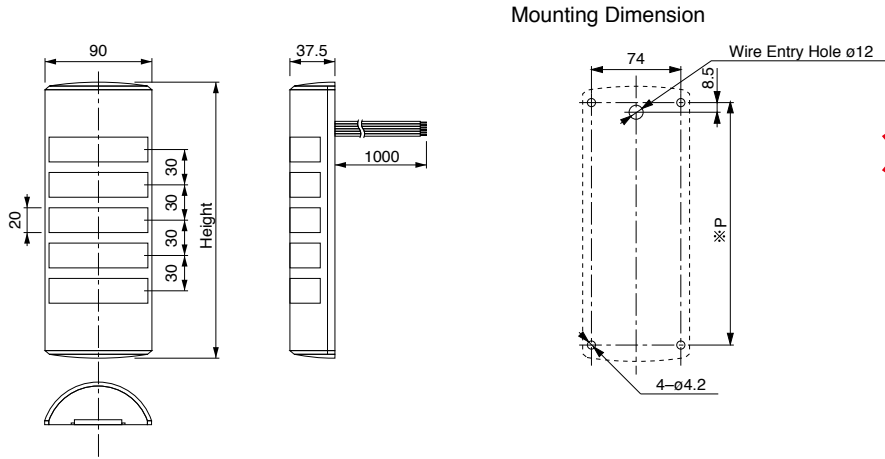
Patlite has perfected a 37.5mm-thin design that significantly enhances integration with the equipment as a built-in signal system.

New and exclusive LED lighting design



Patlite has created a revolutionary lighting design (patent pending) in which multiple LEDs project light across a broad peripheral area, ensuring equal intensity at the sides as well as the front. This design, with its side-projection technology, is a unique achievement in signal light design.

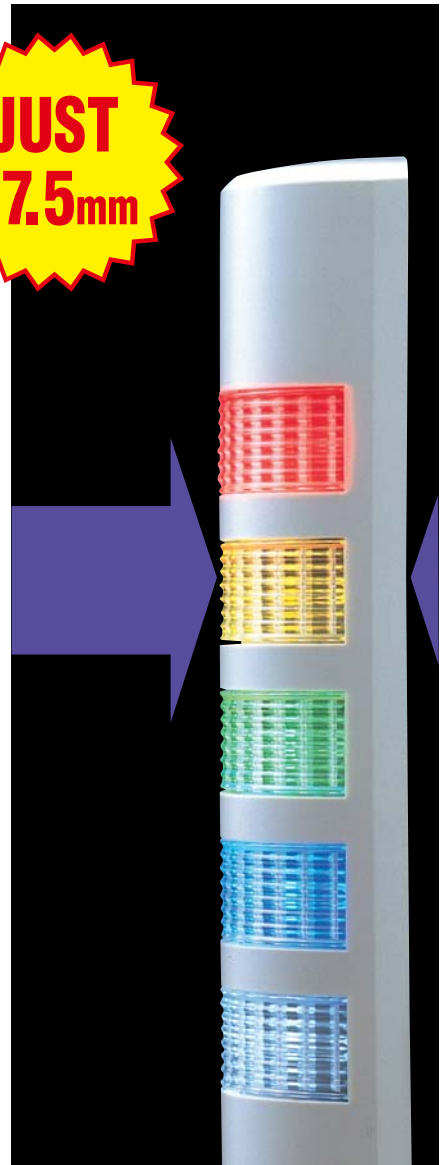
Dimensions



Height (mm)
3 Lights: 176
4 Lights: 206
5 Lights: 236

※ P (mm)
3 Lights: 150
4 Lights: 180
5 Lights: 210

JUST 37.5mm



IP65 construction is safe for installation in damp locations, dusty factories and outdoor environments.

Wiring Diagram

Note: See page 172 for wiring diagram

WE / WEP Type

Number of Stacks	Model	Rated Voltage	Power Consumption	Mass
3 Lights	WE(P)-302	24V AC/DC	1.7W	0.26kg
	WE(P)-302FB	24V AC/DC	2.7W	0.30kg
4 Lights	WE(P)-402	24V AC/DC	2.0W	0.31kg
	WE(P)-402FB	24V AC/DC	3.2W	0.35kg
5 Lights	WE(P)-502	24V AC/DC	2.7W	0.31kg
	WE(P)-502FB	24V AC/DC	3.7W	0.35kg

FB type: approx 60 flashes per minute

How to Order

WEP-302FB-RYG

Body color WE: Chrome plated WEP: Ivory white	Color R: Red Y: Amber G: Green B: Blue C: Clear/White Top to bottom
Stacks 3-5	Type Blank: Continuous light FB: Continuous or flashing light with audible alarm
Rated Voltage 02: 24V AC/DC	

LCE / LCE-U

Signal Tower

Silver Color Body
LCE-U Type



LED

Cabtyre
(LCE-U type only)

85dB at 1m
(FB type)

Electronic Sound 2
(FB type)

∅40

IP65
(LCE-FB type IP54)

**NPN/PNP
Open collector**



Ivory White Body
LCE Type



Reflection
system



High visibility
from any angle



Adjustable volume
Max. 85dB/m

Low-priced, high quality LED Signal Tower featuring low maintenance and energy savings.

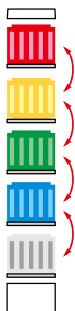
- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright, distinctive illumination while saving energy (Patent Pending).
- Built-in Alarms (FB Type): 2 selectable sound patterns with adjustable volume up to 85dB at 1m.
- Installation: Direct or pole mount.
- Color-coordinated Wiring: Corresponds to the lens colors for quick wiring verification.
- Interchangeable LED Modules: No re-wiring even after installation.
- Main Body: ABS resin with superior resistance to impact and heat (U type has silver color and 3m cabtyre cable).
- Lens: Superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible: For 24V DC type; M2 type compatible with NPN only.
- Available Colors: Red, Amber, Green, Blue, Clear/White.
- High visibility from any angle.
- Adjustable volume Max. 85dB at 1m

Interchangeable LED modules

- Changeable color sequence: Easy to add / remove up to 5 colored modules even after installation.
- Note: LED modules of the same color will light up simultaneously.

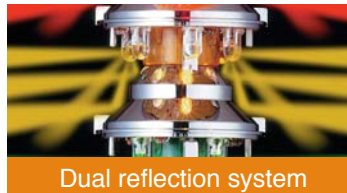
The wiring remains the same

Each color of LED module corresponds to the lead wire color.



Easy to add and remove

If the number of LED module is changed, center shaft must be purchased.

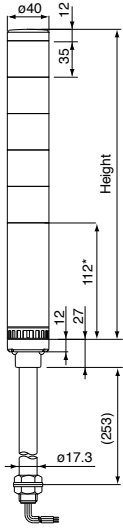


Dual reflection system

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and 5 color LED modules create bright, distinctive, even illumination.

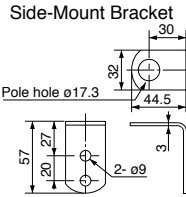
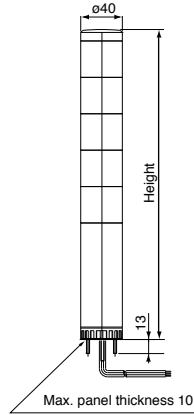
Dimensions

LCE type
LCE-U type

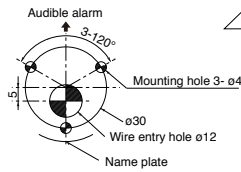


*M2-FB type:167

LCE-W type
LCE-UW type



Mounting Dimension



LCE type
LCE-U type

Height (mm)
1 Light: 158
2 Lights: 193
3 Lights: 228
4 Lights: 263
5 Lights: 298

LCE-M2FB type

Height (mm)
1 Light: 213
2 Lights: 248
3 Lights: 283
4 Lights: 318
5 Lights: 353

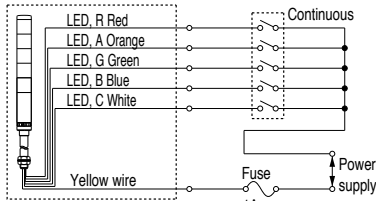
(mm)



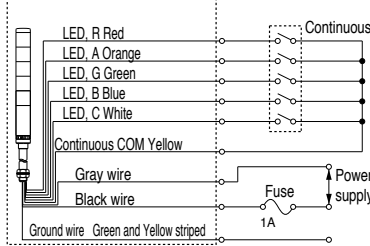
Wiring Diagram

Continuous only

AC/DC 24V



AC 90~250V

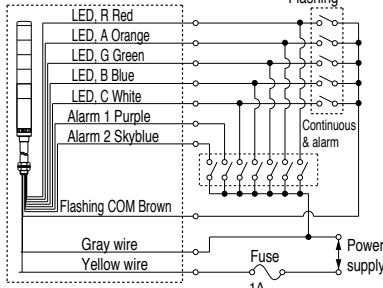


Signal line voltage and current per LED module

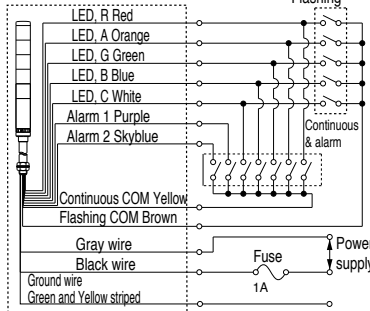
Model	Voltage Type	Signal Line Voltage	LED		Alarm	
			Signal Line Current R,Y	G,B,C	Signal Line Current	Inrush Current
LCE/LCE-U	24V AC/DC	24V AC/DC	30mA	25mA	40mA	250mA
LCE-M2	90~250V AC	24V DC	30mA	25mA	40mA	250mA

Continuous and Flashing with Alarm

AC/DC 24V



AC 90~250V



Lead wire color correspondence table

Color of LED Unit	Color of Lead Wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear/White	White

Alarm	Color of Lead Wire
Alarm 1	Purple
Alarm 2	Skyblue

Fuse for outer contact protection

Voltage	Fuse
All voltage types	1A

Note: See page 167 for wiring diagram

LCE / LCE-U Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	LCE-102(U)	24V AC/DC	1.7W
	LCE-1M2	90~250V AC	1.9W
2 Lights	LCE-202(U)	24V AC/DC	2.4W
	LCE-2M2	90~250V AC	2.6W
3 Lights	LCE-302(U)	24V AC/DC	3.0W
	LCE-3M2	90~250V AC	3.2W
4 Lights	LCE-402(U)	24V AC/DC	3.6W
	LCE-4M2	90~250V AC	3.8W
5 Lights	LCE-502(U)	24V AC/DC	4.2W
	LCE-5M2	90~250V AC	4.4W

FB type: approx. 60 flashes per minute.

How to Order (LCE Type)

LCE-502UFBW-RYGB-C-Z

- Stacks: 1~5
- Rated Voltage: 02: 24V AC/DC, M2: 90~250V AC
- Body Color: Blank: Ivory white, U: Silver Color
- Type: Blank: Continuous light, FB: Continuous or flashing light with audible alarm
- Color of LED: R: Red, Y: Amber, G: Green, B: Blue, C: Clear/White, Top to bottom
- Color of Lens: Blank: Colored lens, Z: Clear lens
- Mount: Blank: Pole Mount (with SZ-012), K: Pole Mount (with SZ-021), W: Direct Mount

LCE/LCE-U

LCS / LCS-U

Signal Tower



LED



∅40

IP54

NPN/PNP
Open collector



Ivory White Body
LCS Type

Silver Color Body
LCS-U Type



Reflection
system



High visibility
from any angle

Versatile LED Signal Tower featuring high quality and low price.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright, distinctive illumination while saving energy (Patent Pending).
- Installation: Pole mount only.
- Color coordinated Wiring: Corresponds to the lens colors for quick wiring verification.
- Interchangeable LED Modules: No re-wiring even after installation.
- Main Body: ABS resin with superior resistance to impact and heat.
- Lens: Superior impact resistant and light translucent AS resin.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

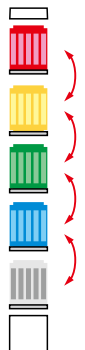
- Silver Color Body Type (LCS-U).
- Cabtyre Cable: Versatile and flexible 3m cable.
- Clear Lens Module: Distinctive color recognition when operated (B0438 type).
- UL type (E215660).

Interchangeable LED modules

- Changeable color sequence: Easy to add/ remove up to 5 colored modules even after installation.
- Note: LED modules of the same color within a signal tower will light up simultaneously.

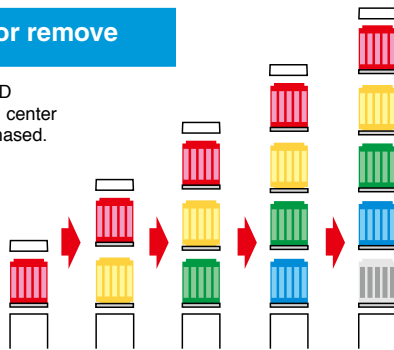
The wiring remains the same.

Each color of LED module corresponds to the lead wire color.



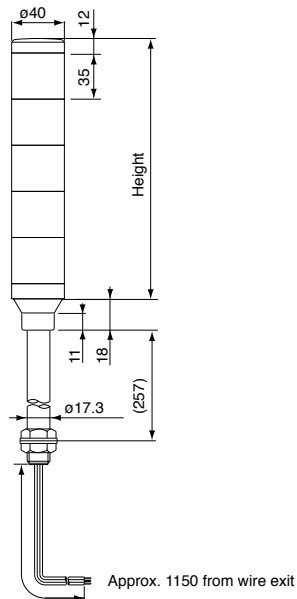
Easy to add or remove

If the number of LED module is changed, center shaft must be purchased.

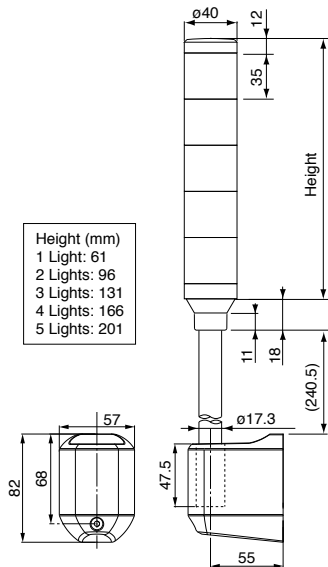


Dimensions

LCS type



LCS-K type



Height (mm)
1 Light: 61
2 Lights: 96
3 Lights: 131
4 Lights: 166
5 Lights: 201

Clear lens style tower is also available.



Please add -Z at the end of the part number when ordering the clear lens type tower.

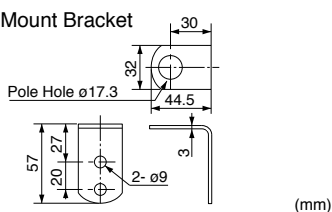


LCS type
Mounting Bracket
SZ-012



LCS-K type
Mounting Bracket
SZ-021

Side-Mount Bracket



(mm)

Wiring Diagram

Note: See page 167 for wiring diagram

LCS Type

Number of Stacks	Model	Rated Voltage	Power Consumption	Mass	
				LCS	LCS-K
1 Light	LCS-102	24V AC/DC	0.7W	0.42kg	0.54kg
2 Lights	LCS-202	24V AC/DC	1.4W	0.45kg	0.57kg
3 Lights	LCS-302	24V AC/DC	2.0W	0.48kg	0.60kg
4 Lights	LCS-402	24V AC/DC	2.6W	0.51kg	—
5 Lights	LCS-502	24V AC/DC	3.2W	0.54kg	—

How to Order (LCS Type)

LCS-502K-RYGB-C-Z		
Stacks 1~5	Color of LED R: Red Y: Amber G: Green B: Blue C: Clear/White Top to bottom	Color of Lens Blank: Colored lens Z: Clear lens
Rated Voltage 02: 24V AC/DC	Mount Blank: Pole Mount (with SZ-012) K: Pole Mount (with SZ-021)	

LE/LES

Signal Tower



LED



85dB at 1m
(LE-FB type)

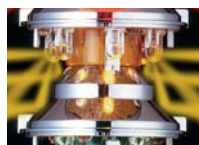
∅50

IP54
(Pole-mount type IP23)

NPN/PNP
Open collector

LES-A

LE



Reflection system



High visibility from any direction

Versatile, cost and energy efficient LED Signal Tower for every need.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- Built-in Alarms (FB Type): 2 selectable sound patterns with adjustable volume up to 85dB at 1m.
- Installation: Direct or pole mount
- Color-coordinated Wiring: Corresponds to the lens colors for quick wiring verification.
- Interchangeable LED Modules: No re-wiring even after installation for LE model. The LED module of LES-A cannot be added, removed or interchanged.
- Main Body: ABS resin with superior resistance to impact and heat.
- Lens: Superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible: Except LE 100/220V AC, compatible with NPN only.
- Available Colors: Red, Amber, Green, Blue, Clear.

Available by Special Order

- LES 24V: IP65 for direct mount and IP54 for pole mount types.
- UL type (E215660).

Interchangeable LED modules

- Changeable color sequence: Easy to add / remove up to 5 colored modules even after installation.
- Note: LED modules of the same color will light up simultaneously.

The wiring remains the same

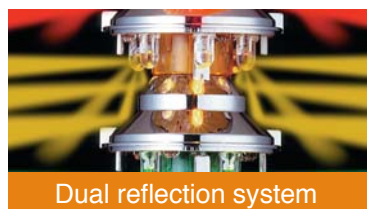
Each color of LED module corresponds to the lead wire color.



Easy to add and remove

If the number of LED module is changed, center shaft must be purchased.

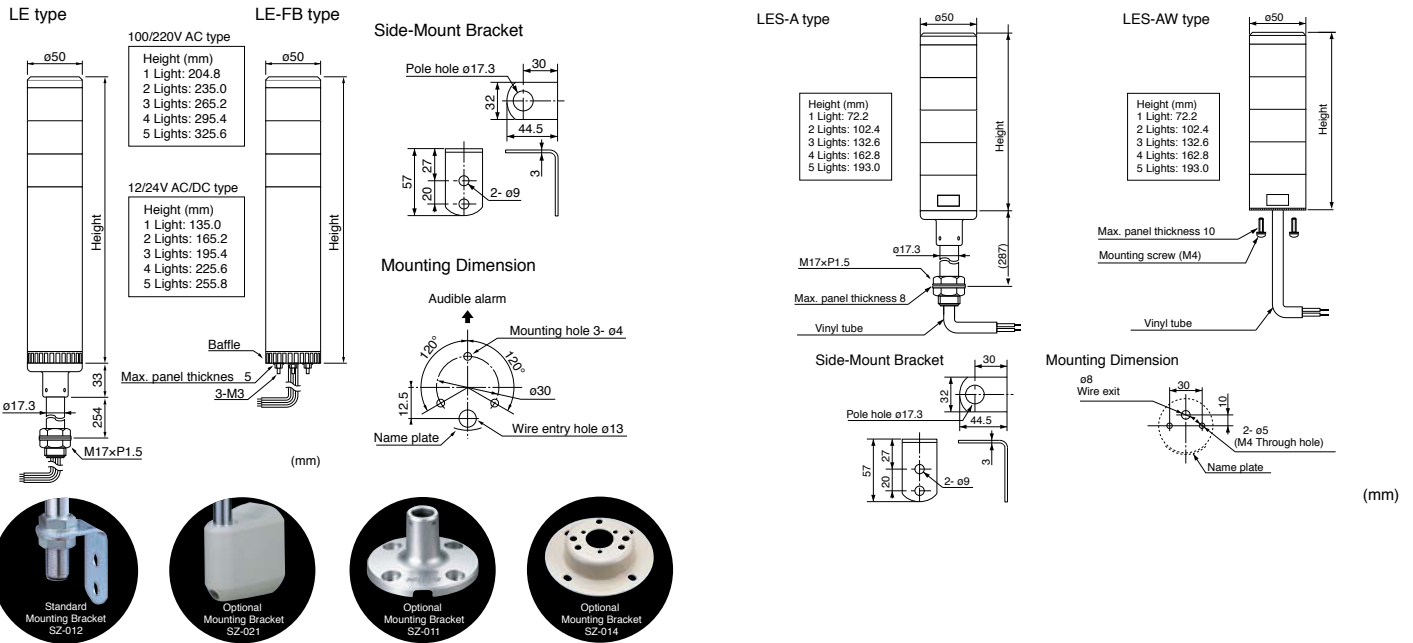
- Note: The LED module of LES-A cannot be added, removed or interchanged.



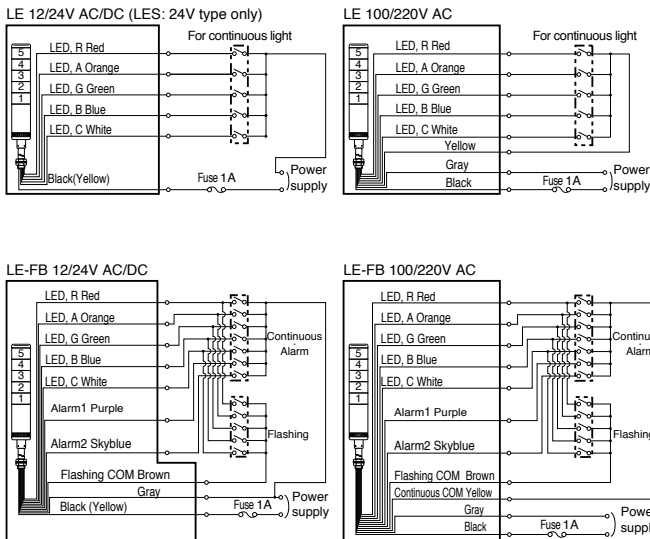
Dual reflection system

PATLITE's original double reflection system with its exclusive hybrid prism-cut lens and 5 color LED modules create distinctive illumination that is bright and even (Patent Pending).

Dimensions



Wiring Diagram



Signal line voltage and current per LED module

Model	Rated Voltage	Signal Line Voltage	LED			Alarm
			Signal Line Current			
LE	12V AC/DC	12V AC/DC	R, A: 50mA	G, C: 40mA	B: 44mA	Signal Line Current 40mA
LES/LE	24V AC/DC	24V AC/DC	R, A: 25mA	G, C: 20mA	B: 22mA	
LE	100V, 220V AC	24V DC	R, A: 25mA	G, C: 20mA	B: 22mA	Inrush Current 150mA

Color Designator Chart *

Color of LED unit	Color of Lead wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear/White	White

Alarm	Color of Lead wire
Alarm1	Purple
Alarm2	Skyblue

*Alarm wires do not exist for continuous only models.

*LE type: All 5 light wires are supplied even if all colors are not used.

Fuse for customer-supplied contact protection

Voltage	Fuse
All voltage types	1A

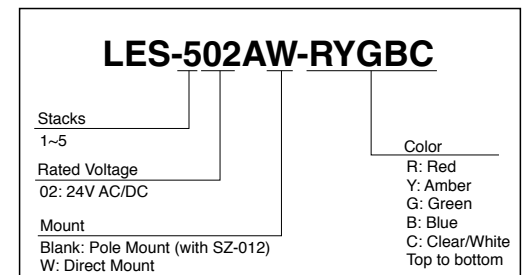
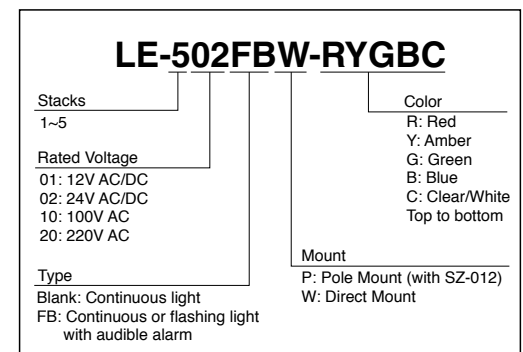
Note: See page 168 for wiring diagram

LE Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	LE-101	12V AC/DC	1.1W
	LE-102	24V AC/DC	1.6W
	LE-110	100V AC	5.7W
2 Lights	LE-120	220V AC	6.7W
	LE-201	12V AC/DC	1.7W
	LE-202	24V AC/DC	2.2W
3 Lights	LE-210	100V AC	6.7W
	LE-220	220V AC	6.7W
	LE-301	12V AC/DC	2.2W
4 Lights	LE-302	24V AC/DC	2.7W
	LE-310	100V AC	7.5W
	LE-320	220V AC	7.5W
5 Lights	LE-401	12V AC/DC	2.7W
	LE-402	24V AC/DC	3.2W
	LE-410	100V AC	8.3W
5 Lights	LE-420	220V AC	8.3W
	LE-501	12V AC/DC	3.2W
	LE-502	24V AC/DC	3.7W
5 Lights	LE-510	100V AC	9.1W
	LE-520	220V AC	9.1W

FB type: approx. 60 flashes per minute.

How to Order



LES Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	LES-102A	24V AC/DC	0.6W
2 Lights	LES-202A	24V AC/DC	1.2W
3 Lights	LES-302A	24V AC/DC	1.7W
4 Lights	LES-402A	24V AC/DC	2.2W
5 Lights	LES-502A	24V AC/DC	2.7W

LEL

Signal Tower



LED



85dB at 1m
(LEL-FB type)

∅50

IP54
(Pole-mount type IP23)

NPN/PNP
Open collector



Reflection system



High visibility from any direction

Versatile, cost and energy efficient LED Signal Tower for every need.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- Built-in Alarms (FB Type): 2 selectable sound patterns with adjustable volume up to 85dB at 1m.
- Installation: Direct or pole mount
- Color-coordinated Wiring: Corresponds to the lens colors for quick wiring verification.
- Interchangeable LED Modules: No re-wiring even after installation.
- Main Body: ABS resin with superior resistance to impact and heat.
- Lens: Superior impact resistant and light translucent AS resin.
- NPN/PNP Compatible: Except 120/220V AC, compatible with NPN only.
- Available Colors: Red, Amber, Green, Blue, Clear.

Interchangeable LED modules

- Changeable color sequence: Easy to add / remove up to 5 colored modules even after installation.
- Note: LED modules of the same color will light up simultaneously.

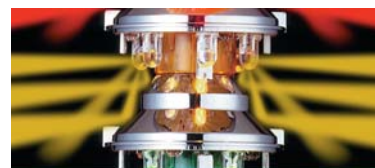
The wiring remains the same

Each color of LED module corresponds to the lead wire color.



Easy to add and remove

If the number of LED module is changed, center shaft must be purchased.



Dual reflection system

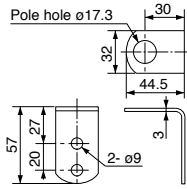
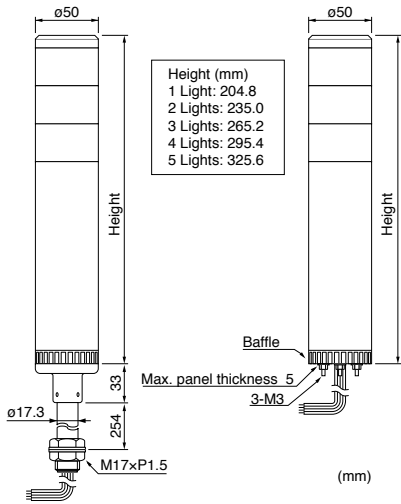
PATLITE's original double reflection system with its exclusive hybrid prism-cut lens and 5 color LED modules create distinctive illumination that is bright and even (Patent Pending).

Dimensions

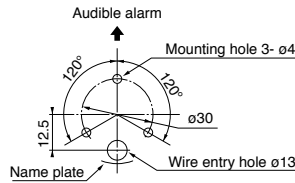
LEL type

LEL-FB type

Side-Mount Bracket

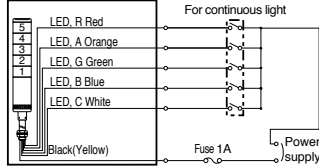


Mounting Dimension

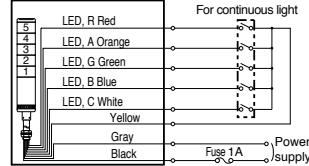


Wiring Diagram

LEL 12/24V AC/DC



LEL 120/230V AC



Signal line voltage and current per LED module

Rated Voltage	Signal Line Voltage	LED			Alarm
		Signal Line Current			
12V AC/DC	12V AC/DC	R, A: 50mA	G, C: 40mA	B: 44mA	Signal Line Current 40mA
24V AC/DC	24V AC/DC	R, A: 25mA	G, C: 20mA	B: 22mA	
10V, 230V AC	24V DC	R, A: 25mA	G, C: 20mA	B: 22mA	Inrush Current 250mA

Color Designator Chart *

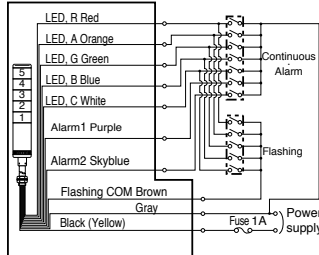
Color of LED unit	Color of Lead wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear/White	White

Alarm	Color of Lead wire
Alarm1	Purple
Alarm2	Skyblue

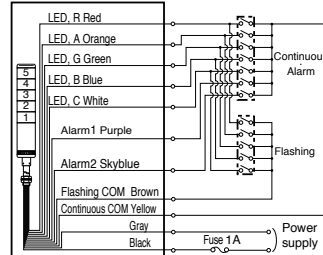
*Alarm wires do not exist for continuous only models.

*All 5 light wires are supplied even if all colors are not used.

LEL-FB 12/24V AC/DC



LEL-FB 120/230V AC



Fuse for customer-supplied contact protection

Voltage	Fuse
All voltage types	1A

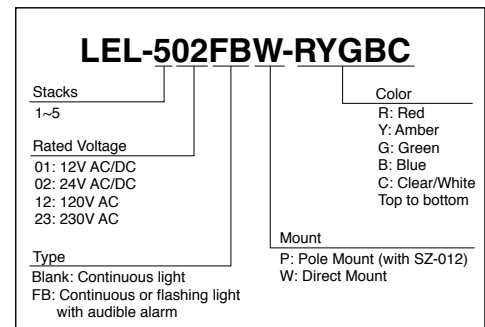
Note: See page 168 for wiring diagram

LEL Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	LEL-101	12V AC/DC	1.1W
	LEL-102	24V AC/DC	1.6W
	LEL-112	120V AC	5.7W
	LEL-123	230V AC	
2 Lights	LEL-201	12V AC/DC	1.7W
	LEL-202	24V AC/DC	2.2W
	LEL-212	120V AC	6.7W
LEL-223	230V AC		
3 Lights	LEL-301	12V AC/DC	2.2W
	LEL-302	24V AC/DC	2.7W
	LEL-312	120V AC	7.5W
LEL-323	230V AC		
4 Lights	LEL-401	12V AC/DC	2.7W
	LEL-402	24V AC/DC	3.2W
	LEL-412	120V AC	8.3W
LEL-423	230V AC		
5 Lights	LEL-501	12V AC/DC	3.2W
	LEL-502	24V AC/DC	3.7W
	LEL-512	120V AC	9.1W
LEL-523	230V AC		

FB type: approx. 60 flashes per minute.

How to Order



LU5

Signal Tower



LED



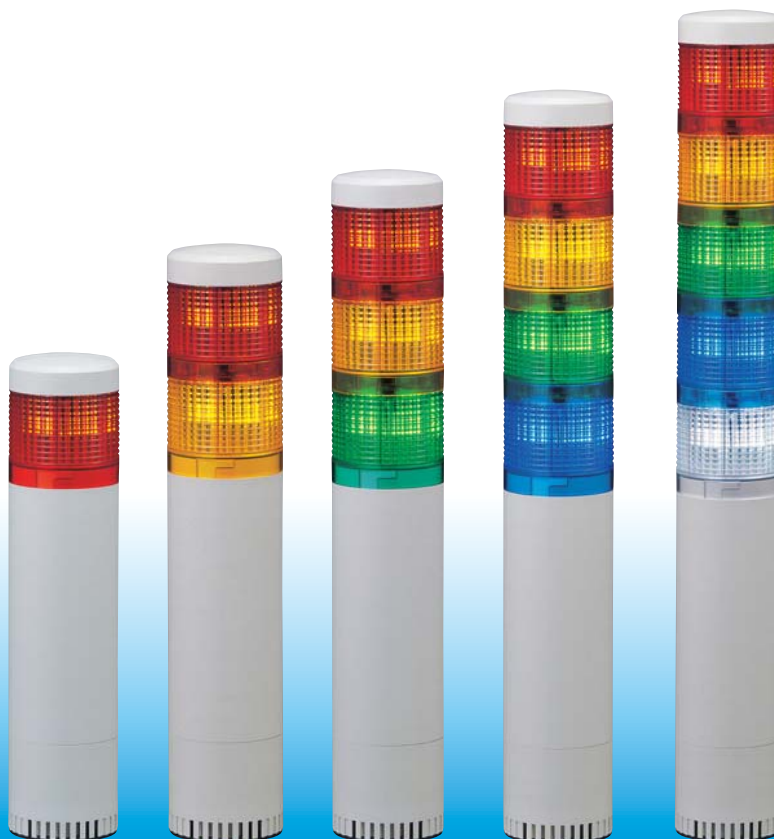
85dB at 1m
(FB type)

Electronic Sound 2
(FB type)

∅50

IP65

NPN/PNP
Open collector



Versatile modular Signal Tower featuring easy assembly and wiring designed for every need.

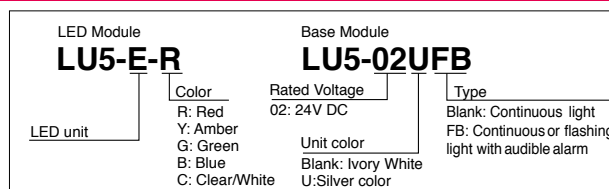
- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Built-in Alarms (FB Type): 2 selectable sound patterns up to 85dB at 1m.
- Installation: Direct or pole* mount.
- Color-coordinated Wiring: Terminal block color corresponds to the lens colors for quick wiring verification.
- Interchangeable LED Modules: No re-wiring even after installation.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available By Special Order

- RoHS Compliance.
- Silver Color Body.
- Modules of the same color can be modified to operate from different terminals.

* Optional part sold separately.

How to Order



LED Module



Module Color	Model	Rated Voltage	Operating Voltage	Current/Power	Operating Temperature Range	Mass
RED	LU5-E-R	24V DC	Rated voltage ±10% (21.6~26.4V)	52mA/1.25W	-30°C~+60°C	44g ±10%
AMBER	LU5-E-Y					
GREEN	LU5-E-G					
BLUE	LU5-E-B					
CLEAR	LU5-E-C					

Base Module

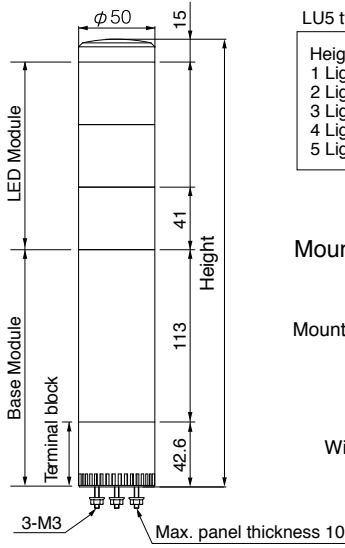


Model	Options	Rated Voltage	Operating voltage	Operating temperature range	Mass	Open Collector
LU5-02	Continuous Only	24V DC	Rated Voltage ±10%	-30°C~+60°C	182g ±10%	PNP/NPN
LU5-02FB	2 Sounds / Flash		(21.6~26.4V)		200g ±10%	

FB type: approx. 60±12 flashes per minute

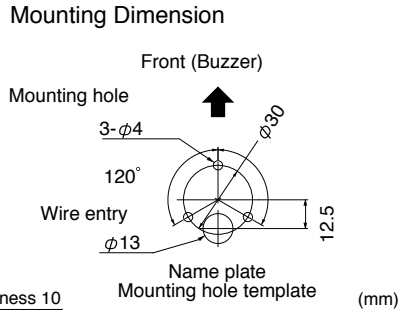
Dimensions

Wiring Diagram

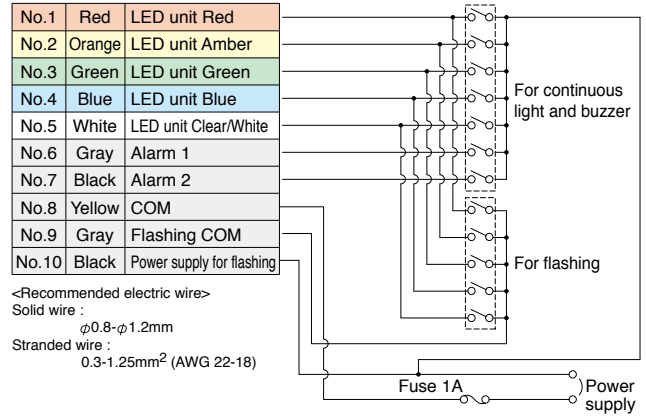


LU5 type

Height (mm)
1 Light: 211
2 Lights: 252
3 Lights: 293
4 Lights: 334
5 Lights: 375



LU5-02FB
24V DC



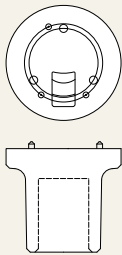
Optional Parts

Upper Bracket

SZ-60-U



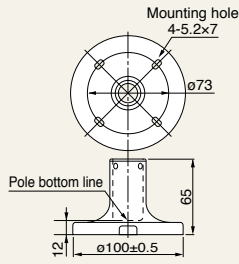
Required for pole mounting



Mounting Bracket

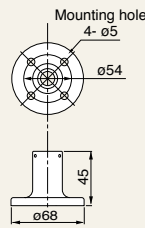
SZ-010

(For $\phi 21.7\text{mm}$ pole)

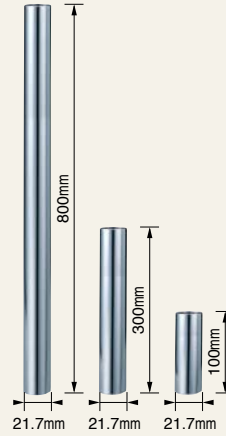


SZ-016A

(For $\phi 21.7\text{mm}$ pole)



Steel Pole

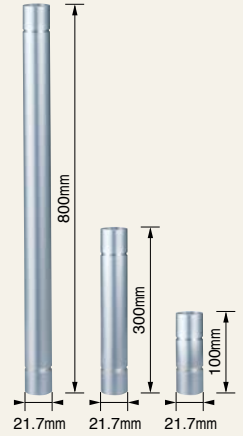


800mm : POLE-800S21

300mm : POLE-300S21

100mm : POLE-100S21

Aluminum Pole



800mm : POLE-800A21

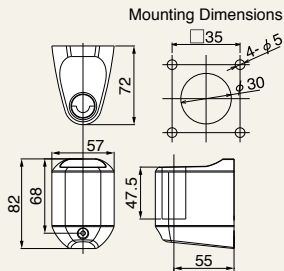
300mm : POLE-300A21

100mm : POLE-100A21

Wall Mount Bracket

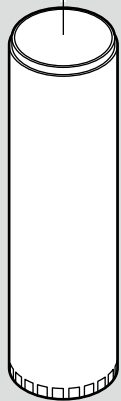
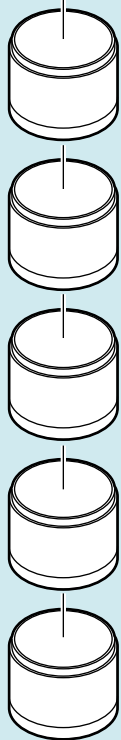
SZ-020

(For $\phi 21.7\text{mm}$ pole)

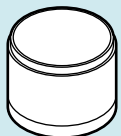


Modules	
Model	Material
POLE-□□□S21	Steel
POLE-□□□A21	Aluminum
SZ-010	ADC12
SZ-016A	ADC12
SZ-70-B	ABS resin
SZ-020	ABS resin

※ADC12...Aluminum alloy die-cast



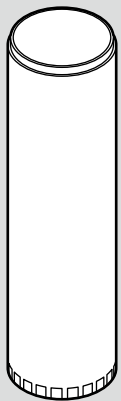
LED Units



Model	LU5-E-R	LU5-E-Y	LU5-E-G	LU5-E-B	LU5-E-C
Unit Color					
Rated Voltage	24V DC				
Operating Voltage Range	Rated voltage $\pm 10\%$ (21.6~26.4V)				
Current/Power Consumption	52mA/1.25W		42mA/1.0W		
Operating Temperature Range	-30°C~+60°C				
Mass	44g $\pm 10\%$				

RED
 AMBER
 GREEN
 BLUE
 CLEAR/WHITE

BASE Units



Model	LU5-02	LU5-02FB
Color		
Standard Body/Short Body	Standard	
Rated Voltage	24V DC	
Operating Voltage Range	Rated voltage $\pm 10\%$ (21.6~26.4V)	
Buzzer		*Buzzer 1 *Buzzer 2
Current Consumption		50 ± 10 mA 24 ± 10 mA
Power Consumption		1.2 ± 0.25 W 0.58 ± 0.25 W
Sound Level		Max: 85 ± 5 dB (at 1m)
Flashing Cycle		60 ± 12 flashes per minutes
Operating Temperature	-30°C~+60°C	
Range	Upright, indoor only	
Mounting Direction	IP65	
Protection Rating	182g $\pm 10\%$	200g $\pm 10\%$
Mass	PNP/NPN	

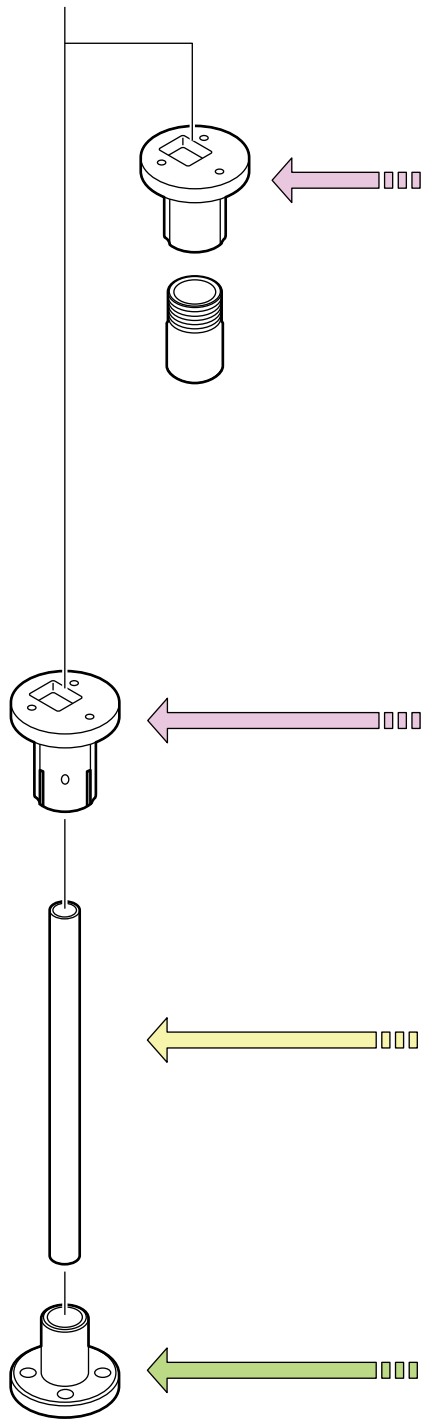
Open Collector

* Buzzer 1 : Continuous Sound **Buzzer 2 : Intermittent Sound

Ivory White
 Silver Color(U)

Optional Parts

Optional Parts



Upper Bracket

SZ-60NPT
(for 1/2" NPT Pole)

Upper Bracket

SZ-60-U

Pole

Height

21.7mm

Steel Pole

Model	POLE-800S21	POLE-300S21	POLE-100S21
Height	800mm	300mm	100mm

Aluminum Pole

Model	POLE-800A21	POLE-300A21	POLE-100A21
Height	800mm	300mm	100mm

Mount Bracket

SZ-016A
(For ϕ 21.7mm Pole)

SZ-70-B
(For ϕ 21.7mm Aluminum Pole Only)

Wall Mount Bracket

SZ-020
(For ϕ 21.7mm Pole)

SZ-017
(For ϕ 21.7mm Pole)

SE-D

Signal Tower

**LED****85dB at 1m**
(FB type)**Electronic Sound 2**
(FB type)**Ø57****IP54** (FB type: IP23)
(Pole mount: IP23)**NPN/PNP**
Open collector

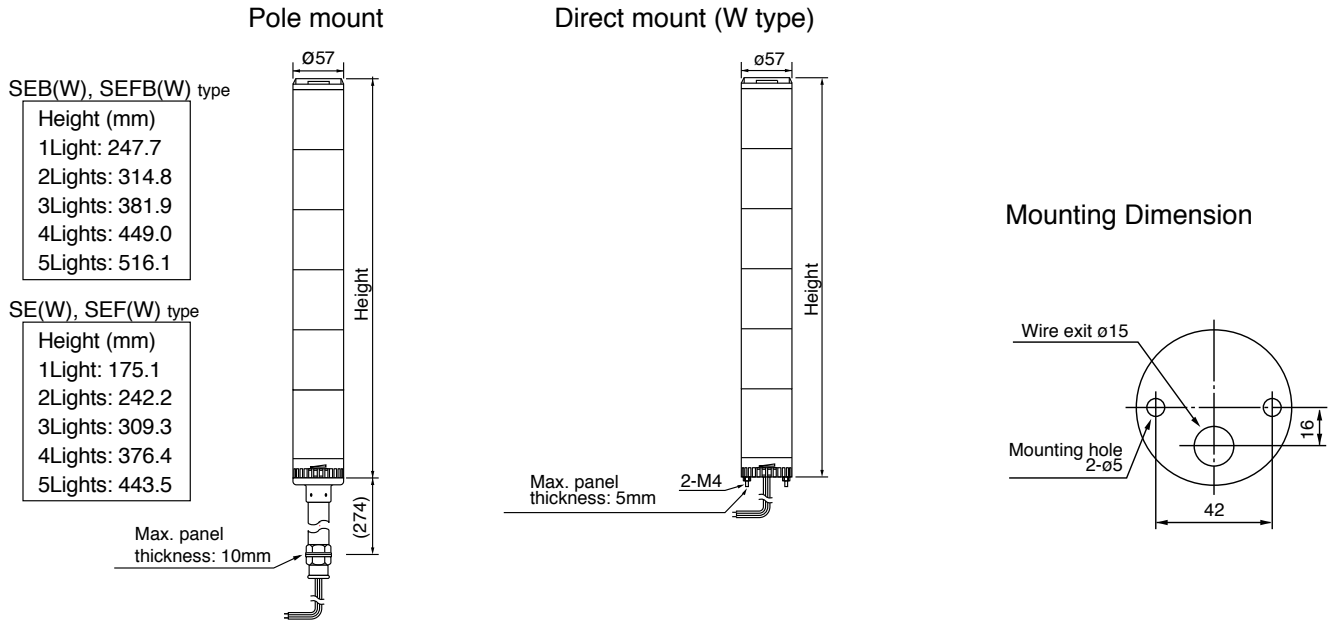
Signal Tower featuring enhanced visibility with original reflection system.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original LED reflection system: Improves brightness and provides maintenance free operation.
- FB type: 2 tone built-in buzzer with volume control (85dB at 1m).
- Installation: Direct or pole mount.
- Color-coordinated wiring: Corresponds to the lens color for quick wiring verification.
- Interchangeable LED module: No re-wiring even after installation.
- Lens: Weather resistant and light translucent AS resin.
- NPN/PNP compatible: Except 100/220V AC, compatible with NPN only.
- CE Compliance: 24V AC/DC type ONLY.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

- UL type (E215660).
- RoHS compliance.

Dimensions



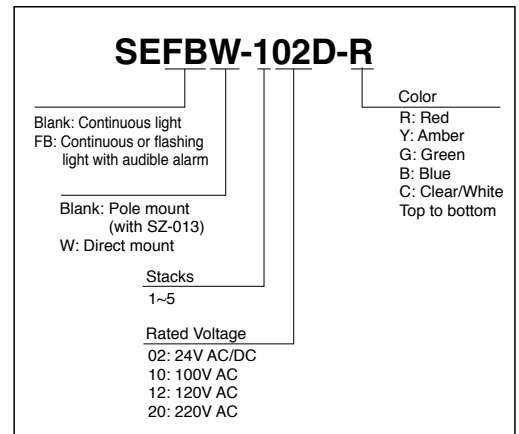
Wiring Diagram

Note: See page 171 for wiring diagram

SE-D Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	SE-102D	24V AC/DC	1.5W
	SE-110D	100V AC	3.0W
	SE-112D	120V AC	3.5W
	SE-120D	220V AC	3.5W
2 Lights	SE-202D	24V AC/DC	2.5W
	SE-210D	100V AC	5.0W
	SE-212D	120V AC	5.5W
	SE-220D	220V AC	5.5W
3 Lights	SE-302D	24V AC/DC	3.5W
	SE-310D	100V AC	6.5W
	SE-312D	120V AC	7.0W
	SE-320D	220V AC	7.0W
4 Lights	SE-402D	24V AC/DC	4.5W
	SE-410D	100V AC	7.5W
	SE-412D	120V AC	8.5W
	SE-420D	220V AC	8.5W
5 Lights	SE-502D	24V AC/DC	5.5W
	SE-510D	100V AC	8.5W
	SE-512D	120V AC	10.0W
	SE-520D	220V AC	10.0W

How to Order



STD

Signal Tower



Bulb



LED
(optional)



ø57

IP20



Vibration-absorption technology to extend bulb life.

- Extended Bulb Life: Shock resistance bulb and vibration-absorption mechanism provides long bulb life even under severe vibration.
- Installation: Pole mount.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- CE Compliance: For 24V AC/DC type ONLY.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

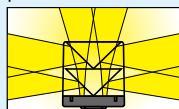
Optional Parts

LED Illuminant Bulb DE



E12 Base

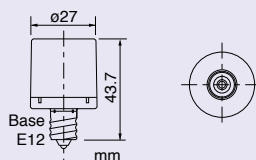
Light diffusion through hybrid prism-cut lens.



LED illuminant bulb will eliminate bulb failure.

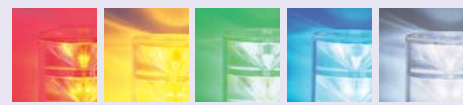
- Enhanced Visibility: PATLITE's exclusive hybrid prism-cut lens with super bright LEDs
- Energy Efficient: Power-saving and long life LED.
- Installation: Same as bulb type.
- AC/DC compatible.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Dimension



Visible from Top

Even optical diffusion with the combination of PATLITE's hybrid prism-cut lens and LED radial layout.

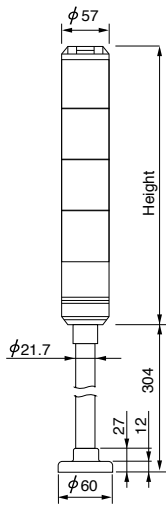


Red Amber Green Blue Clear/White

MODEL	BASE	RATED VOLTAGE	WATTAGE
DE-24E	E12 Edison Base	24V AC/DC	0.7W

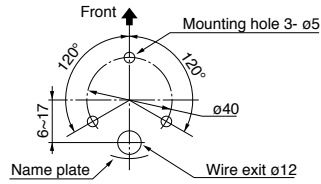
Only 24V model is applicable on all series.

Dimensions

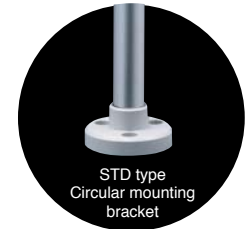


Height (mm)
 1Light: 160
 2Lights: 226
 3Lights: 292
 4Lights: 358

Mounting Dimension

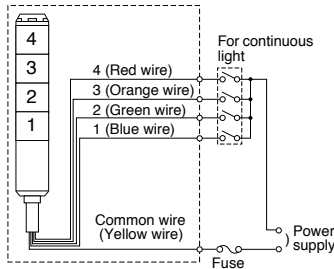


(mm)



Wiring Diagram

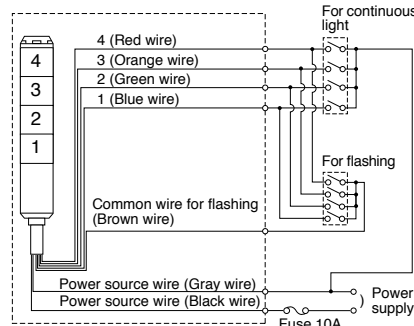
STD (Continuous lighting type)



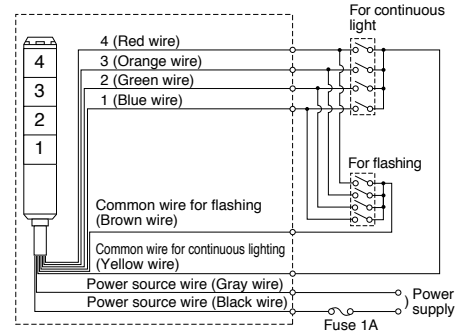
Amperage rating for the fuse

Voltage Type	Amperage rating
24V AC/DC	3A
100~240V AC	1A

STD-F 24V type



STD-F 100V/120V/200~240V type



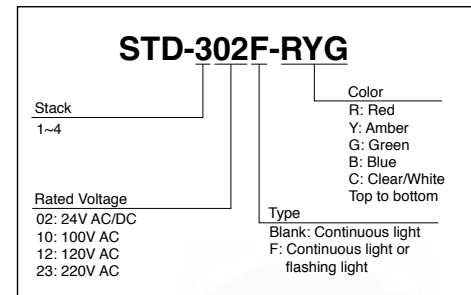
Note: See page 166 for wiring diagram

STD Type

Number of Stacks	Model	Rated Voltage	Bulb
1 Light	STD-102	24V AC/DC	30V 10W
	STD-110	100V AC	110V 15W
	STD-112	120V AC	140V 10W
	STD-123	220V AC	240V 15W
2 Lights	STD-202	24V AC/DC	30V 10W
	STD-210	100V AC	110V 15W
	STD-212	120V AC	140V 10W
	STD-223	220V AC	240V 15W
3 Lights	STD-302	24V AC/DC	30V 10W
	STD-310	100V AC	110V 15W
	STD-312	120V AC	140V 10W
	STD-323	220V AC	240V 15W
4 Lights	STD-402	24V AC/DC	30V 10W
	STD-410	100V AC	110V 15W
	STD-412	120V AC	140V 10W
	STD-423	220V AC	240V 15W

Bulb:30V/110V/140V/240V: T20 E12

How to Order



Without vibration-proof



STD type



Vibration-absorption mechanism extends bulb life.

The unique Patented vibration absorbing structure using new material reduces vibration and impact from all machines and devices, greatly extending bulb life (PAT.)

The rubber vibration isolator absorbs vibration.



LME / LME-U / LME-N

Signal Tower



LED

Cabtyre (LME-U)

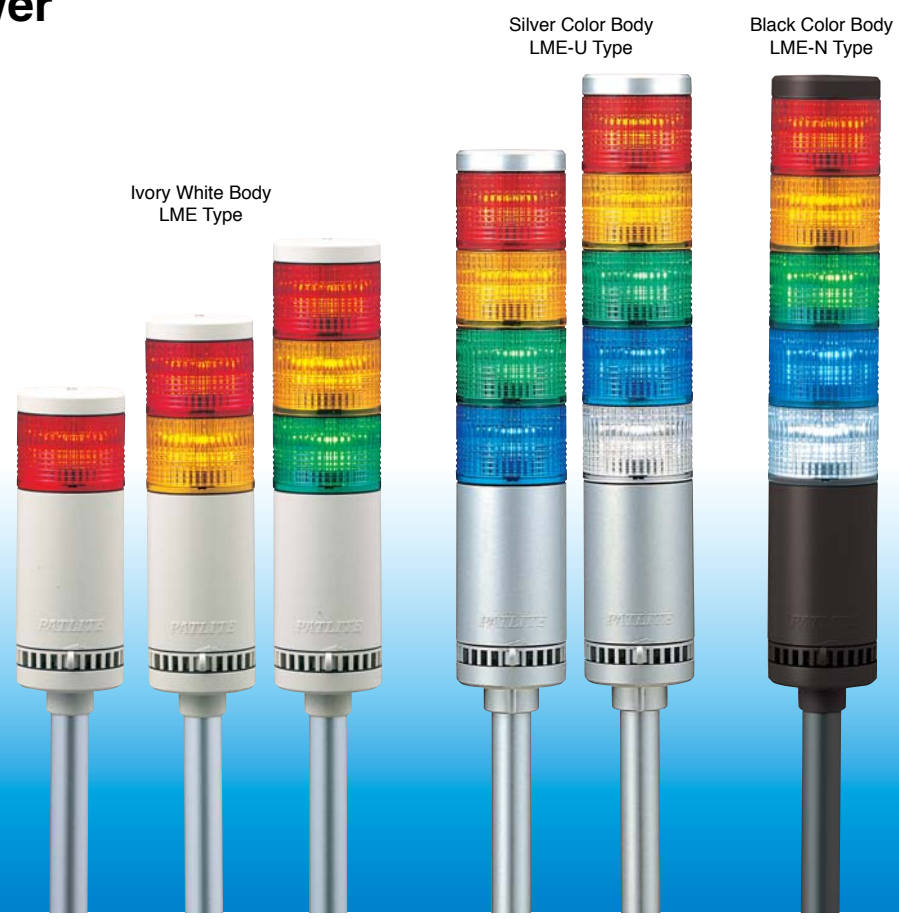
90dB at 1m
(FB type)

Electronic Sound 2
(FB type)

∅60

IP65
(FB, L, K type: IP54)

NPN/PNP
Open collector



Reflection system



High visibility from any direction



Adjustable volume
Max. 90dB at 1m

Versatile, cost and energy efficient LED Signal Tower for every need.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- FB type: 2 selectable built-in alarms with adjustable volume up to 90dB at 1m.
- Installation: Direct or pole mount.
- Interchangeable LED module: No re-wiring even after installation.
- Main Body: Superior impact and heat resistant ABS resin.
- Lens: Superior weather resistant and light translucent AS resin.
- NPN/PNP Compatible: Except 100/220V AC LME-U type, compatible with NPN only.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

LME-U type

- Available 24V AC/DC only.
- Silver Color Body.
- Cabtyre Cable: Versatile and flexible 3m cable.
- Pole-mount with circular mounting base or wall mount bracket as an optional accessory.

Available by Special Order

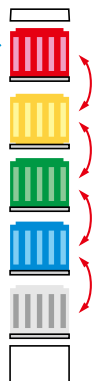
- UL type (E215660)

Interchangeable LED modules

- Changeable color sequence: Easy to add / remove up to 5 colored modules even after installation.
- Note: LED modules of the same color within a signal tower will light up simultaneously.

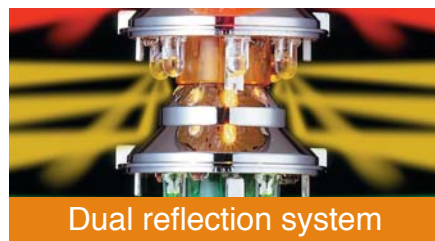
The wiring remains the same

Each color of LED module corresponds to the lead wire color.



Easy to add and remove

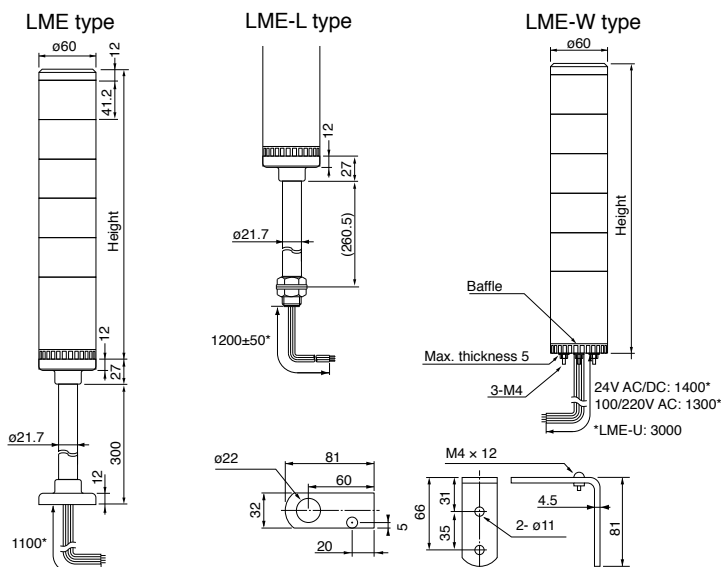
If the number of LED module is changed, center shaft must be purchased.



Dual reflection system

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and 5 color LED modules create bright, distinctive, even illumination.

Dimensions



100/220V AC type

Height (mm)
1 Light: 206.0
2 Lights: 247.2
3 Lights: 288.4
4 Lights: 329.6
5 Lights: 370.8

24V AC/DC type

Height (mm)
1 Light: 150.0
2 Lights: 191.2
3 Lights: 232.4
4 Lights: 273.6
5 Lights: 314.8



(mm)

Wiring Diagram

Note: See page 169 for wiring diagram

LME Type

Number of Stacks	Model	Rated Voltage	Power Consumption	Mass		
				LME	LME-L	LME-W
1 Light	LME-102	24V AC/DC	2.2W	0.42kg	0.77kg	0.28kg
	LME-110	100V AC	5.1W	0.66kg	1.01kg	0.52kg
	LME-112	120V AC				
	LME-120	220V AC				
2 Lights	LME-202	24V AC/DC	3.4W	0.48kg	0.82kg	0.34kg
	LME-210	100V AC	7.1W	0.72kg	1.06kg	0.58kg
	LME-212	120V AC				
	LME-220	220V AC				
3 Lights	LME-302	24V AC/DC	3.8W	0.54kg	0.87kg	0.40kg
	LME-310	100V AC	7.9W	0.78kg	1.11kg	0.64kg
	LME-312	120V AC				
	LME-320	220V AC				
4 Lights	LME-402	24V AC/DC	4.2W	0.60kg	—	0.46kg
	LME-410	100V AC	8.7W	0.84kg	—	0.70kg
	LME-412	120V AC				
	LME-420	220V AC				
5 Lights	LME-502	24V AC/DC	4.6W	0.66kg	—	0.52kg
	LME-510	100V AC	9.5W	0.90kg	—	0.76kg
	LME-512	120V AC				
	LME-520	220V AC				

FB type: approx. 60 flashes per minute.

How to Order

LME-502UFBW-RYGBC-Z

Stack
1~5

Rated Voltage
02: 24V AC/DC
10: 100V AC
12: 120V AC
20: 220V AC

Body Color
Blank: Ivory white
N: Black color
U: Silver color

Type
Blank: Continuous light
FB: Continuous or flashing light with audible alarm

Mount
Blank: Pole Mount (with circular mounting bracket)
K: Pole Mount (with SZ-020)
L: Pole Mount (with SZ-013)
W: Direct Mount

Color of LED
R: Red
Y: Amber
G: Green
B: Blue
C: Clear/White
Top to bottom

Color of Lens
Blank: Colored lens
Z: Clear lens

LME-S / LME-Q

Signal Tower



LED



Cabtyre



90dB at 1m
(FB type)

Electronic Sound 2
(FB type)

∅60

IP65

NPN
Open collector



Reflection system



High visibility from any angle



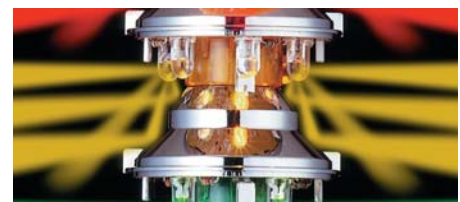
Adjustable volume
Max. 90dB at 1m

Versatile, cost and energy efficient LED Signal Tower for every need.

- PATLITE's Exclusive Hybrid Prism-Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright, distinctive illumination while saving energy (Patent Pending).
- FB type: 2 selectable built-in alarms with adjustable volume up to 90dB at 1m.
- Installation: Direct or pole mount.
- Interchangeable Modules: No re-wiring even after installation.
- Patlite's new single tier, triple or quadruple color unit: For multi color display applications with limited vertical space.
- Pole-mount type: Includes circular mounting base as standard equipment.
- Available Colors: Refer to color combination table (p. 54).

Available by Special Order

- PNP compatible.
- Silver color body.
- UL compliance.



Dual reflection system

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and 5 color LED modules create bright, distinctive, even illumination.

Patlite's new single tier, triple color or quadruple color unit

S1: Red, Amber, Green



Q1: Red, Amber, Green, Blue



S4: Red, Green, Blue



Q2: Red, Amber, Green, Clear/White



S7: Amber, Green, Blue



Q4: Amber, Green, Blue, Clear/White

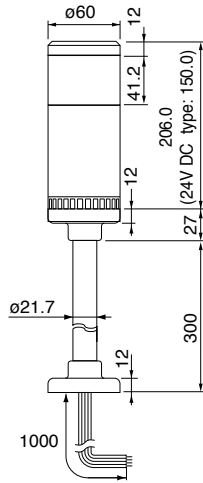


Clear lens

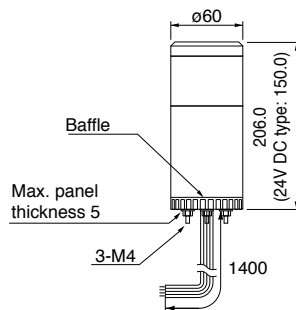
Patlite's new single-tier, multi-color unit is ideally suited for installations requiring a multiple color display but have limited vertical space. Clear lenses distinguish between lit and unlit lamps, and the unit set integrates visually with the equipment to which it is attached.

Dimensions

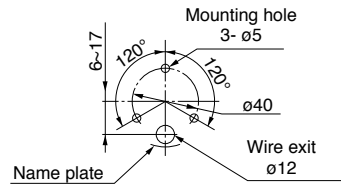
LME type



LME-W type



Mounting Dimension (LME-W)



(mm)



Wiring Diagram

Note: See page 169 for wiring diagram

LME-S / LME-Q Type

LME-S type

Number of Stacks	Model	Rated Voltage	Power Consumption	Mass	
				LME	LME-W
1 Light	LME-102S	24V DC	2.2W	0.42kg	0.28kg
	LME-110S	100V AC	5.1W	0.66kg	0.52kg
	LME-112S	120V AC			
	LME-120S	220V AC			
	LME-123S	230V AC			

FB type: approx. 60 flashes per minute.

LME-Q type

Number of Stacks	Model	Rated Voltage	Power Consumption	Mass	
				LME	LME-W
1 Light	LME-102Q	24V DC	2.2W	0.42kg	0.28kg
	LME-110Q	100V AC	5.1W	0.66kg	0.52kg
	LME-112Q	120V AC			
	LME-120Q	220V AC			
	LME-123Q	230V AC			

FB type: approx. 60 flashes per minute.

How to Order

LME-102UFBW-S1

Rated Voltage
 02: 24V DC
 10: 100V AC
 12: 120V AC
 20: 220V AC
 23: 230V AC

Body color
 Blank: Ivory white
 U: Silver color

Type
 Blank: Continuous light
 FB: Continuous or flashing light with audible alarm

Mount
 Blank: Pole Mount (with circular mounting bracket)
 W: Direct Mount

Color
 S1: Red, Amber, Green
 S4: Red, Green, Blue
 S7: Amber, Green, Blue
 Q1: Red, Amber, Green, Blue
 Q2: Red, Amber, Green, Clear/White
 Q4: Amber, Green, Blue, Clear/White

LMC

Signal Tower

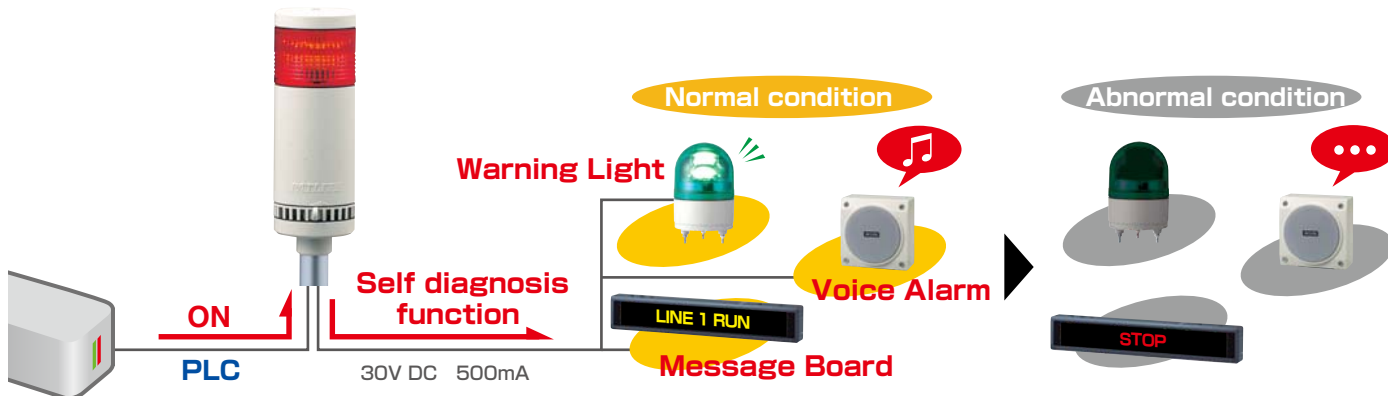


LED



ø60

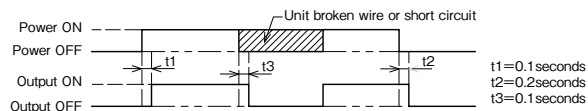
IP54



■ 24V DC

LED Unit	Power source (Signal Wire) OFF			Power source (Signal Wire) ON		
	Normal	Short-circuit	Contact Disconnected	Normal	Short-circuit	Contact Disconnected
LED	Turned off	Turned off	Turned off	continuous light	Turned off	Turned off
Output	OFF	OFF	OFF	ON	OFF	OFF

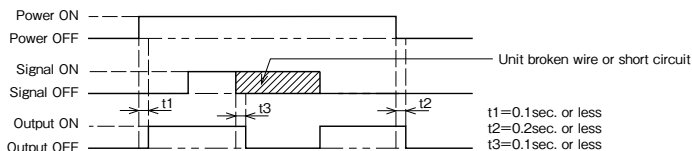
● Timing chart



■ 100/120/220V AC

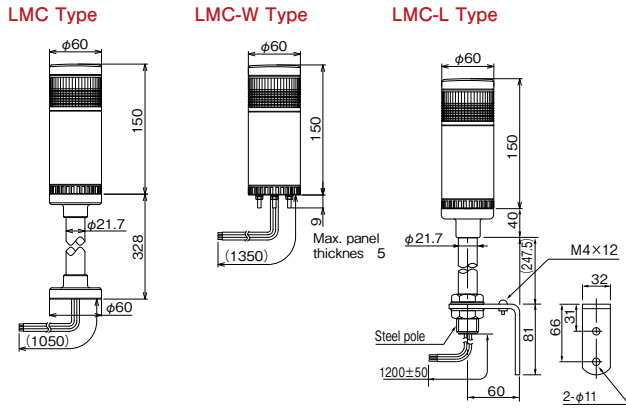
LED Unit	Power source OFF						Power source ON					
	Signal Wire OFF			Signal Wire ON			Signal Wire OFF			Signal Wire ON		
	Normal	Short-circuit	Contact Disconnected	Normal	Short-circuit	Contact Disconnected	Normal	Short-circuit	Contact Disconnected	Normal	Short-circuit	Contact Disconnected
LED	Turned off	Turned off	Turned off	Turned off	Turned off	Turned off	Turned off	Turned off	Turned off	continuous light	Turned off	Turned off
Output	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF

● Timing chart

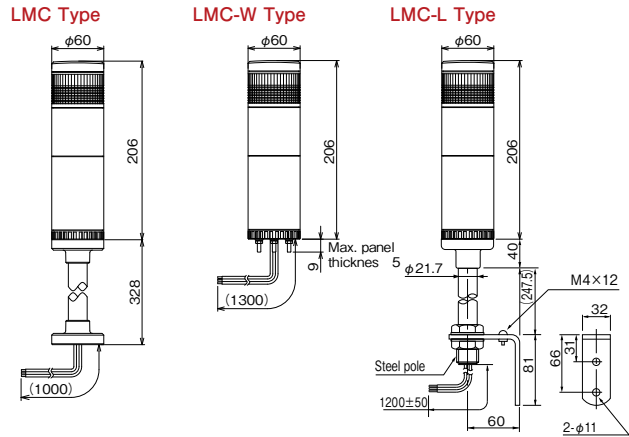


Dimensions

24V DC

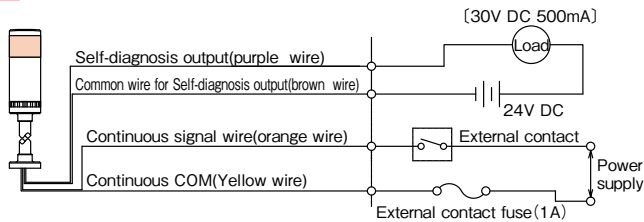


100/120/220V AC



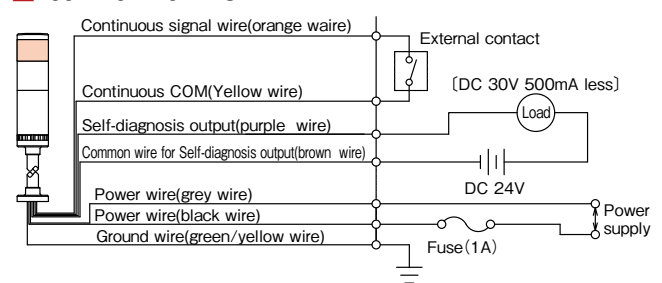
Wiring Diagram

24V DC



Wire kind, wire diameter
UL1430 AWG22

100/120/220V AC

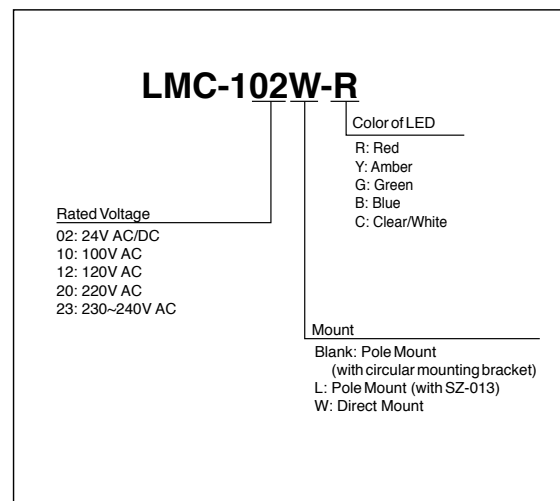


	Wire kind, wire diameter		
	Power wire	Signal wire	Ground wire
100/220V	UL1007 0.5mm ²	UL1430 0.3mm ²	UL1015 0.75mm ²
120/230V	UL1015 0.75mm ²		

LMC Type

Model	Rated Voltage	Power Consumption	Mass
LMC-102-□	24V AC/DC	1.5W	0.46kg
LMC-102 L -□			0.76kg
LMC-102W-□			0.30kg
LMC-110-□	100V AC	4.0W	0.71kg
LMC-110 L -□			1.01kg
LMC-110W-□			0.55kg
LMC-112-□	120V AC	4.0W	0.71kg
LMC-112 L -□			1.01kg
LMC-112W-□			0.55kg
LMC-120-□	220V AC	5.0W	0.71kg
LMC-120 L -□			1.01kg
LMC-120W-□			0.55kg
LMC-123-□	230~240V AC	5.5W	0.71kg
LMC-123 L -□			1.01kg
LMC-123W-□			0.55kg

How to Order



LMS / LMS-U

Signal Tower



LED



∅60

IP65

NPN/PNP
Open collector

Ivory White Body
LMS Type



Silver Color Body
LMS-U Type



Reflection
system



High visibility
from any direction

Versatile, cost and energy efficient LED Signal Tower for every need.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- Original Dual Reflection System: For enhanced light diffusion, creating bright distinctive illumination while saving energy (Patent Pending).
- Installation: Pole mount.
- Interchangeable Modules: No re-wiring even after installation.
- Main Body: Superior impact and heat resistant ABS resin.
- Lens: Superior weather resistant and light translucent AS resin.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

- Silver Color Type (LMS-U).
- Cabtyre Cable: Versatile and flexible 3m cable.
- UL type (E215660).

Interchangeable LED modules

- Changeable color sequence: Easy to add/ remove up to 5 colored modules even after installation.
- Note: LED modules of the same color within a signal tower will light up simultaneously.

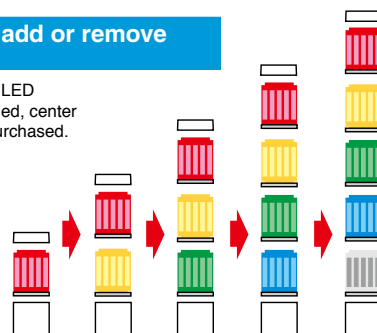
The wiring remains the same.

Each color of LED module corresponds to the lead wire color.

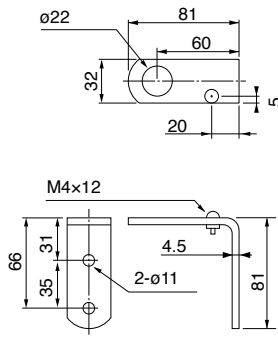
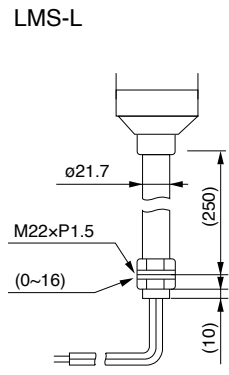
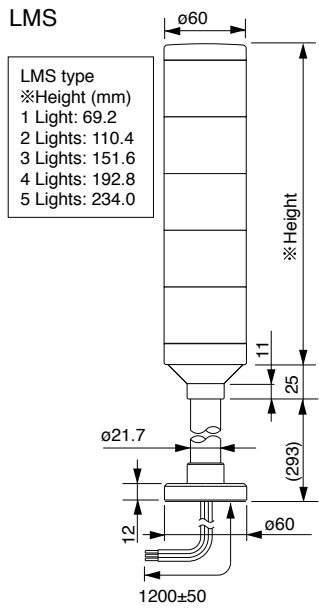


Easy to add or remove

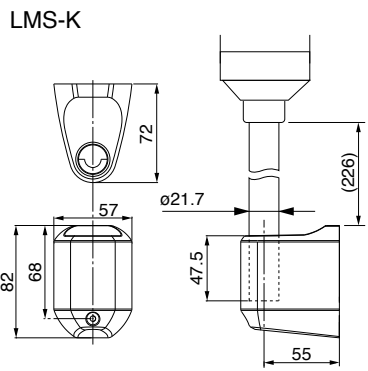
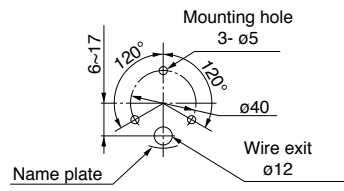
If the number of LED module is changed, center shaft must be purchased.



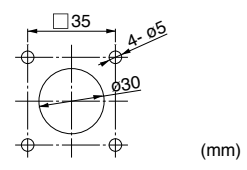
Dimensions



Mounting Dimension (LMS)



Mounting Dimension (LMS-K)



All clear lens type is also available.



Please add - Z after the part number when you place the order for all clear lens type.

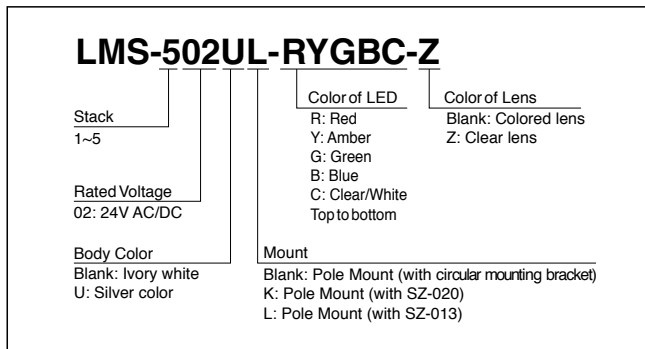
Wiring Diagram

Note: See page 169 for wiring diagram

LMS Type

Number of Stacks	Model	Rated Voltage	Power Consumption	Mass		
				LMS	LMS-L	LMS-K
1 Light	LMS-102	24V AC/DC	1.2W	0.29kg	0.62kg	0.42kg
2 Lights	LMS-202	24V AC/DC	2.4W	0.34kg	0.67kg	0.47kg
3 Lights	LMS-302	24V AC/DC	2.8W	0.39kg	0.72kg	0.52kg
4 Lights	LMS-402	24V AC/DC	3.2W	0.44kg	0.72kg	0.57kg
5 Lights	LMS-502	24V AC/DC	3.6W	0.49kg	0.82kg	0.62kg

How to Order



LHE

Signal Tower



LED



90dB at 1m
(FB type)

Electronic Sound 2
(FB type)

∅70

IP65
(FB type IP54)

NPN/PNP
Open collector



Reflection system



Adjustable volume
Max. 90dB at 1m

Signal Tower with waterproof design for wet environments.

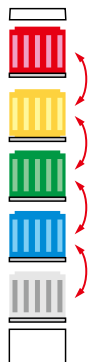
- Original LED reflection system: Improves brightness and provides maintenance free operation.
- FB type: 2 built-in alarms with adjustable volume up to 90dB at 1m.
- Installation: Direct mount; pole mount is available with optional mounting pole.
- Interchangeable Modules: No re-wiring even after installation.
- Lens: Superior impact and heat resistant AS resin for superior durability and light transmission.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

- UL type (E215660).

Interchangeable LED modules

- Changeable color sequence: Easy to add / remove up to 5 colored modules even after installation.
- Note: LED modules of the same color within a signal tower will light up simultaneously.

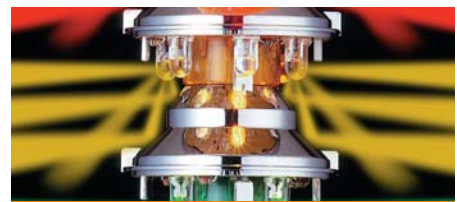


Easy to add and remove

If the number of LED module is changed, center shaft must be purchased.

The wiring remains the same

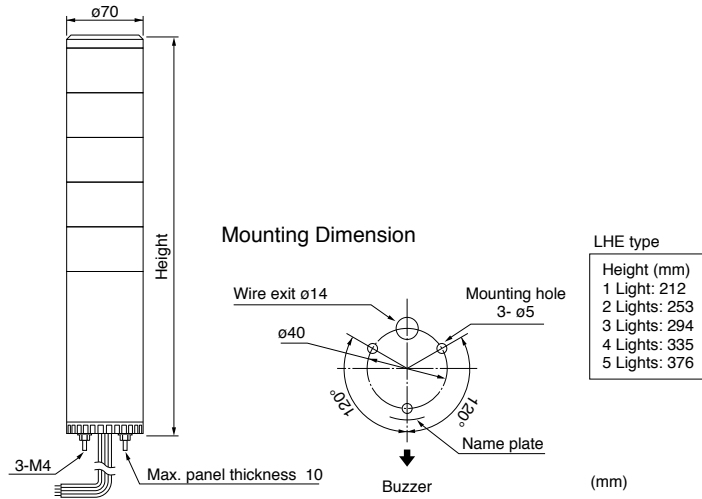
Each color of LED module corresponds to the lead wire color.



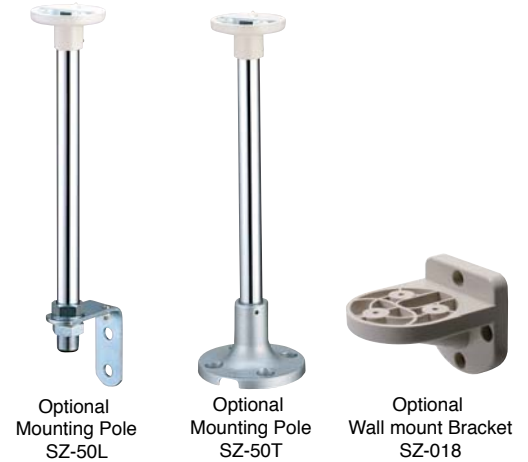
Dual reflection system

PATLITE's original dual reflection system with its exclusive hybrid prism-cut lens and 5 color LED modules create bright, distinctive, even illumination.

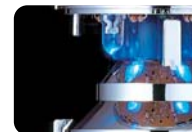
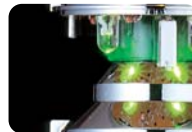
Dimensions



Optional parts



"Super Bright" LED provides highest level of visibility.



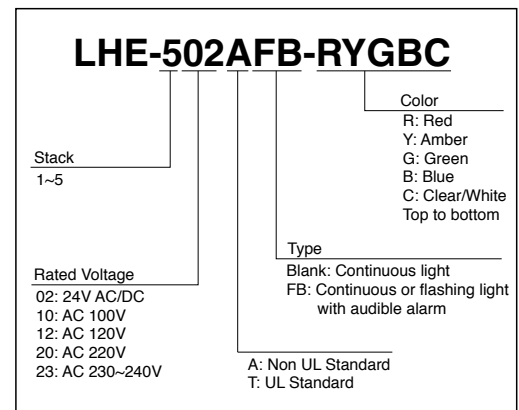
Wiring Diagram

Note: See page 168 for wiring diagram

LHE Type

Number of Stacks	Model	Rated Voltage	Power Consumption
1 Light	LHE-102A/AFB	24V AC/DC	2.2W
	LHE-110A/AFB	100V AC	4.7W
	LHE-112T/TFB	120V AC	4.7W
	LHE-120A/AFB	220V AC	4.7W
	LHE-123A/AFB	230~240V AC	4.7W
2 Lights	LHE-202A/AFB	24V AC/DC	3.4W
	LHE-210A/AFB	100V AC	6.4W
	LHE-212T/TFB	120V AC	6.4W
	LHE-220A/AFB	220V AC	6.4W
	LHE-223A/AFB	230~240V AC	6.4W
3 Lights	LHE-302A/AFB	24V AC/DC	4.4W
	LHE-310A/AFB	100V AC	7.9W
	LHE-312T/TFB	120V AC	7.9W
	LHE-320A/AFB	220V AC	7.9W
	LHE-323A/AFB	230~240V AC	7.9W
4 Lights	LHE-402A/AFB	24V AC/DC	5.4W
	LHE-410A/AFB	100V AC	9.4W
	LHE-412T/TFB	120V AC	9.4W
	LHE-420A/AFB	220V AC	9.4W
	LHE-423A/AFB	230~240V AC	9.4W
5 Lights	LHE-502A/AFB	24V AC/DC	6.4W
	LHE-510A/AFB	100V AC	10.9W
	LHE-512T/TFB	120V AC	10.9W
	LHE-520A/AFB	220V AC	10.9W
	LHE-523A/AFB	230~240V AC	10.9W

How to Order



FB type approx. 60 flashes per minute.

LU7

Signal Tower



LED



90dB at 1m
(FB type)

Electronic Sound 2
(FB type)

∅70

IP65

NPN/PNP
Open collector



Versatile modular Signal Tower featuring easy assembly and wiring designed for every need.

- PATLITE's Exclusive Hybrid Prism Cut Lens: For enhanced visibility from any direction and distance.
- FB type: 2 selectable built-in alarms with adjustable volume up to 90dB at 1m.
- Installation: Direct mount (Pole mount with optional parts).
- Color-coordinated Terminal Block: Corresponds to the lens colors for quick wiring verification in the base unit.
- Interchangeable LED module: No re-wiring even after installation.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

- RoHS Compliance.
- Silver Color Body.

LED Module

Model	Color
LU7-E-R	Red
LU7-E-Y	Amber
LU7-E-G	Green
LU7-E-B	Blue
LU7-E-C	Clear/White



Base Module

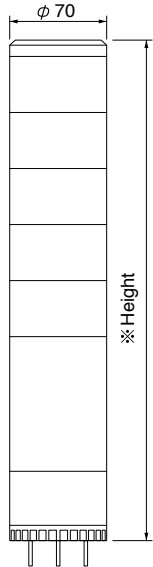
Model	Rated Voltage	Alarm / Flash
LU7-02	24V DC	-
LU7-02FB	24V DC	2 sounds / Flash
LU7-M2	90~250V AC	-
LU7-M2FB	90~250V AC	2 sounds / Flash

FB type: approx. 60 flashes per minute.



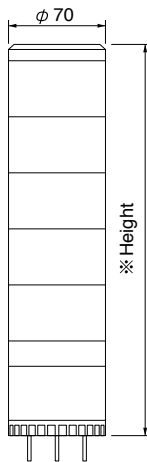
Dimensions

LU7 Standard Body



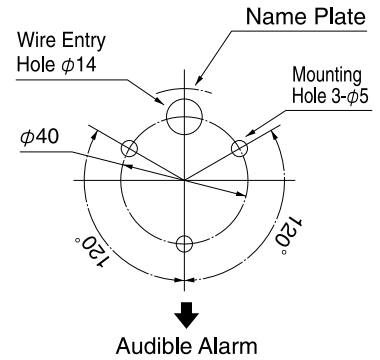
※Height(mm)	
1Light	: 211
2Lights	: 252
3Lights	: 293
4Lights	: 334
5Lights	: 375

LU7-02S Short Body



※Height(mm)	
1Light	: 118
2Lights	: 159
3Lights	: 200
4Lights	: 241
5Lights	: 282

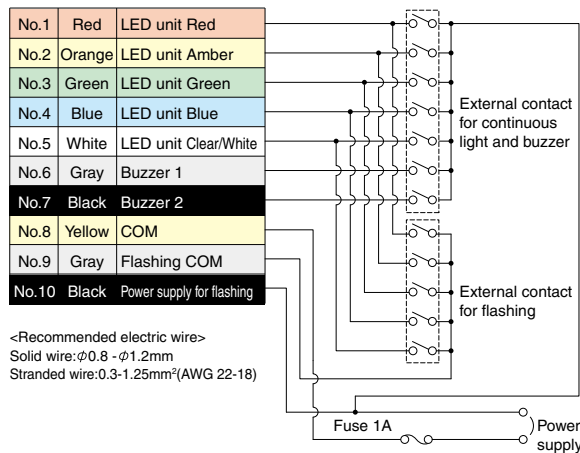
Mounting Dimensions



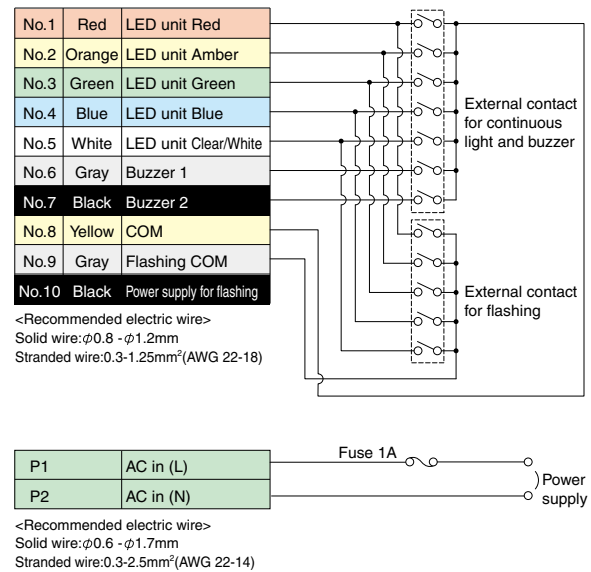
Wiring Diagram

Wiring example for base unit

LU7-02FB 24V DC



LU7-M2FB 90-250V AC



LU7-02FB



LU7-M2FB



LED Units



Model	LU7-E-R	LU7-E-Y	LU7-E-G	LU7-E-B	LU7-E-C
Unit color	LED Unit RED	LED Unit AMBER	LED Unit GREEN	LED Unit BLUE	LED Unit CLEAR/WHITE
Rated Voltage	24V DC				
Operating Voltage Range	Rated Voltage $\pm 10\%$ (21.6~26.4V)				
Current/Power Consumption	52mA/1.25W		42mA/1.0W		
Operating Temperature Range	-30°C~+60°C				
Mass	60g $\pm 10\%$				

※ Operates with all voltage base units LU7-02, LU7-02FB, LU7-M2 and LU7-M2FB listed below.

Base Units

Model	LU7-02S	LU7-02	LU7-02FB	LU7-M2	LU7-M2FB	Unit Color Variation
Rated Voltage	24V DC			90~250V AC (50/60Hz)		
Operating Voltage Range	Rated voltage $\pm 10\%$ (21.6~26.4V)			90~250V AC (50/60Hz)		
Buzzer	—		*Buzzer 1 **Buzzer 2	—		
Current Consumption	—		50 \pm 10mA ; 24 \pm 10mA	—		
Power Consumption	—		1.2 \pm 0.25W ; 0.58 \pm 0.25W	—		
Sound Level	—		Max: 90 \pm 5dB (at 1m) Min: 70dB or Less (at 1m)	—		
Flashing Cycle	—		60 \pm 12 flashes per minute	—		
Operating Temperature Range	-30°C~+60°C			-25°C~+55°C		
Mounting Direction	Upright, indoor only			Upright, indoor only		
Protection Rating	IP65			IP65		
Mass	150g $\pm 10\%$	250g $\pm 10\%$	280g $\pm 10\%$	310g $\pm 10\%$	340g $\pm 10\%$	
Open Collector	PNP/NPN			NPN		

※ *Buzzer 1:Continuous sound

**Buzzer 2:Intermittent sound

【External Contact Capacity】

Voltage specifications		24V DC	90~250V AC
LED Unit [1-Light]	Current Consumption	Red·Amber : 52mA	Green·Blue·Clear/White : 42mA
	Contact Capacity	Is ≥ 100 mA, Vs ≥ 35 V AC	
Buzzer	Current Consumption	50mA	
	Inrush Current	100mA	
	Contact Capacity	Is ≥ 100 mA, Vs ≥ 35 V AC	
Power Supply	Current Consumption	360mA	40mA (250V)~110mA (90V)
	Contact Capacity	Is ≥ 500 mA Vs ≥ 35 V AC	9A (90V)~25A (250V) Vs ≥ 250 V AC

※Is : Current Capacity Vs : Withstanding voltage

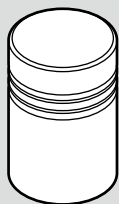
【External Contact Fuse】

Voltage	Amperage rating of fuse
All models	250V 1A

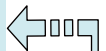
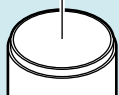
※ Use a fuse conforming to the rated current of the machine of the installed product.
(Example: UL class J type fuse)



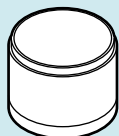
Voice and Sound Module



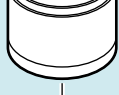
Model	LU7-V1
Type	Voice Synthesizer
Rated Voltage	DC24V
Power Consumption	3.5W
Weight	0.17kg



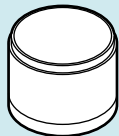
LED Units



Model	LU7-E-R	LU7-E-Y	LU7-E-G	LU7-E-B	LU7-E-C
Unit Color					
Rated Voltage	24V DC				
Operating Voltage Range	Rated Voltage ± 10% (21.6~26.4V)				
Current/Power Consumption	52mA/1.25W		42mA/1.0W		
Operating Temperature Range	-30°C ~ +60°C				
Mass	60g ± 10%				

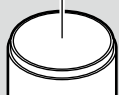


LED Strobe Module

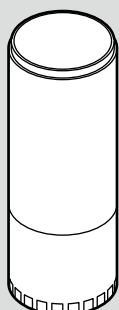


Model	LU7-XE-R	LU7-XE-Y	LU7-XE-G	LU7-XE-B	LU7-XE-C
Unit Color					
Rated Voltage	24V DC				
Power Consumption	290mA	290mA	140mA	270mA	280mA
Mass	0.07kg				

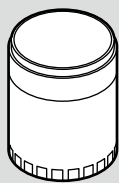
RED AMBER GREEN BLUE CLEAR/WHITE



BASE Units



Standard Body



Short Body

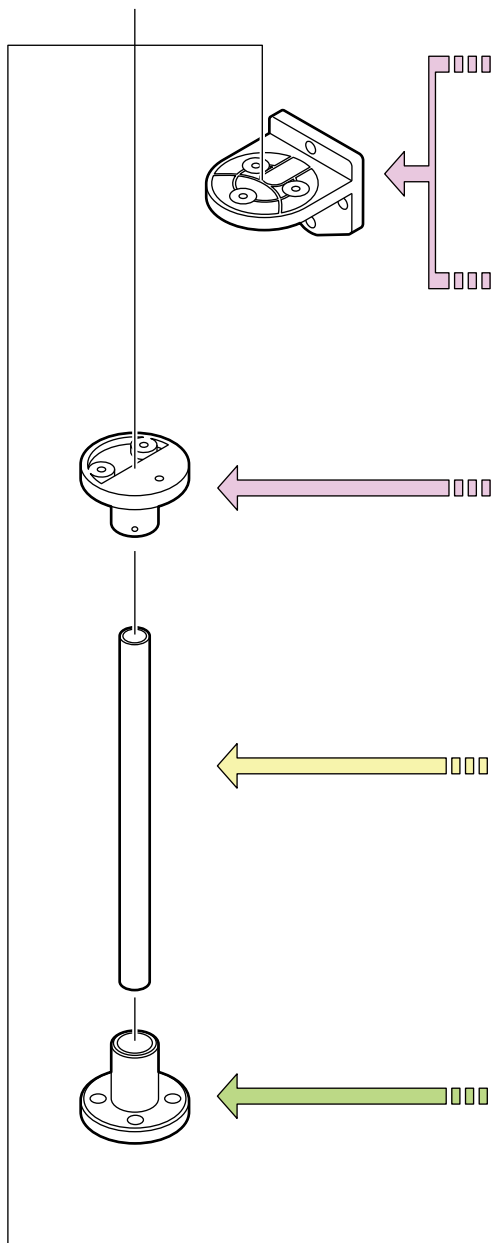
Model	LU7-02S	LU7-02	LU7-02FB	LU7-M2	LU7-M2FB
Color					
Standard Body/Short Body	Short	Standard		Standard	
Rated Voltage	24V DC			90~250V (50/60Hz)	
Operating Voltage Range	Rated voltage ± 10% (21.6~26.4V)			90~250V (50/60Hz)	
Buzzer	—	*Buzzer 1 : *Buzzer 2		—	*Buzzer 1 : *Buzzer 2
Current Consumption	—	50 ± 10mA; 24 ± 10mA		—	50 ± 10mA; 24 ± 10mA
Power Consumption	—	1.2 ± 0.25W; 0.58 ± 0.25W		—	1.8 ± 0.25W; 1.3 ± 0.25W
Sound Level	—	Max: 90 ± 5dB (at 1m) Min: 70dB or Less (at 1m)		—	Max: 90 ± 5dB (at 1m) Min: 70dB or Less (at 1m)
Flashing Cycle	—	60 ± 12 flashes per minute		—	60 ± 12 flashes per minute
Operating Temperature Range	-30°C ~ +60°C			-25°C ~ +55°C	
Mounting Direction	Upright, Indoor only			Upright, Indoor only	
Protection Rating	IP65			IP65	
Mass	150g ± 10%	250g ± 10%	280g ± 10%	310g ± 10%	340g ± 10%
Open Collector	PNP/NPN			NPN	

* Buzzer 1 : Continuous Sound **Buzzer 2 : Intermittent Sound

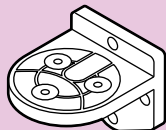
Ivory White Silver Color (U) Black (K)

Optional Parts

Optional Parts

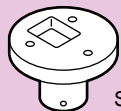


Wall Mount Bracket



Model	SZ-18	SZ-18U	SZ-18K
Color	Ivory White	Silver Color (U)	Black (K)

Upper Bracket



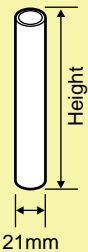
SZ-50NPT(For 1/2" NPT Pole)

Upper Bracket



Model	SZ-50-U	SZ-50U-U	SZ-50K-U
Color	Ivory White	Silver Color (U)	Black (K)

Pole



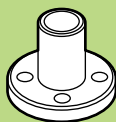
Steel Pole

Model	POLE-800S21	POLE-300S21	POLE-100S21
Height	800mm	300mm	100mm

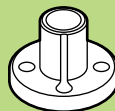
Aluminum Pole

Model	POLE-800A21	POLE-300A21	POLE-100A21
Height	800mm	300mm	100mm

Mount Bracket



SZ-016A
(For ϕ 21.7mm Pole)



SZ-70-B
(For ϕ 21.7mm Aluminium Pole Only)

Wall Mount Bracket

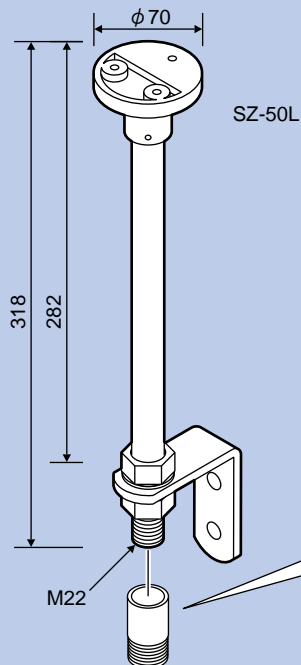
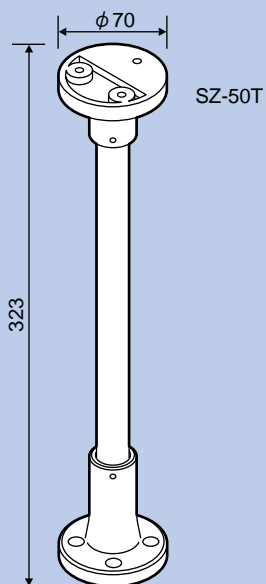


SZ-020
(For ϕ 21.7mm Pole)

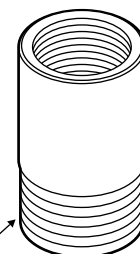


SZ-017
(For ϕ 21.7mm Pole)

Pre-assembled



Adaptor



SZ-904
For 3/4" NPT

LU7-V1

Sound Module



80dB at 1m

MP3 (4 Messages)

ø70

IP65

NPN/PNP
Open collector

Stackable sound module with high volume in all directions.

- Volume⁽¹⁾: Adjustable with internal control, high level of 80dB at 1m in all direction.
- Playback System⁽²⁾: High quality MP3, alarms, melodies or up to 4 messages in 32 seconds.
- Operating Terminal / Playback Sound: Selected by internal jumper placement.
- CE compliant.
- UL approved.

(1) Sound level may vary depending on type of sound.
 (2) Sound data is pre-recorded per order at the factory.

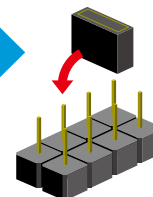
Stackable audible alarm

- Available for all LU7 base styles.
- Easily mounts on top of the light stack.

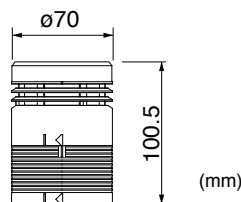


Selectable playback sound

- The jumper position determines the sound.



Dimensions



Head cover is supplied with the base unit.

LU7-V1 Type

Model	Rated Voltage	Power Consumption	Mass
LU7-V1	24V DC	3.5W	0.17kg

LU7-XE

LED Strobe Module

LU7-XE



LED

ø70

IP65

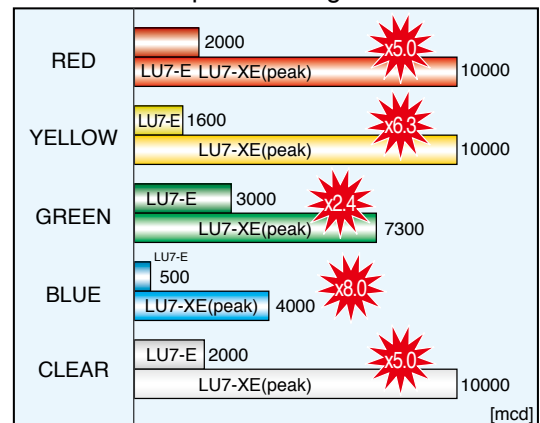
NPN/PNP
Open collector

Stackable LED strobe module saves energy and requires low maintenance.

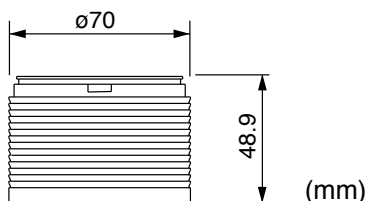
- Application⁽¹⁾: For use with the LU7 series signal tower.
- Lighting Pattern: Double-flash for a visually stunning display.
- LED: Super bright for enhanced visibility.
- Assembly: Stackable and interchangeable before or after installation.

(1) For use with the LU7-02 and LU7-02FB bases only.

Comparative Brightness



Dimensions



LU7-XE Type

Color	Model	Rated Voltage	Power Consumption	Mass
Red	LU7-XE-R	24V DC	290mA	0.07kg
Amber	LU7-XE-Y	24V DC	290mA	0.07kg
Green	LU7-XE-G	24V DC	140mA	0.07kg
Blue	LU7-XE-B	24V DC	270mA	0.07kg
Clear/White	LU7-XE-C	24V DC	280mA	0.07kg

WME-A

Signal Tower



LED



90dB at 1m

Electronic
Sound 2

W70 D80

IP65
(FB type: IP54)

NPN/PNP
Open collector



Exclusive wall-mount design saves space and enhances its integral appearance.

- FB type: Built-in audible alarm up to 90dB at 1m .
- Installation: Easy vertical and horizontal installation with mounting bracket.
- Interchangeable Modules: No re-wiring even after installation.
- Mount option: Compatible with household switch box (JISC 8336 with 82.5m pitch).
- Main body: Made of ABS resin.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- NPN/PNP Compatible: 24V DC type ONLY.
- Available Colors: Red, Amber, Green, Blue, Clear/White.

Available by Special Order

- UL type (E215660).
- 1 stack type.

Interchangeable Modules

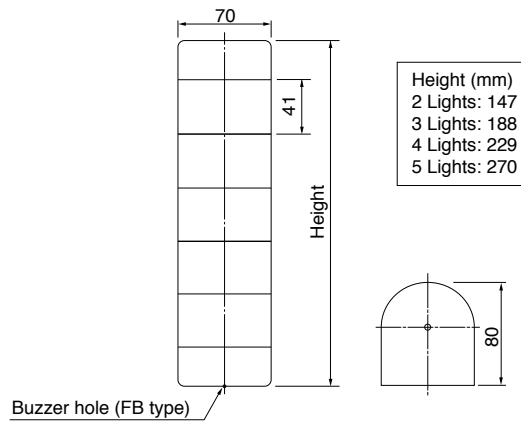
If the number of LED modules are changed, center shaft and mounting bracket must be purchased.



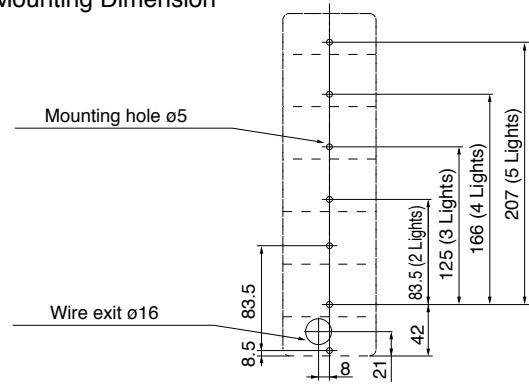
Note: When the same colored modules are in one light tower, they will light simultaneously.

Individual module control is possible by special order.

Dimensions



Mounting Dimension



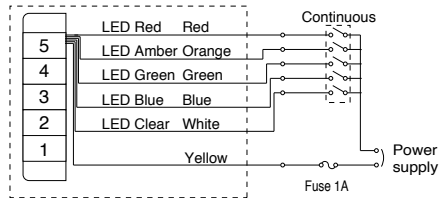
※ When installing, please keep the buzzer hole faced downward.

(mm)

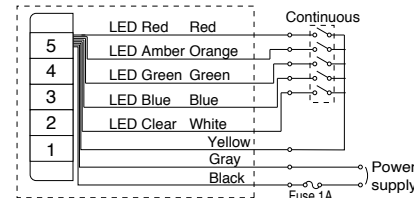
Wiring Diagram

WME-A

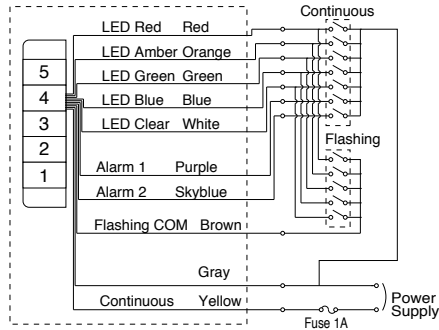
Continuous light
24V AC/DC



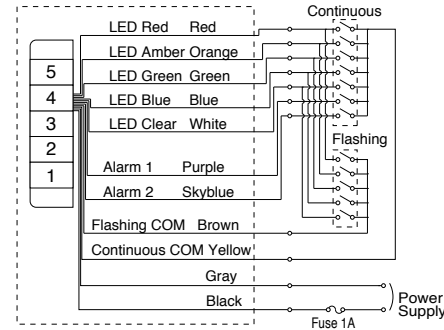
90~250V AC



Continuous or flashing light with audible alarm
24V AC/DC



90~250V AC



Signal line voltage and current per LED module

Model	Voltage Type	Signal Line Voltage	LED					Alarm	
			Signal Line Current					Signal Line Current	Inrush Current
			R	A	G	B	C		
WME-A	24V AC/DC	24V AC/DC	35mA	50mA	40mA	250mA			
	90~250V AC	24V DC							

Note: See page 173 for wiring diagram

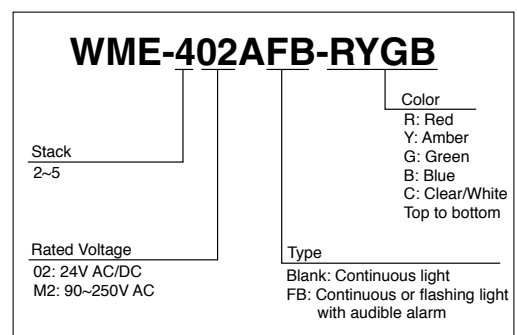
WME-A Type

Number of Stacks	Model	Rated Voltage	Power Consumption
2 Lights	WME-202A	24V AC/DC	2.3W
	WME-2M2A	90~250V AC	5.2W(at 200V)
3 Lights	WME-302A	24V AC/DC	2.8W
	WME-3M2A	90~250V AC	6.6W(at 200V)
4 Lights	WME-402A	24V AC/DC	3.8W
	WME-4M2A	90~250V AC	8.6W(at 200V)
5 Lights	◎WME-502A	24V AC/DC	4.8W
	◎WME-5M2A	90~250V AC	10.6W(at 200V)

WM type: Bulb--T20 BA15D

FB type approx. 60 flashes per minute. ◎: Custom order

How to Order



WSST

Manual Control Box



LED



Applications

- Lean manufacturing workstations
- Remote visual indication of line status for managers and line supervisors
- Safety and security applications
- Manual assembly operations
- Retail check stands
- Call centers



Tower lights, cables and poles are sold separately.

PATLITE's new WSST Control Box is the latest exciting product that offers all-in-one functionality as well as remote operation capability to meet the growing needs of the manufacturing sector and beyond.

FEATURES

- Universal manual control box for PATLITE visual alert LED light towers.
- Accommodate up to 5 LEDs (Red, Amber, Green, Blue and Clear).
- Optional sound alarm available (must purchase FB type).
- Each light module can be manually configured for “steady on” or “flashing” (must purchase FB type).
- Sturdy metal construction with 6 color coordinated push buttons.
- Various configurations available including all in-one and remote mounting capabilities.
- Very easy setup and operation. All necessary components are included in the package.

*Available soon

HSST

Manual Indicating Light



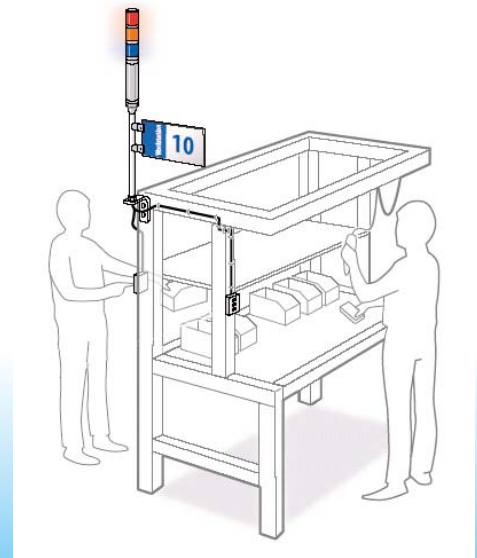
Complete HSST-312 Kit



Control box

12inch mounting pole & bracket

OPTIONAL
Extension cable available in 10 ft. segments (DT-HSST-10).



LED



Applications

- Assembly workstations
- Safety and security applications
- Call centers
- Retail check stands
- Hospitals
- Airports

The HSST kit is a low cost complete turn-key solution for manually controlling a pre-assembled, pre-wired 3 stack light tower. The kit includes a 3 stack LED tower, pole, control box, brackets and AC adapter. Ideal for use in manual assembly operations where lean manufacturing practices are critical to the overall efficiency of the operation.

FEATURES

- HSST standard colors: red, yellow, and green.
- LED illuminating light offers maintenance-free operation.
- AC power adapter makes set-up easy in any location (UL Listed)
- Complete kit includes 3 LED, 50 mm diameter, signal tower in red/yellow/green with 4-foot cable, mounting brackets that fit standard cubicle partitions, and AC power adaptor.
- 120V AC power supply with 6 ft. cord length.
- 3 button switchbox with mounting screws.



LED



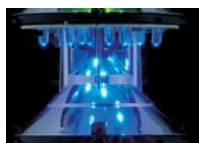
85dB at 1m
(FB type)

Electronic Sound 1
(FB type)

∅100

IP54

NPN/PNP
Open collector



Triple Reflection system

Large Signal Tower featuring enhanced visibility and downward illumination, designed for large machines.

- PATLITE's large prism cut lens: For enhanced downward illumination (cut lens: Φ100mm x 60mm high).
- Newly developed triple-reflection system: For enhanced visibility and low power consumption.
- Lighting Pattern: Flashing and continuous.
- FB type: Built-in buzzer with volume up to 85dB at 1m.
- Installation: Direct mount.
- Interchangeable Modules: No re-wiring even after installation.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- NPN/PNP compatible: 24V DC type; 100/220V AC compatible with NPN only.
- CE Compliance: 24V AC/DC type ONLY.
- Available Colors: Red, Amber, Green, Blue and Clear/White.

Interchangeable LED modules

- Changeable color sequence: Easy to add / remove up to 4 colored modules even after installation.
- Note: LED modules of the same color within a signal tower will light up simultaneously.

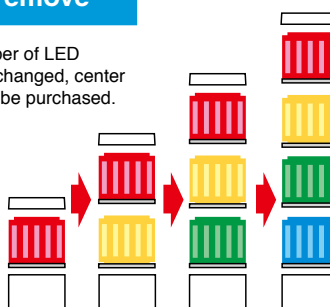


The wiring remains the same

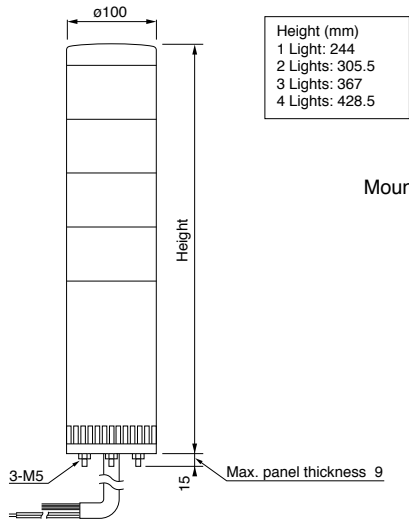
Each color of LED module corresponds to the lead wire color.

Easy to add and remove

If the number of LED module is changed, center shaft must be purchased.

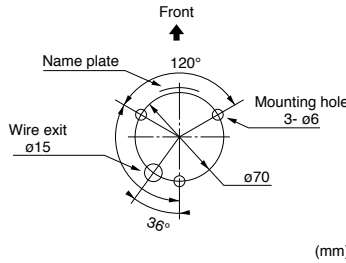


Dimensions



Height (mm)
 1 Light: 244
 2 Lights: 305.5
 3 Lights: 367
 4 Lights: 428.5

Mounting Dimension



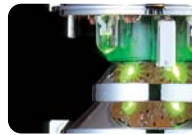
"Super Bright" LED provides highest level of visibility.



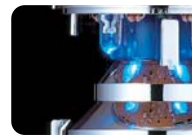
RED



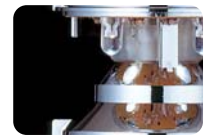
AMBER



GREEN



BLUE



CLEAR/WHITE

Wiring Diagram

Note: See page 170 for wiring diagram

LGE Type

Number of stacks	Model	Rated Voltage	LGE Power Consumption
1 Light	LGE-102 / 102FB	24V AC/DC	2.5W
	LGE-110 / 110FB	100V AC	5.7W
	LGE-120 / 120FB	220V AC	
2 Lights	LGE-202 / 202FB	24V AC/DC	4.5W
	LGE-210 / 210FB	100V AC	8.2W
	LGE-220 / 220FB	220V AC	
3 Lights	LGE-302 / 302FB	24V AC/DC	6.5W
	LGE-310 / 310FB	100V AC	10.7W
	LGE-320 / 320FB	220V AC	
4 Lights	LGE-402 / 402FB	24V AC/DC	8.5W
	LGE-410 / 410FB	100V AC	13.2W
	LGE-420 / 420FB	220V AC	

FB type: approx. 60 flashes per minute.

How to Order (1)

LGE-402FB-RYGB

Stack: 1~4

Rated Voltage:
 02: 24V AC/DC
 10: 100V AC
 20: 220V AC

Type:
 Blank: Continuous light
 FB: Continuous or flashing light with audible alarm

Color:
 R: Red
 Y: Amber
 G: Green
 B: Blue
 C: Clear/White
 Top to bottom

How to Order (2)

Light-Module

Light Unit	Color	Rated Voltage	Wattage
LGEM24-R	Red	24V AC/DC	2W
LGEM24-Y	Yellow		
LGEM24-G	Green		
LGEM24-B	Blue		
LGEM24-C	Clear		

Power Unit

Power Unit	Rated Voltage	Type Operation
LGEBEC-120	120V AC	Continuous
LGEBEC-24	24V AC/DC	
LGEBEC-120FB	120V AC	Continuous/Flashing with Audible Alarm option
LGEBEC-24FB	24V AC/DC	

Shaft Assembly

Part No.	Light- Modules per Base Unit
LGSHAFT-1	1
LGSHAFT-2	2
LGSHAFT-3	3
LGSHAFT-4	4

How to order (Example)

Three LED lights (Red, Yellow, Green) with flashing at input voltage of 120V AC

1. Power Unit: LGEBEC-120FB × 1pce
2. Light Module: LGEM-24-R × 1pce
 LGEM-24-Y × 1pce
 LGEM-24-G × 1pce

Note: LGEBEC contains a transformer that steps down the input voltage to 24V DC.

LKEH



MP3 compatible annunciator with LED Signal Tower



24V Type

105dB at 1m*

MP3 (LKEH-FV)

32 Sounds (LKEH-F□)

IP53

NPN Open Collector



*Actual sound level may vary depending on sound type.

Get the attention you need with PATLITE's Field Programmable LKEH series signal tower with audible alarm hybrid unit.

- Visible from great distance with ultra bright LEDs and 100mm diameter lens.
- Safe for use at high vibration environment with robust 2G vibration resistant design.
- Easy to control with only one common wire for both LEDs and audible signals.
- CE, RoHS, IP53, (UL, c-UL pending).
- Field programmable with SD card. (Sold separately) (LKEH-FV)
Message capacity is up to 64 seconds (64kbit/s) with 5 channels by a bit input and 31 channels by binary input.
- Volume is adjustable from 0 to 105dB (at 1m) to fit various environments.
- Smooth LED lens surface.

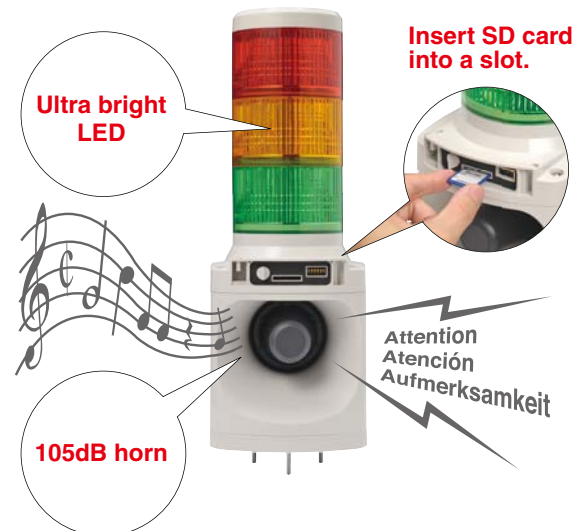
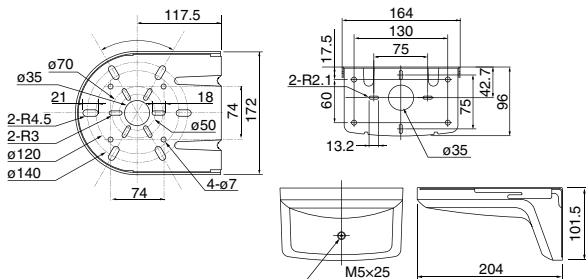
Available by Special Order

- PNP open collector transistor type.

Optional Parts

Wall mount bracket SZ-023

Bracket: steel (powder coating)
Bracket cover: AES resin



Voice Synthesizer (LKEH-FV)

- Total recording time of up to 64 seconds (64kbit/s) can be divided up to 5 channels with a bit input, or 31 channels with binary input.

32 sounds are pre-recorded in one unit (LKEH-FA/FC/FD/FE)

- 32 sounds are pre-recorded in one unit. 4 sound types are available.
- 8 sounds can be played back by a bit input, and 32 sounds by binary input.



T-06B0152
T-0710139
T-0710140

Type A

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Fur Elise	Maiden's Prayer	Minuet	Annie Laurie
London Bridge is Falling Down	Holdiridia	Mary Had a Little Lamb	Camptown Races
Kuck kuck	Der Schmied im Walde	On the Bridge of Avignon	Daydream Believer
Amaryllis	Mozart Symphony No. 40	Itsy Bitsy Spider	Ich bin ein Musikante
Jeux Interdits	Katuscha	Grandfather's Clock	Ave Maria

Type C

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Can't Take My Eyes off of You	Top of the World	The Entertainer	Amazing Grace
Amairono Kamino Otome	Les Champs-Elysees	Canon	Rara Sanshain
Uchuusenkan Yamato	Oshiete	Makenaide	Gonna Fly Now (Theme for 'Rocky')
I Don't Want to Miss a Thing	Yozorano Mukou	Aiwa Katsu	Haruyo Koi
Gattsudaze	Odoru Ponpokorin	Imasugu Kisu Mi	Truth

Type D

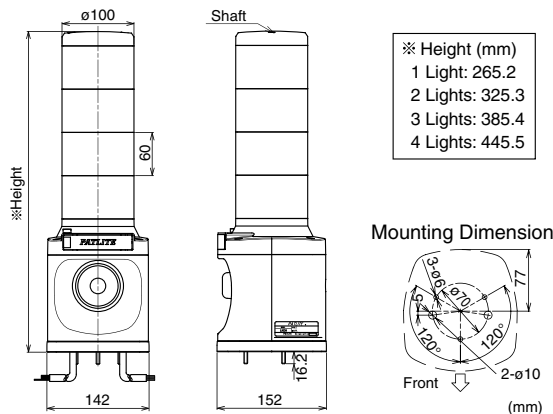
Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call sign
Oribiao Kikinagara	A September	Doyoubino Koibito	Akino Kehai
Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Happy Birthday	Hi Ho
I've been working on the Railroad	Bear Song	Toys Go Cha Cha Cha	Konnako Irukana
Wiegenlied	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	Oh My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Air

Type E

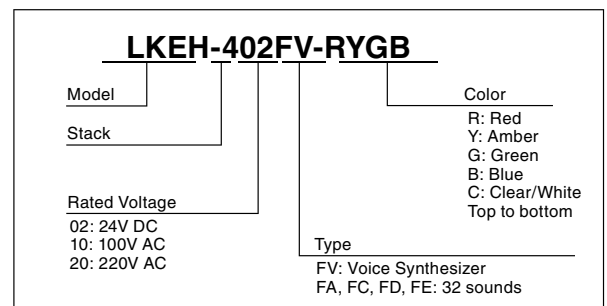
Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Inverted Receille	Annie Laurie
Stutter (rapid intermittent horn)	Synthesized Melody Chime	Galactic Motor	London Bridge is Falling Down
Bell (clear high pitched bell)	Chime	Ringin Phone	Mary Had a Little Lamb
Yelp (rapid siren)	Call Sign	Two Tone	Camptown Races
Rapid Hi-Lo	Train Ride	Alarm Clock	Amaryllis
Melody Chime	Galloping Hi-Lo	Ringin Hi-Lo	Mozart Symphony No.40
Synthesized Piano	Alien Chatter	Fur Elise	Ave Maria
Synthesized Bell	Falling Crystals	Minuet in G	Grandfather's Clock

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded in LKEH-FA, FC and FD types outside of Japan; therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. LKEH-FE type is recommended for use outside of Japan as this model does not include copyrighted music or songs, and the permission is not require.

Dimensions



How to Order



Note: See page 174 for wiring diagram

LKEH-FV Type

60 flashes per minute						
	Model	Rated Voltage	Voltage Range	Number of stacks	Power Consumption	Mass
Voice Type	LKEH-102FV	24V DC	24V DC±10%	1	14W	1.8kg
	LKEH-202FV			2	16W	2.0kg
	LKEH-302FV			3	18W	2.2kg
	LKEH-402FV			4	20W	2.4kg
	LKEH-110FV	100V AC	100V AC±10%	1	17W	2.5kg
	LKEH-210FV			2	20W	2.7kg
	LKEH-310FV			3	23W	2.9kg
	LKEH-410FV			4	26W	3.1kg
	LKEH-120FV	220V AC	220V AC±10%	1	17W	2.5kg
	LKEH-220FV			2	20W	2.7kg
	LKEH-320FV			3	23W	2.9kg
	LKEH-420FV			4	26W	3.1kg

LKEH-F□ Type

60 flashes per minute						
	Model	Rated Voltage	Voltage Range	Number of stacks	Power Consumption	Mass
Sound Type	LKEH-102FA/FC/FD/FE	24V DC	24V DC±10%	1	10.6W	1.8kg
	LKEH-202FA/FC/FD/FE			2	12.4W	2.0kg
	LKEH-302FA/FC/FD/FE			3	14.2W	2.2kg
	LKEH-402FA/FC/FD/FE			4	16W	2.4kg
	LKEH-110FA/FC/FD/FE	100V AC	100V AC±10%	1	17W	2.5kg
	LKEH-210FA/FC/FD/FE			2	20W	2.7kg
	LKEH-310FA/FC/FD/FE			3	23W	2.9kg
	LKEH-410FA/FC/FD/FE			4	26W	3.1kg
	LKEH-120FA/FC/FD/FE	220V AC	220V AC±10%	1	17W	2.5kg
	LKEH-220FA/FC/FD/FE			2	20W	2.7kg
	LKEH-320FA/FC/FD/FE			3	23W	2.9kg
	LKEH-420FA/FC/FD/FE			4	26W	3.1kg

EDLM / EDWM

Explosion-proof Signal Tower

ATEX & FM
CENELEC Standards



Testing Authority
NEC Article 505

LED



IP66

**NPN/PNP
Open collector***

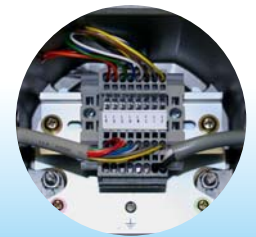
*AC 120/230/90-250V types are NPN compatible only



EDLM



EDWM



Terminal block

- Standards : Compliance to ATEX and NEC standards.
- Connection : Easy wiring for parallel connection to another interlocking device through 2 lead-in ports.
- Terminal Block : Easy connection to the signal tower by opening the bottom cover.
- Body : Made of aluminum alloy.
- Light Source : Long life, maintenance-free LED.
- Mounting : Wall mount, flush mount and horizontal mount. See page 52. (Photo shows model EDWM.)

Specifications (ATEX)

Type	EDLM-302FE	EDLM-312FE	EDLM-323FE	EDWM-502FE	EDWM-5M2FE
Rated Voltage	AC/DC 24V	AC 120V	AC 230V	AC/DC 24V	AC 90~250V
Signal Line Current (Per LED Module)	Red/Amber: 52.5mA Green: 20.0mA			Red: 22.6mA, Amber: 26.6mA, Green: 17.5mA Blue/White: 38.9mA	
Explosion Protection Ratings	Ⓔ II2G Ex d IIC T6 (Zone 1,2)			Ⓔ II2D Ex tD A21 IP66 T80°C (Zone 21, 22)	
Operating Temperature	-20°C~+50°C (no ice)				
Operating Humidity	45%~85%RH (Keep from dew condensation)				
Ambient Pressure	80~110kpa				
Lighting Pattern	Flashing (60±12 flashes per minute) / Continuous light				
IP	IP66				
Vibration Resistance	9.8m/s ²				
Mounting	Outdoor & Indoor Upright			Outdoor & Indoor Upright & Sideways	
Luminosity	Red: 350mcd, Amber: 580mcd Green: 1300mcd			Red/Green/White: 1000mcd Amber: 700mcd, Blue: 300mcd	
Mass (Main body)	4.3kg			4.7kg	
Material	Upper & Lower Case : Aluminum alloy(Housing finish: Melamine baking finish) Glass Case : Borosilicate glass Fitting Bracket : Stainless steel (SUS 316) Cable Gland : Brass				

Specifications (NEC)

Type	EDLM-302FA	EDLM-312FA	EDLM-323FA	EDWM-502FA	EDWM-5M2FA
Rated Voltage	AC/DC 24V	AC 120V	AC 230V	AC/DC 24V	AC 90~250V
Signal Line Current (Per LED Module)	Red/Amber: 52.5mA Green: 20.0mA			Red: 22.6mA, Amber: 26.6mA, Green: 17.5mA Blue/White: 38.9mA	
Explosion Protection Ratings	Class I, Zone 1 AEx d IIC T6				
Operating Temperature	-25°C~+50°C (no ice)				
Operating Humidity	45%~85%RH (Keep from dew condensation)				
Ambient Pressure	80~110kpa				
Lighting Pattern	Flashing (60±12 flashes per minute) / Continuous light				
IP	IP66				
Vibration Resistance	9.8m/s ²				
Mounting	Outdoor & Indoor Upright			Outdoor & Indoor Upright & Sideways	
Luminosity	Red: 350mcd, Amber: 580mcd Green: 1300mcd			Red/Green/White: 1000mcd Amber: 700mcd, Blue: 300mcd	
Mass (Main body)	4.3kg			4.7kg	
Material	Upper & Lower Case : Aluminum alloy(Housing finish: Melamine baking finish) Glass Case : Borosilicate glass Fitting Bracket : Stainless steel (SUS 316)				

EDLM & EDWM are covered by the specifications shown in the **shaded** areas below

Common in Europe

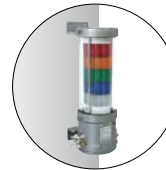
• ATEX directive is CENELEC standard.

Classification	Standard	PATLITE Models	Present Continuously	Present Intermittently	Present Abnormally
ATEX, IEC/EU Directive 94/9/EC	IEC 60079-10 EN 60079-10	EDLM, EDWM	Zone 0	Zone 1	Zone 2

Common in the USA

• NEC standard is National Electrical Code.

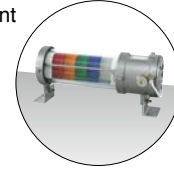
Classification	Standard	PATLITE Models	Present Continuously	Present Intermittently	Present Abnormally
NEC Article 505	ANSI/NFPA 71	EDLM, EDWM	Zone 0	Zone 1	Zone 2
NEC Article 500	ANSI/NFPA 70	—	Division 1		Division 2



Wall Mount

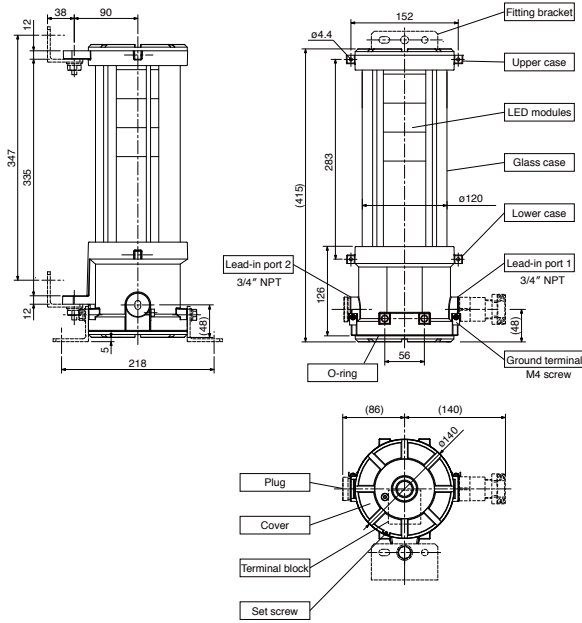


Flush Mount

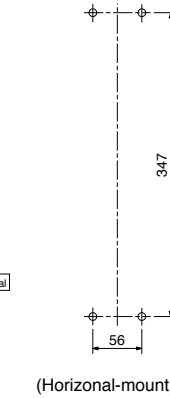


Horizontal Mount

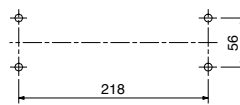
Dimensions (EDLM, EDWM)



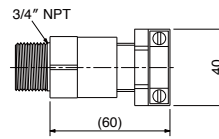
■ Installation (Wall-mount)



(Horizontal-mount)

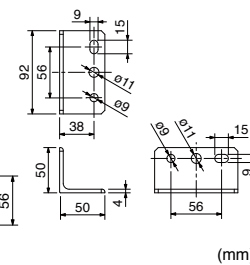


■ Cable gland*



*ATEX model ... Included
*NEC model ... Sold separately

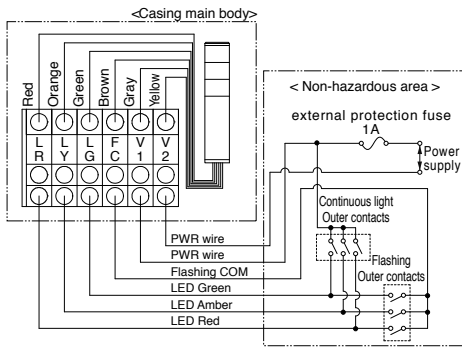
■ Bracket for flush mount



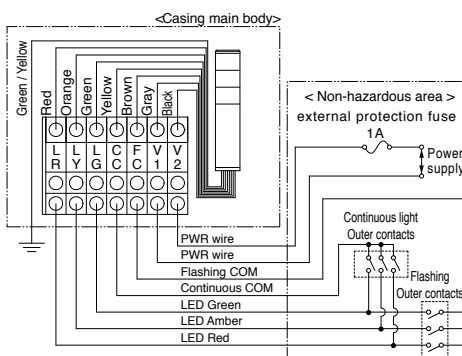
rear view: EDWM (5 color LED)

Wiring Diagram (EDLM (3 color LED))

■ EDLM-302FE/FA

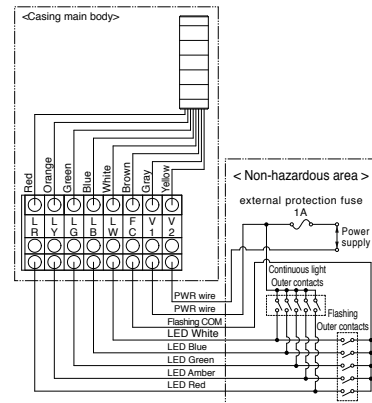


■ EDLM-312FE/FA
EDLM-323FE/FA

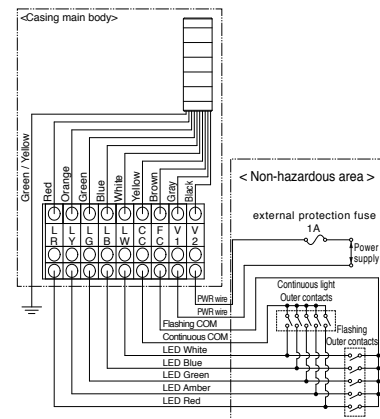


Wiring Diagram (EDWM (5 color LED))

■ EDWM-502FE/FA



■ EDWM-5M2FE/FA



Signal Light



NE-24

Signal Light



LED



ø57

IP65

NPN/PNP
Open collector

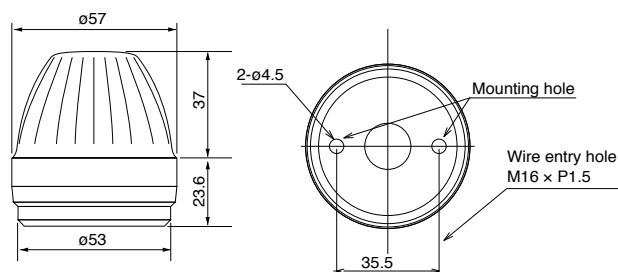


NE series LED Dome Indicator Light

The dome shape provides increased visibility and the LEDs provide years of maintenance-free operation.

- Enhanced Illumination : Use of long-life, super bright LED.
- Energy Efficient : Low power consumption.
- Maintenance-Free : High vibration resistant and no bulb replacement needed.
- Terminal Block : For easy wiring.
- Applications : Suitable for small machine tools, control panel, etc.
- Available colors : Red, Amber, Green, Blue, Clear/White.

Dimensions



NE-24 Type

Model	NE-24				
Rated Voltage	24V DC (No polarity) NPN/PNP open collector				
Operating Voltage Range	21.6V ~26.4V DC				
Power Consumption	Red	Amber	Green	Blue	Clear/White
	0.63W	0.63W	0.56W	0.53W	0.45W
Operating Temperature Range (Relative humidity)	-30°C~+ 50°C (Less than 90%)				
Mounting Place	Indoor & Outdoor				
Mounting Direction	Upright, Upside down & Horizontal				
Protection Rating	IP65				
Vibration Proof	19.6m/s ²				
Luminosity Intensity	Red	Amber	Green	Blue	Clear/White
	100mcd	400mcd	340mcd	100mcd	460mcd
Mass	55g				



Optional Rubber Gasket SZ-200A



LED

Ø100

IP65 With SZ-200A

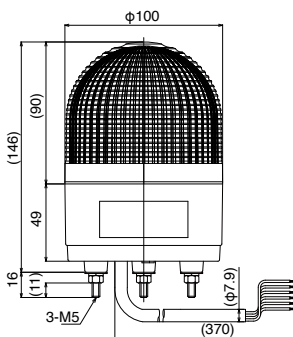
LED Multi Signal Light featuring three flashing patterns for diverse use.

- Flashing Pattern: 3 Patterns...Simulated Rotation, Strobe, Blinking.
- Enhanced Illumination: Use of long-life, super bright LED.
- Maintenance-free: No bulb replacement needed.
- Energy Efficient: Low power consumption.
- Extended Product Life: Longer life without the use of a motor.
- Installation: Indoor: upright, inverted and sideways; Outdoors: upright only.
- Available Colors: Red, Amber, Green, Blue.

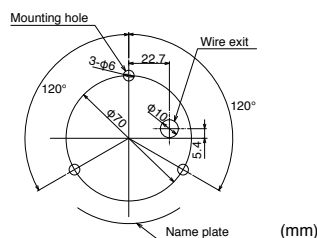
Available by Special Order

- Silver Color Body.

Dimensions



Mounting Dimension



KHE Type

Model	Rated Voltage	Color	Power Consumption	Current	Luminosity
KHE-24	24V DC (no polarity)	Red	8.2W	340mA	10cd
		Amber	8.2W	340mA	15cd
		Green	10.1W	420mA	15cd
		Blue	21.6W	900mA	3cd

PEW / PES

Signal Light



LED



85dB at 1m
(PEW-B only)

Electronic Sound 1
(PEW-B only)

∅82

IP55*

NPN
Open collector

*PES: IP55 with rubber gasket SZ-210 (IP23 without SZ-210)

*PEW: IP54 (IP23 : Using the side wire exit)



PEW type

PES type

Optional
Rubber Gasket
SZ-210

Dome shape LED Signal Light featuring enhanced visibility and maintenance-free operation.

- Newly Developed Triple-reflection System: For enhanced visibility and low power consumption.
- Flashing Cycles: 3 patterns —60/120/180 fpm, selectable by a switch.
- PEW-B type: Built-in audible alarm with adjustable volume up to 85dB at 1m.
- Maintenance-free: LED's power consumption is approx. half of incandescent bulb type (100V/200V AC).
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Dome: Superior weather resistant and light translucent acrylic resin.
- PEW: IP54 (IP23 : Using the side wire exit); PES: IP55 (with optional rubber gasket SZ-210, IP23 without SZ-210).
- CE Compliance: 24V AC/DC type ONLY.
- Available Colors: Red, Amber, Green, Blue.

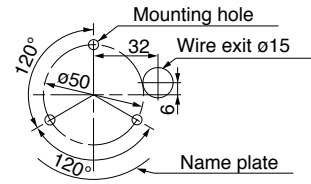
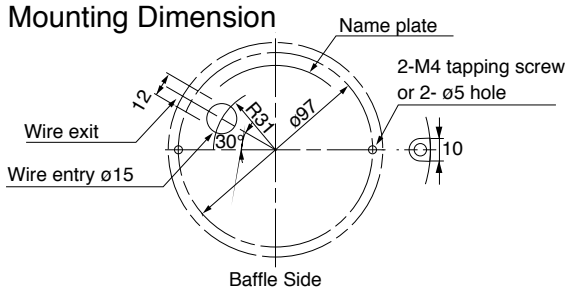
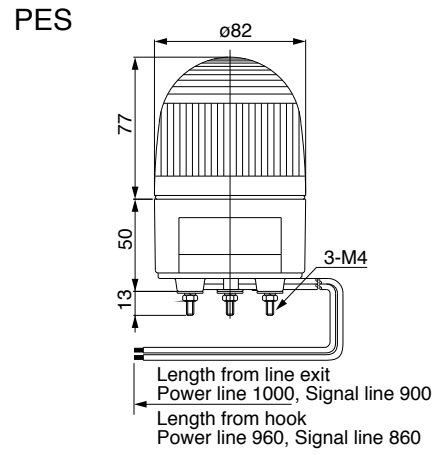
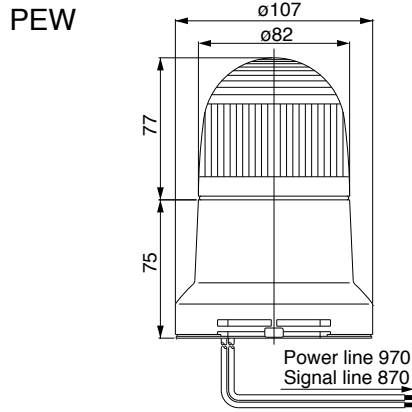
Available by Special Order

- Silver Color Body.
- IP65: PEW type only.
- UL type (E215660).



Max. 85dB at 1m

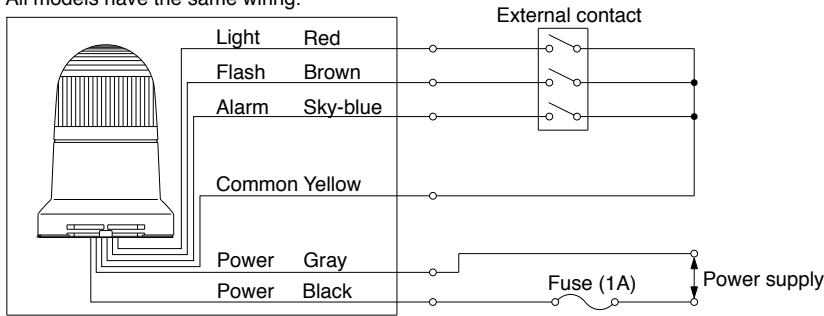
Dimensions (PEW, PES)



(Unit: mm)

Wiring Diagram

All models have the same wiring.



* Skyblue line exists on buzzer type only.

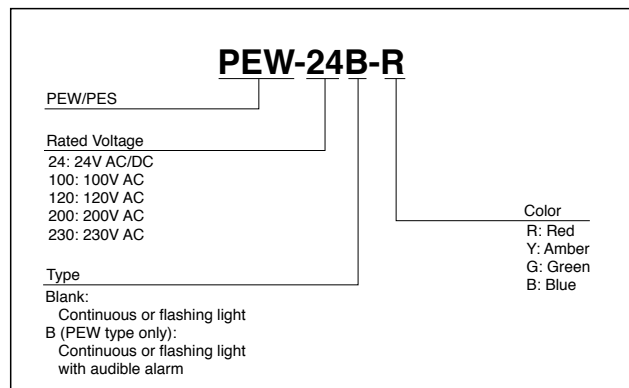
Transistor Operation Example

Transistor	NPN	Voltage proof	$V_c \geq 35V$
Current capacity	$I_c \geq 100mA$	Current leak	$I_L \leq 1mA$

PEW/PES Type

Model	Rated Voltage	Power Consumption	Flash Frequency	Mass
PEW-24	24V AC/DC	2.5W	Approx. 180 times/minute	0.32kg
PES-24				0.24kg
PEW-24B				0.34kg
PEW-100	100V AC	5.8W	Approx. 120 times/minute	0.52kg
PES-100				0.43kg
PEW-100B				0.54kg
PEW-120	120V AC	4.9W	Approx. 60 times/minute	0.52kg
PES-120				0.43kg
PEW-120B				0.54kg
PEW-200	200V AC	5.6W	Approx. 60 times/minute	0.52kg
PES-200				0.43kg
PEW-200B				0.54kg
PEW-230	230V AC	5.3W	-	0.52kg
PES-230				0.43kg
PEW-230B				0.54kg

How to Order



PS / PSF

Signal Light



Bulb



∅82

IP55 With SZ-210



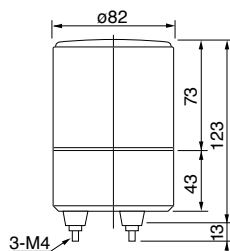
Optional Rubber Gasket SZ-210



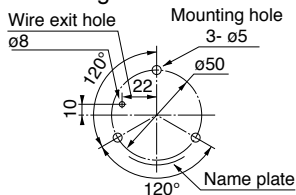
Compact, anti dazzle Signal Light featuring simple function suitable for small devices.

- Original Prism Cut Lens: For enhanced visibility and high illumination in every direction.
- Flashing Cycle: 60 flashes/min. for PSF type.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Superior impact and heat resistant ABS resin.
- Dome: Superior impact and heat resistant polycarbonate resin.
- CE compliance: 24V AC/DC type.
- Available Colors: Red, Amber, Green, Blue.

Dimensions



Mounting Dimension



(mm)

PS / PSF Type

Model	Rated Voltage	Flashes per Minute	Bulb	No.	Mass
PS-12/PSF-12	12V AC/DC	60 times/minute (PSF type)	12V 10W	9	0.3kg
PS-24/PSF-24	24V AC/DC		24V 10W	10	
PS-100/PSF-100	100V AC		110V 10W	46	
PS-120/PSF-120	120V AC		120V 10W	14	
PS-220/PSF-220	220V AC		220V 10W	15	

Bulb...12V/24V-G18 BA15S 110V/220V-T20 E12

PSX

Signal Light



Optional Rubber Gasket SZ-210

Silver Color Body Available by Special Order

 **Xenon**

ø82

IP55 With SZ-210

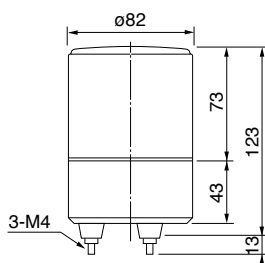
Xenon Signal Light featuring long-lasting afterglow ideal for use in bad weather or snow.

- Original Prism Cut Lens: For enhanced visibility and high illumination in every direction.
- Double Flashing: For enhanced visibility (night-time visibility: 1,000m+).
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Impact and heat resistant ABS resin.
- Dome: Superior impact and heat resistant polycarbonate resin.
- IP55 with the optional rubber gasket SZ-210.
- Available Colors: Red, Amber, Green, Blue.

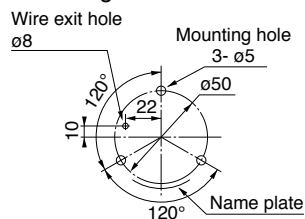
Available by Special Order

- Silver Color Body.

Dimensions



Mounting Dimension



(mm)

PSX Type

Model	Rated Voltage	Power Consumption	Rush Current	Double Flashes
PSX-100	100V AC	2.0W	5A	35 flashes/min
PSX-220	220V AC	2.2W	10A	

Inrush current of this product is very high. Please check the outer contact capacity.

KX

Signal Light



Xenon



Ø100

IP55 With SZ-200A



Optional Rubber Gasket SZ-200A

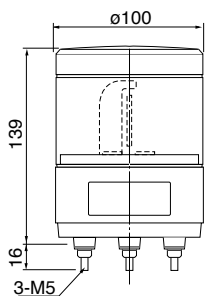
Xenon Signal Light featuring superior night-time visibility and adjustable flashing cycle.

- Newly Developed Prism Cut Lens: For bright illumination and improved visibility from all directions.
- Extended Bulb Life: Shock resistant xenon, even under severe vibration.
- Installation: Upright, inverted and sideways for indoors only.
- Main Body: Impact and heat resistant ABS resin.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Superior Visibility: Intensive flashing using a xenon lamp (night-time visibility: 1,000m or more).
- Flashing Cycle: Adjustable between 30~90 times/minute.
- IP55 with the optional Rubber gasket SZ-200A (IP23 without SZ-200A).
- Available Colors: Red, Amber, Green, Blue.

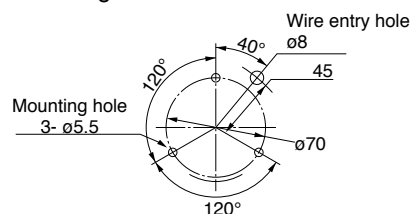
Available by Special Order

- Silver Color Body.
- UL type (E215660).

Dimensions



Mounting Dimension



(mm)

KX Type

Model	Rated Voltage	Power Consumption	Rush Current	Flashes per Minute
KX-12	12V DC	8W	—	30~90
KX-24	24V DC		—	
KX-100	100V AC	4W	10A	
KX-120	120V AC		21A	
KX-220	220V AC			
KX-230	230~240V AC			

Inrush current of this product is very high. Please check the outer contact capacity.



Xenon

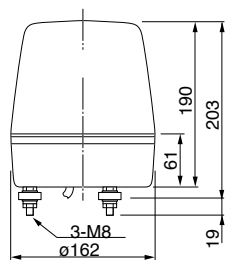
∅162

IP23

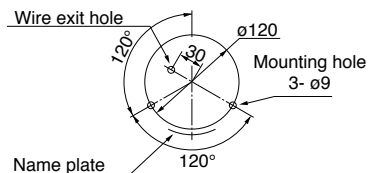
Corrosion-proof plastic Signal Light with triple flashing.

- Newly Developed Prism Cut Lens: For bright illumination and improved visibility from all directions.
- Superior Visibility: Intensive flashing using a xenon lamp (night-time visibility: 1,000m or more).
- Extended Bulb Life: Shock resistant xenon, even under severe vibration.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Impact and heat resistant ABS resin.
- Lens: Superior weather resistant and light translucent AS resin.
- Available Colors: Red, Amber, Blue.

Dimensions



Mounting Dimension



XP Type

Model	Rated Voltage	Current	Flashes per Minute	Mass
XP-12	12V DC	1.4A	110	1.3kg
XP-24	24V DC	0.7A		1.2kg
XP-100	100V AC	0.4A		
XP-220	220V AC	0.2A		

Inrush current of this product is very high. Please check the outer contact capacity.

XL

Signal Light



Xenon

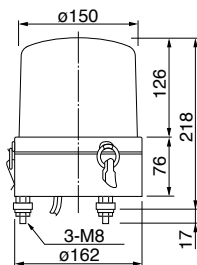


Ø162

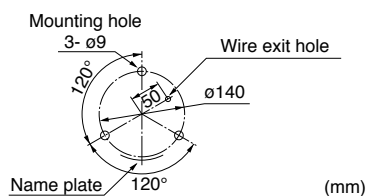
Xenon Signal Light with corrosion-proof stainless steel body.

- Newly Developed Prism Cut Lens: For bright illumination and improved visibility from all directions.
- Superior Visibility: Intensive flashing using a xenon lamp (night-time visibility: 1,000m or more).
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Corrosion proof stainless steel body (SUS304) with stainless steel fixing bolt.
- Lens: Superior impact and heat resistant polycarbonate resin for superior durability and light transmission.
- Available Colors: Red, Amber, Blue.

Dimensions



Mounting Dimension



XL Type

Model	Rated Voltage	Current	Flashes per Minute	Mass
XL-M1	12~24V DC	2.5A (12V DC) 1.5A (24V DC)	70~90 (adjustable)	2.0kg



LED

∅162

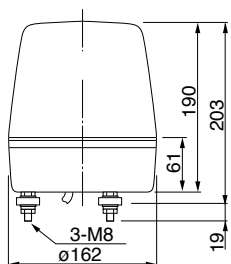
IP23

Drip-proof

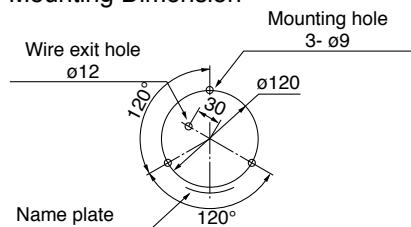
Revolving Warning Light featuring Corrosion-proof plastic, LED, adjustable flashing cycles, and maintenance-free design.

- Enhanced Illumination: Special high intensity illumination design for improved light diffusion, ensuring sufficient brightness even outdoors.
- Flashing Cycle: Adjustable flashes between 50~200 times/minute with internal volume.
- Extended Bulb life: No bulb replacement needed with long-life LED, perfect for "hard-to-service" locations.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- No Motor: No worn-out motor within electronic rotating light system.
- Main Body: Weather resistant special resin.
- Dome: Superior weather resistant and light translucent acrylic resin.
- Stainless Mounting Bolts: Corrosion-proof screws, even in marine environment.
- Available Colors: Red, Amber.

Dimensions



Mounting Dimension



Mounting hole 3-∅9
(mm)

KPE Type

Model	Rated Voltage	Current	Flashes per Minute	Mass
KPE-100	100V AC	50mA/100mA	50~200 (revolution) 60 (flashes)	1.5kg
KPE-220	220V AC	30mA/50mA		

Operating Temperature Range: -30°C ~ +60°C

Revolving Warning Light



SKHE / SKHEB

1 chip super bright LED Revolving Warning Light



90dB at 1m
(SKHEB type)

LED



Ø118

IP23



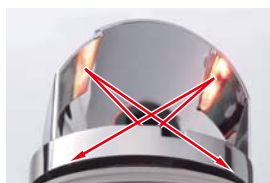
Compact LED revolving warning light featuring enhanced illumination with 1 chip super bright LED and new high dispersion reflection system.

- Colors available : Red, Amber, Green, Blue.
- SKHEB series has an integral alarm (hi-pitch tone 90dB at 1m) that sounds with light operation.
- Compact Motor : High durability and energy-efficient.
- Energy-Efficient : Maintenance-free 1 chip super bright LED.
- Dome lens : Made of acrylic resin with superior weather resistance and light translucence.
- Installation : Indoors-Upright, inverted, sideways; Outdoors-upright only.
- CE Compliant (12V DC, 24V DC type only)

Newly developed reflector for LED revolving warning light.

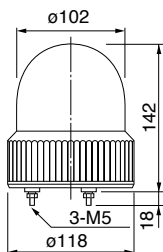


PATLITE LED revolving warning light uses a unique (patented) reflecting system solely designed for these models. Even though the dispersion effect of the LED unit is less than an incandescent bulb, PATLITE LED revolving warning light creates the equivalent dispersion effect with the light reflector.

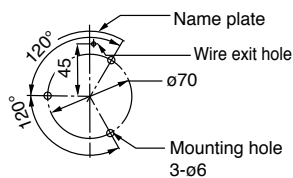


The newly designed reflector enables not only upward and sideways light reflections, but also downward light reflection that is not achieved by incandescent bulb type revolving warning lights. PATLITE LED revolving warning light is suitable for applications where high visibility from below is required.

Dimensions



Mounting Dimensions



(unit: mm)

SKHE Type

Size (mm)	Model	Rated Voltage	Current Consumption	Rotations per Minute	Weight
ø118	SKHE/SKHEB-12	12 DC	0.25A	120	0.4kg
	SKHE/SKHEB-24	24V DC	0.16A	120	0.4kg
	SKHE/SKHEB-100	100V AC	0.04A	120	0.6kg
	SKHE/SKHEB-200	200V AC	0.02A	120	0.6kg

RKE / RKEB / RHE / RHEB

1 chip super bright LED Revolving Warning Light

RKE / RHE



∅100

IP55 With SZ-200A
(RKEB/RHEB type)



Optional Rubber Gasket SZ-200A

Compact LED revolving warning light featuring enhanced illumination with 1 chip super bright LED and new dispersion reflection system.

- Colors available: Red, Amber, Green, Blue.
- RHEB/RKEB series has an integral alarm (hi-pitch tone 90dB at 1m) that sounds with light operation.
- Compact Motor: High durability and energy-efficient.
- Energy-Efficient: Maintenance-free 1 chip super bright LED.
- Dome lens: Impact and heat resistant polycarbonate resin.
- Main Body: Impact and heat resistant ABS resin.
- CE Compliant (12V DC, 24V DC type only).
- Terminal Block: For easy wiring.

Newly developed reflector for LED revolving warning light.

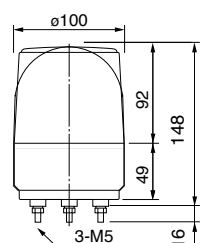


PATLITE LED revolving warning light uses a unique (patented) reflecting system solely designed for these models. Even though the dispersion effect of the LED unit is less than an incandescent bulb, PATLITE LED revolving warning light creates the equivalent dispersion effect with the light reflector.

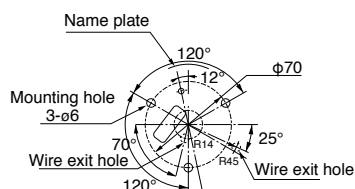


The newly designed reflector enables not only upward and sideway light reflections, but also downward light reflection that is not achieved by incandescent bulb type revolving warning lights. PATLITE LED revolving warning light is suitable for applications where high visibility from below is required.

Dimensions



Mounting Dimensions



(unit: mm)

RKE/RHE Type

Size (mm)	Model	Rated Voltage	Current Consumption	Rotations per Minute	Weight
∅100	RKE/RKEB-12 RHE/RHEB-12	12 DC	0.25A	120	0.4kg
	RKE/RKEB-24 RHE/RHEB-24	24V DC	0.16A	120	0.4kg
	RKE/RKEB-100 RHE/RHEB-100	100V AC	0.04A	120	0.6kg
	RKE/RKEB-200 RHE/RHEB-200	200V AC	0.02A	120	0.6kg

RLE

Revolving Warning Light

LED



∅82

IP55 With SZ-210

Drip-proof

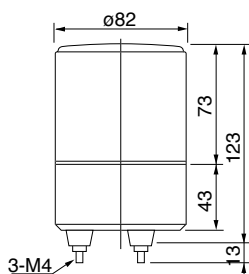


Optional Rubber Gasket SZ-210

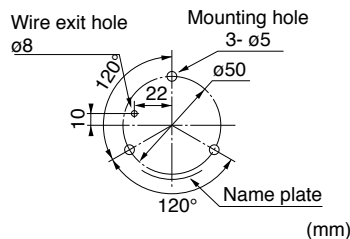
LED Signal Light featuring energy-saving and enhanced illumination with LED integrated reflection system.

- LED Integrated Reflection System: For enhanced illumination.
- Compact Motor: High durability and energy-efficient.
- Energy-Efficient: Maintenance-free LED.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Impact and heat resistant ABS resin.
- Dome: Superior impact and heat resistant polycarbonate resin.
- Available Colors: Red, Amber, Green.

Dimensions



Mounting Dimension



RLE Type

Model	Rated Voltage	Power Consumption	Rotations per Minute	Mass
©RLE-12	12V DC	1.7W MAX	120	0.4kg
RLE-24	24V DC	3.9W MAX		0.6kg
RLE-100	100V AC	2W MAX		
RLE-220	220V AC	2W MAX		

©: Special Order

MEMO

A series of horizontal dashed lines for writing.

RLR

Revolving Warning Light



LED



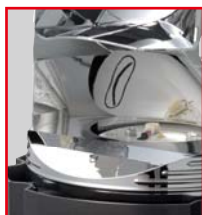
∅162

IP66

Ideal for forklift, Material handling equipment and a great variety of applications.

- RLR complies with the RoHS Directive.
- Complies with the CE requirements and the CE Marking is indicated.
- Color : Red Amber Green Blue

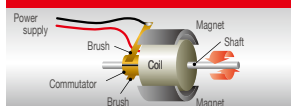
LED + Brushless Motor + Bearing Mechanism



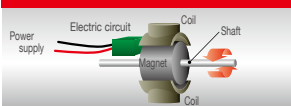
Long Life

The RLR has many advantages compared to a rotating beacon with incandescent bulb and standard motor. The LEDs last approximately 20 times to 40 times longer than an incandescent bulb. The combination of the brushless motor and bearing mechanism allows the RLR to operate from 8,000 hrs to 10,000 hrs, compared to 5,000 hrs for other rotating beacons.

Structure of conventional motor



Structure of Brushless motor



Vibration Resistance ※

※Except RLR-M2



High Visibility



High Protection

IP66 TEST PROCEDURE

- ① IP66=Water is sprayed for at least 3 minutes, at a flow rate of 100 L/min, from a distance of 2.5 m to 3.0 m, from a 12.5mm diameter jet hose nozzle, and from all directions - 360°
- ② IP6X=Unit is tested under-pressure in a dust chamber for 8 hours.

Model Code

Rated Voltage

O4 : 48V DC
M1 : 12/24V DC
M2 : 90V AC~250V AC

RLR-04-P-R

Color

R : Red G : Green
Y : Amber B : Blue

Mounting Dimensions

Blank : ∅140
P : ∅120

Typical Vibration Values

2G (19.6m/s²)



Passenger Car

4.5G (44.1m/s²)



Construction Machinery

7G (68.6m/s²)



Emergency Vehicle

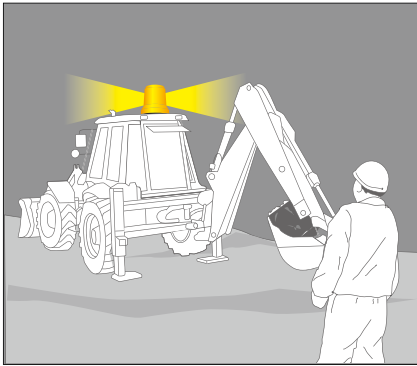
11G (107.8m/s²)



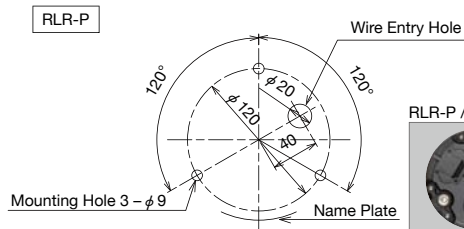
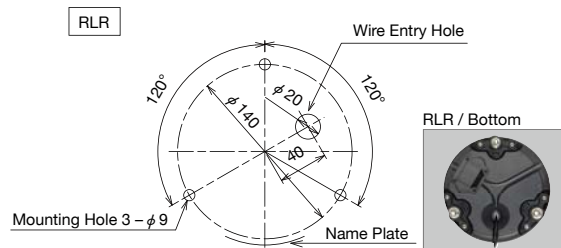
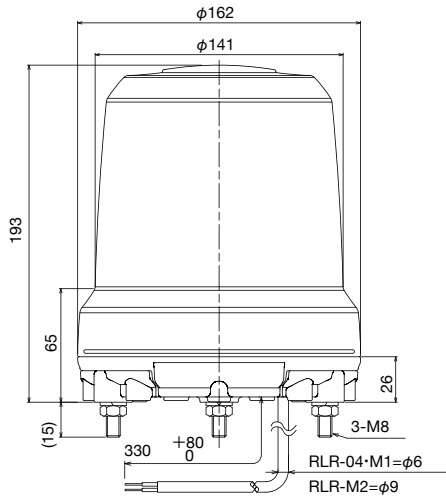
Dump Truck

Application Examples

Construction Equipment, Forklift, Signboard, Public Facility, etc



Dimensions



mm

RLR Type

Model	Rated Voltage	Operating Voltage Range	Vibration Resistance	Operating Temperature Range	Dome	Mass
RLR-M1	12/24V DC	9.5~15V DC	110m/s ² (11G)	-30°C~+70°C	-R (Red) -Y (Amber) -G (Green) -B (Blue)	1.0kg
RLR-04	48V DC	20~30V DC				
RLR-M2	90~250V AC	90~250V AC	45m/s ² (4.5G)	-10°C~+50°C		1.06kg

RU / RS

Revolving Warning Light



Optional Rubber Gasket SZ-210



Bulb



ø82

IP55 With SZ-210

Compact Revolving Warning Light perfectly designed for small devices.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Extended Bulb Life: Vibration resistant automobile bulb.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Impact and heat resistant ABS resin.
- Dome: Superior impact and heat resistant polycarbonate resin.
- CE Compliant: 12V DC, 24V DC type only.
- Available Colors: Red, Amber, Green, Blue.

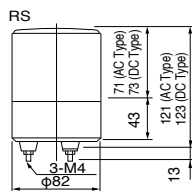
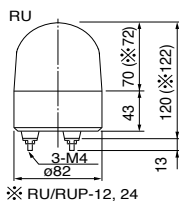
Available by Special Order

- Silver Color Body.
- RUP series furnished with mounting pole and bracket.

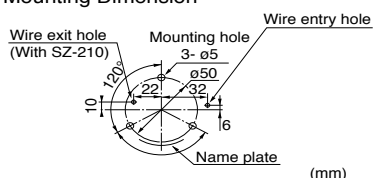


RUP

Dimensions



Mounting Dimension



RU/RS Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	Mass		
					No.	RU/RS	RUP
RU/RS-12	12V DC	0.5A	120	12V6W	18	0.4kg	0.8kg
RU/RS-24	24V DC	0.3A		24V6W	19		
RU/RS-100	100V AC	0.1A		12V6W	18	0.6kg	1.0kg
RU/RS-120	120V AC						
RU/RS-220	220V AC	0.05A					
RU/RS-240	240V AC						
◎RU/RS-24AC	24V AC	0.3A		24V6W	19	0.4kg	0.8kg

Bulb: G14 BA9S

◎: Special order

RH-A / RK-A

Revolving Warning Light



Optional Rubber Gasket SZ-200A



Bulb



Terminal

90dB at 1m
(RHB and RKB Types)

Electronic Sound 1
(RHB and RKB Types)

∅100

IP55 With SZ-200A

RH-A / RK-A

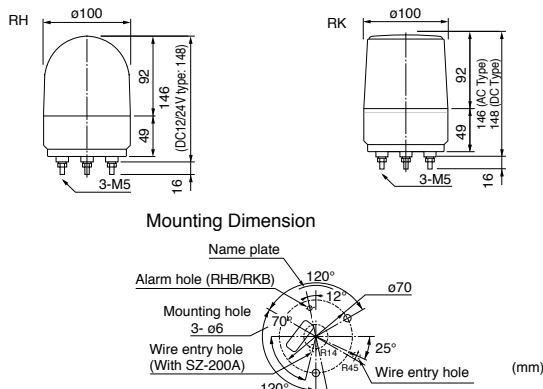
Compact Revolving Warning Light featuring high durability and easy wiring with terminal block.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Extended Bulb Life: Vibration-resistant automobile bulb.
- Built-in Alarm: Built-in audible alarm up to 90dB at 1m for RHB/RKB.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Terminal Block: For easy wiring.
- Main Body: Impact and heat resistant ABS resin.
- Dome: Superior impact and heat resistant polycarbonate resin.
- CE Compliant: 12V DC, 24V DC type only.
- Available Colors: Red, Amber, Green, Blue.
- AUL type comes with rubber gasket SZ-200A.

Available by Special Order (RH type)

- Silver Color Body.
- UL type (E215660).

Dimensions



RH-A / RK-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb		Mass
				No.		
RH/RHB/RK/RKB-12A (UL)	12V DC	0.8A	170	12V10W	9	0.4kg
RH/RHB/RK/RKB-24A (UL)	24V DC	0.5A		24V10W	10	
RH/RHB/RK/RKB-100A (UL)	100V DC	0.065A		12V5W	12	0.6kg
RH/RHB/RK/RKB-200A	120V AC	0.1A				
RH/RHB/RK/RKB-200A	200V AC	0.03A				
RH/RHB/RK/RKB-240A (UL)	240V AC	0.05A				

Bulb...G18 BA15S

SKH-EA

Revolving Warning Light

USA version



Bulb



∅100

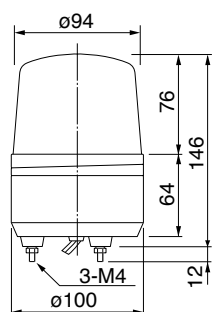
IP23



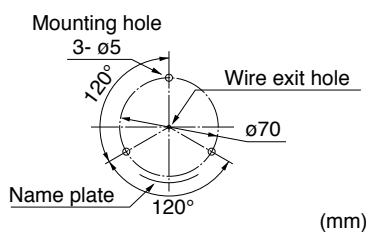
Best-selling Revolving Warning Light for wide range of applications.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Extended Bulb Life: Vibration-resistant automobile bulb.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Dome: Superior weather resistant and light translucent acrylic resin.
- CE Compliance: For 12V DC, 24V DC type only.
- Available Colors: Red, Amber, Green, Blue.

Dimensions



Mounting Dimension



(mm)

SKH-EA Type (USA Version)

Body color is beige.

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKH-12EA	12V DC	0.8A	170	12V10W	9	0.4kg
SKH-24EA	24V DC	0.5A		24V10W	10	
SKH-120EA	120V AC	0.07A		12V5W	12	0.6kg

Bulb: G18 BA15S

SKH-EA Type (International Version)

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKH-12EA	12V DC	0.8A	170	12V10W	9	0.4kg
SKH-24EA	24V DC	0.5A		24V10W	10	
SKH-100EA	100V AC	0.065A		12V5W	12	0.6kg
SKH-200EA	200V AC	0.03A				

Bulb: G18 BA15S

WH-A/WK-A

Revolving Warning Light



WH-A



WK-A



Bulb

90dB at 1m
(WHB-A type)

Electronic Sound 1
(WHB-A type)

∅100

IP54
(WHB: IP23)

WH-A/WK-A

Easy to attach to an electrical box and the terminal block allows easy wiring.



Installation in various directions is available for indoor use.



When installing the WHB, please keep its buzzer outlet faced downward.

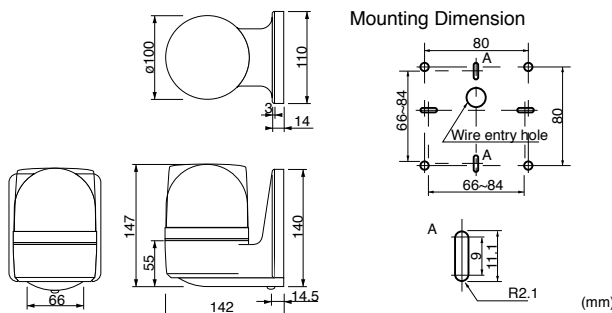
Wall-mount Revolving Warning Light featuring easy wiring with terminal block.

- Built-in Alarm: Audible sound volume up to 90dB at 1m, synchronized with light.
 - Extended Bulb Life: Vibration-resistant automobile bulb.
 - Installation*: Indoors, Outdoors—upright, inverted, sideways.
 - Terminal Block: For easy wiring.
 - Main Body: Impact and heat resistant ABS resin.
 - Dome: Superior impact and heat resistant polycarbonate resin.
 - Compact Motor: Higher durability and energy-efficient.
 - CE Compliant: For 24V DC type only.
 - Available Colors: Red, Amber, Green, Blue.
- * WHB type: upright only (outdoors).

Available by Special Order

- Silver Color Body.
- IP65.

Dimensions



WH-A/WK-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
WH-12A/WK-12A	12V DC	1A	170	12V10W	9	0.55kg
WH-24A/WK-24A	24V DC	0.5A		24V10W	10	0.55kg
WH-100A/WK-100A	100V AC	0.07A		12V5W	12	0.75kg
WH-120A/WK-120A	120V AC	0.08A				
WH-200A/WK-200A	200V AC	0.04A				
WH-240A/WK-240A	240V AC	0.04A		24V10W	10	0.55kg
WHB-24A/WKB-24A	24V DC	0.5A				
WHB-100A/WKB-100A	100V AC	0.07A				
WHB-120A/WKB-120A	120V AC	0.07A				
WHB-200A/WKB-200A	200V AC	0.04A				
WHB-240A/WKB-240A	240V AC	0.04A				

Bulb...G18 BA15S

SKH-A

Revolving Warning Light



Bulb



90dB at 1m
(SKHB type)

Electronic Sound 1
(SKHB type)

∅118

IP56 (SKH-SA type)
(others: IP23)



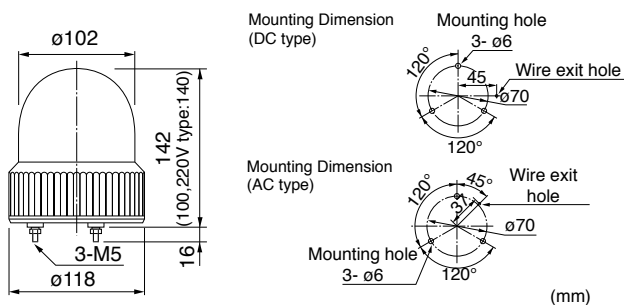
Corrosion-proof plastic Revolving Warning Light for wide range of applications.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Extended Bulb Life: Vibration-resistant automobile bulb.
- Built-in Alarm: Audible sound up to 90dB at 1m, synchronized with light function.
- Installation: Indoors—upright, inverted; Outdoors—upright only.
- Dome: Superior weather resistant and light translucent acrylic resin.
- CE Compliant: 12V DC, 24V DC type only.
- Available Colors: Red, Amber, Green, Blue, Purple.

SKH-SA

- Installation: Indoors—upright, inverted.

Dimensions



SKH-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb No.	Mass
SKH-101A/SKHB-12A	12V DC	0.8A	170	12V10W 9	0.4kg
SKH-102A/SKHB-24A	24V DC	0.5A		24V10W 10	
SKH-110A/SKHB-100A	100V AC	0.065A	170	12V5W 12	0.6kg
SKH-112A/SKHB-120A	120V AC	0.07A		12V5W 12	
SKH-120A/SKHB-200A	200V AC	0.03A	170	24V10W 10	0.4kg
SKH-102SA	24V DC	0.5A		24V10W 10	
SKH-110SA	100V AC	0.1A	170	12V5W 12	0.6kg

Blub--G18 BA15S

SKP-A

Revolving Warning Light

SKP-A



CE



Bulb

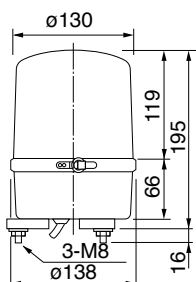
∅138

IP23

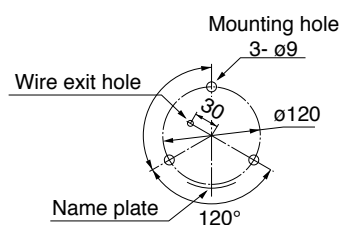
Environment resistant and corrosion-proof Revolving Warning Light featuring silent and stable rotation.

- Rotary Mechanism: Gear-driven, for stable rotation under vibration.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Melamine baked finish with corrosion-proof stainless steel (SUS 304) lens mounting fixture.
- Dome: Superior impact and heat resistant polycarbonate resin.
- CE Compliant: 12V DC, 24V DC, 48V DC type only.
- Available Colors: Red, Amber, Green, Blue.

Dimensions



Mounting Dimension



(mm)

SKP-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKP-101A	12V DC	2.6A	140	12V35W	1	1.0kg
SKP-102A	24V DC	1.2A		24V35W	2	
SKP-104A	48V DC	0.8A		48V35W	5	
◎SKP-110ADC	100V DC	0.35A	120	120V40W	36	1.1kg
SKP-110A	100V AC	0.3A		120V40W	6	
SKP-120A	200V AC	0.13A		220V30W	37	

Bulb: 12V/24V · RP35 BA15S 48V/120V/220V · RP35 BA15D

◎: Special order

KP-A

Revolving Warning Light



Bulb



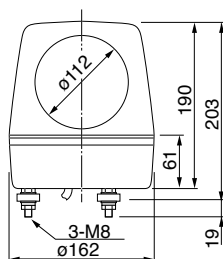
ø162

IP23

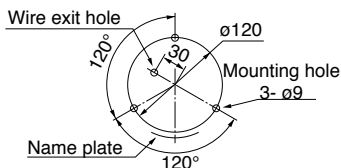
Corrosion-proof plastic Revolving Warning Light for a wide range of applications.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Extended Product Life: Vibration resistant and reliable operation even under severe cold environment (-30°C).
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: UV and water-proof special resin.
- Dome: Superior weather resistant and light translucent acrylic resin.
- Mounting Bolts: Drip-proof and rust-free stainless steel type.
- CE Compliant: 24V DC type only.
- Available Colors: Red, Amber, Green, Blue.

Dimensions



Mounting Dimension



KP-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
KP-24A	24V DC	1.2A	140	24V35W	2	1.0kg
KP-100A	100V AC	0.3A		120V40W	6	1.2kg
KP-120A	120V AC	0.4A	120	220V30W	37	1.2kg
KP-200A	200V AC	0.13A				

Bulb...24V · RP35 BA15S 120V/220V · RP35 BA15D

SKHB-1006D

Revolving Warning Light

SKHB-1006D



Bulb

Electronic Sound **1**

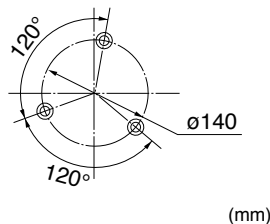
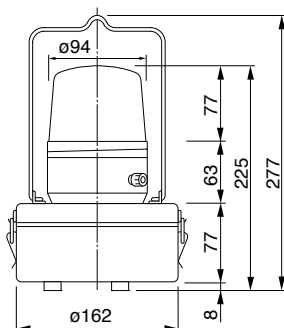
Ø**162**

IP23

Portable Revolving Warning Light with dry cell battery.

- Built-in Alarm: Operation selectable with external switch for light rotation with buzzer or light rotation only (solenoid buzzer sound).
- Battery Life: SUM-1 × 5: about 4 hours; LR20 × 5: about 15 hours.
- Installation: Upright only.
- Dome: Superior weather resistant and light translucent acrylic resin.
- 1006MA type: includes a powerful magnet for secure placement.
- Available Colors: Red, Amber.

Dimensions



(mm)

SKHB-1006A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKHB-1006D	SUM-1×5	0.6A	170	6V3W	8	1.8kg
SKHB-1006MD						1.9kg

Bulb...G18 BA15S

SKL-A

Revolving Warning Light



Melamine Coated
Finish Steel Body
SKL-CA Type

Bulb



ø162

IP23

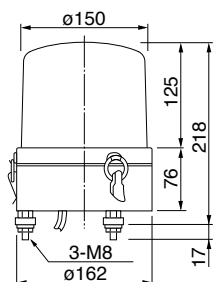


Stainless Steel Body
SKL-SA Type

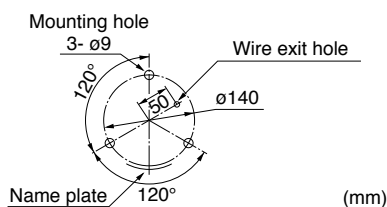
Large Basic Revolving Warning Light with highly durable housing.

- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: SKL-CA - Scratch-free melamine baked finish; SKL-SA - Corrosion-proof stainless steel body (SUS304).
- Dome: Superior impact and heat resistant polycarbonate resin.
- Available Colors: Red, Amber, Green, Blue.

Dimensions



Mounting Dimension



SKL-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKL-101CA/101SA	12V DC	2.6A	140	12V35W	1	1.4kg
SKL-102CA/102SA	24V DC	1.2A		24V35W	2	
©SKL-102ACSA	24V AC				48V35W	5
SKL-104CA	48V DC	0.8A		120V40W		6
SKL-110CA/110SA	100V AC	0.3A				
SKL-112SA	120V AC	0.4A				
SKL-120CA/120SA	200V AC	0.13A	120	220V30W	37	

Bulb: 12V/24V · RP35 BA15S 48V/120V/220V · RP35 BA15D

©: Special order

SKLB-A

Revolving Warning Light

SKLB-A



Bulb

80dB at 1m

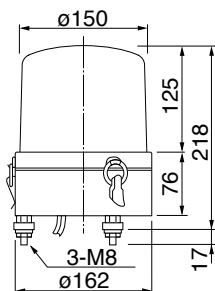
Electronic Sound 1

Ø162

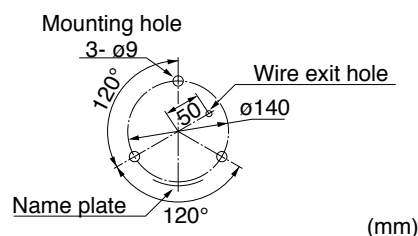
Revolving Warning Light featuring built-in buzzer up to 80dB at 1m.

- Built-in Alarm: Intermittent buzzer in 3 levels of volume —low: 65dB at 1m, medium: 70dB at 1m, high: 80dB at 1m. —selectable by external switch (60 times/min.).
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Dome: Superior impact and heat resistant polycarbonate resin.
- Available Colors: Red, Amber.

Dimensions



Mounting Dimension



(mm)

SKLB-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKLB-110A	100V AC	0.4A	140	120V40W	6	1.8kg
SKLB-112A	120V AC	0.5A				
SKLB-120A	200V AC	0.2A	120	220V30W	37	

Bulb...RP35 BA15D

Revolving Warning Light



Halogen

(Sold separately)

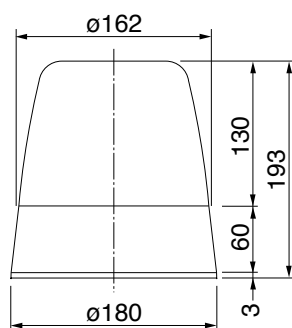


∅182

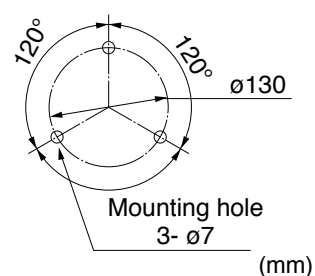
Large Revolving Warning Light with solid design.

- Main Body: Impact and heat resistant ABS resin.
- Dome: Superior weather-resistant and light translucent acrylic resin.
- Voltage Range: 12V, 24V DC.
- Available Colors: Red, Amber, Blue.
- Bulb sold separately (H1).

Dimensions



Mounting Dimension



HP Type

Model	Rated Voltage	Halogen Bulb (Bulb is sold separately)	Rotations Per Minute	Mass
©HP-12/24	12V/24V DC	12V55W or 24V70W	160	1.0kg

Bulb:12V 55W H1, 24V 70W H1

©: Special order



CE



Bulb

∅186

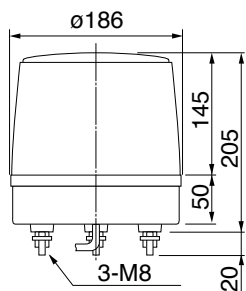
Dual-face reflector

IP23

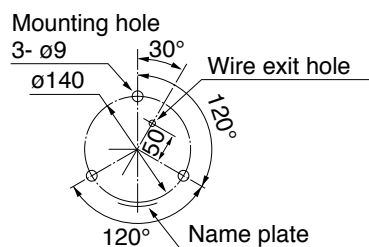
Light and large Revolving Warning Light with dual-face reflector.

- Dual-face reflector: For powerful rotary flash.
- Compact Motor: High durability and energy-efficient.
- Installation: Indoors: Upright, inverted, sideways. Outdoors: Upright only.
- Main Body: Black body for resistance to harsh weather and UV rays.
- Dome: Red: AS resin; Amber: PS resin.
- Available Colors: Red, Amber.

Dimensions



Mounting Dimension



(mm)

KG Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	Mass
KG-12	12V DC	2.7A	180	12V35W	0.7kg
KG-24	24V DC	1.2A		24V35W	
KG-100	100V AC	0.32A		120V40W	0.9kg
KG-120	120V AC	0.4A			
KG-200	200~240V AC	0.13A		240V30W	

Bulb...RP35 BA15S

SKC-A

Revolving Warning Light



Bulb



∅187

IP23

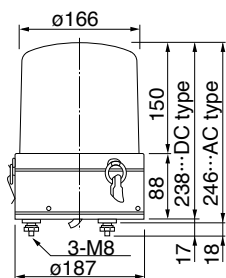
Dual-face reflector



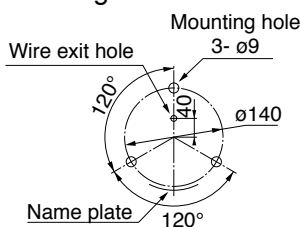
Large Revolving Warning Light featuring powerful flash using dual-face reflector.

- Dual-face reflector: For powerful rotary flash.
- Rotary Mechanism: Belt-drive, for extremely quiet and stable rotation.
- Compact Motor: Higher durability and energy-efficient.
- Extended Product Life: Vibration resistant and reliable operation even under severe cold environment (-30°C).
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Melamine baked finish with corrosion-proof stainless steel (SUS 304) lens mounting fixture.
- Dome: Superior weather resistant and light translucent acrylic resin.
- Available Colors: Red, Amber, Green, Blue.
- CE compliant: DC12V, 24V type only.

Dimensions



Mounting Dimension



(mm)

SKC-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
SKC-201A	12V DC	2.6A	200	12V35W	1	1.7kg
SKC-202A	24V DC	1.2A		24V35W	2	
SKC-210A	100V AC	0.3A	160	120V40W	6	1.8kg
SKC-212A	120V AC	0.4A				
SKC-220A	200V AC	0.13A		220V30W	37	

Bulb...12V/24V · RP35 BA15S 120V/220V · RP35 BA15D

RV-A

Revolving Warning Light



Bulb

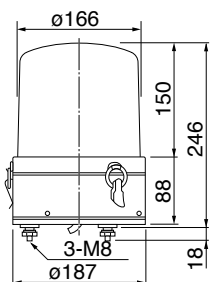
∅187

Vibration-proof

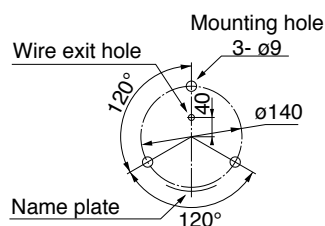
Vibration-proof Revolving Warning Light, ideal for devices with high vibration such as overhead, gantry, and jib cranes.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Rotary Mechanism: Belt-drive, for stable rotation under vibration.
- Extended Product Life: Vibration resistant and reliable operation even under severe cold environment (-30°C).
- Extended Bulb Life: Vibration resistant automobile bulb.
- Dome: Superior weather resistant and light translucent AS resin.
- Available Colors: Red, Amber.

Dimensions



Mounting Dimension



(mm)

RV-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
RV-110A	100V AC	0.3A	140	12V35W	1	2.5kg
RV-112A	120V AC	0.4A				
RV-120A	200V AC	0.13A	120			

Bulb: RP35 BA15S

SKV-A

Revolving Warning Light



Bulb



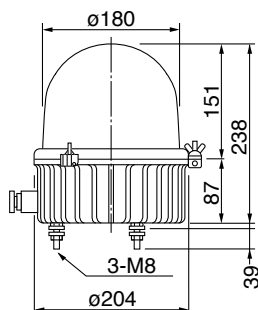
∅204

IP66

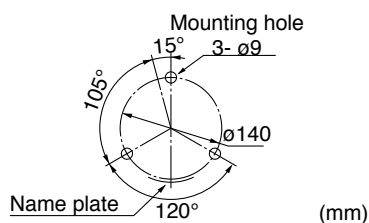
Corrosion-resistant Revolving Warning Light.

- Installation: Upright, inverted, sideways.
- Main Body: Corrosion-resistant aluminum alloy die-cast with metal cable gland.
- Dome: Superior impact and heat resistant polycarbonate resin.
- Operating Temperature Range: -30°C~80°C.
- Available Colors: Red, Amber.

Dimensions



Mounting Dimension



SKV-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
© SKV-101A	12V DC	2.6A	140	12V35W	1	2.6kg
© SKV-102A	24V DC	1.2A		24V35W	2	
SKV-110A	100V AC	0.3A	120	120V40W	6	2.8kg
SKV-120A	200V AC	0.13A		220V30W	37	

Bulb: 12V/24V · RP35 BA15S 120V/220V · RP35 BA15D

©: Special order

RES-A

Explosion-Proof
Revolving Warning Light



Bulb

∅224

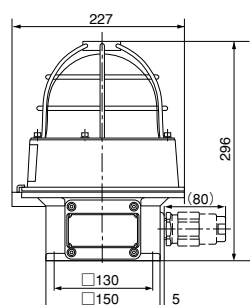
IP65

Explosion-proof

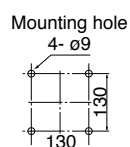
Compact explosion-proof revolving warning light with parabolic reflector.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Main Body: Aluminum alloy die-cast with silver color baked finish.
- Dome: Acrylic resin covered with clear hard-glass, and metal guard.
- Product Standards: IEC Standards (IEC ExdIIB + H₂T6) Zone1, 2 compliant.
- Approved by: TIIS.
- Available Colors: Red, Amber, Green, Blue.

Dimensions



Mounting Dimension



(mm)

RES-A Type

Model	Rated Voltage	Current	Rotations per Minute	Bulb	No.	Mass
◎RES-12A	12V DC	0.9A	170	12V10W	9	6.5kg
◎RES-24A	24V DC	0.5A		24V10W	10	
◎RES-48A	48V DC	0.3A	150	48V10W	11	
RES-100A	100~110V AC	0.1A	170	12V5W	12	
◎RES-115A	115~120V AC					
RES-220A	200~220V AC	0.05A	170	12V5W	12	
◎RES-240A	230~240V AC					

Bulb: G18 BA15S

◎: Special order

KUS

Cube Tower

LED



Bulb



80dB at 1m
(KUS-B type)

Electronic Sound 1
(KUS-B type)

□ 70

IP54
(except the KUS-B)



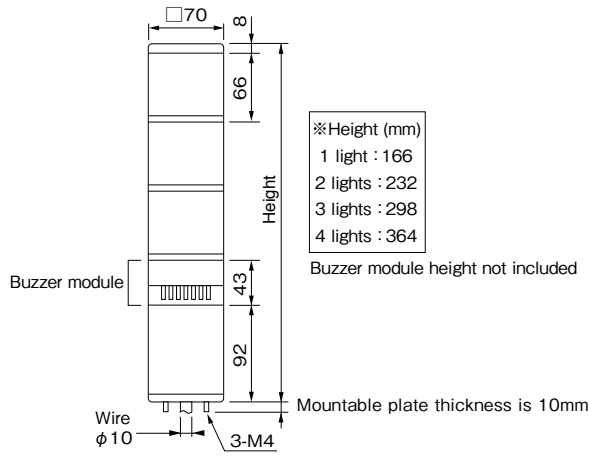
The KUS Series cube tower, with advanced technology, combines two different lights on one unit and has a modular design.

- IP Rating:IP-54(except the KUS-B).
- Lenses:Made of heat & shock resistant polycarbonate resin.
- Light modules can be stacked up to 4 tiers in any color combination.
- Each light module has a built-in dip switch to control the light on or off.
- Light units and base unit sold separately.
- Maximum operating capacity of base unit is 21 watts.
- KUS-F flashes 60 times a minute.

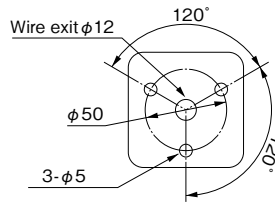
Available by Special Order

- CE Compliance.

Dimensions



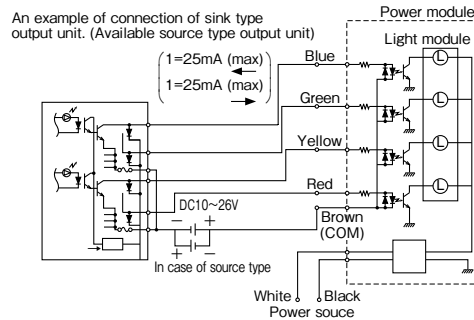
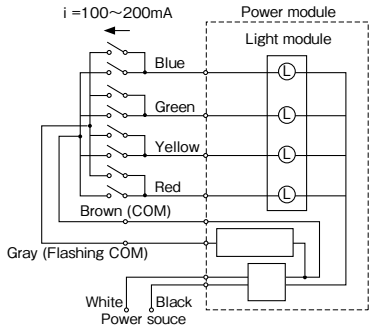
Mounting dimensions



Wiring Diagram

Contact input type
(KUS, KUS-F)

Open-collector applicable type
(KUS-FC, C)



Tramsistor(NPN/PNP)

Model	NPN (2SC, 2SD)	PNP (2SA, 2SB)
Current Capacity	Ic > 50mA	
Withstanding Voltage	Vc > 45V	

Power source wire 0.75mm² : UL1007 : 400mm
 Signal wire 0.3mm² : UL1007 : 350mm

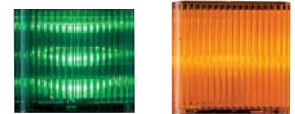
KUS Type

Power module

Module Type	Model	Rated Voltage	Power Consumption
Continuous Lighting	KUS-24	AC/DC24V	Max.21W
	KUS-100	AC100V	
	KUS-120	AC120V	
	KUS-220	AC220V	
Continuous Lighting or Flashing	KUS-24F	AC/DC24V	
	KUS-100F	AC100V	
	KUS-120F	AC120V	
Continuous Lighting with Open-collector Wiring	KUS-24C	AC/DC24V	
	KUS-100C	AC100V	
	KUS-120C	AC120V	
Continuous Lighting or Flashing with Open-collector Wiring	KUS-24FC	AC/DC24V	
	KUS-100FC	AC100V	
	KUS-120FC	AC120V	
	KUS-220FC	AC220V	

Model	Rated Voltage	Power Consumption	Bulb	No.
KUS-S(Bulb)	DC24V	6W	24V 6W	19
KUS-EA(LED)	DC24V	R,Y : 1.2W/G,B,C : 0.9W		

Bulb : G14 BA9S



Model	Rated Voltage	Power Consumption	Volume
KUS-B	DC24V	0.5W	80dB(at 1m)※

※Buzzer pressure 0~70db (at 1m) (24V type)



KJS / KJSB

Cube Tower

Bulb



85dB at 1m

Electronic Sound 1
(KJSB type)

□ 82

IP23

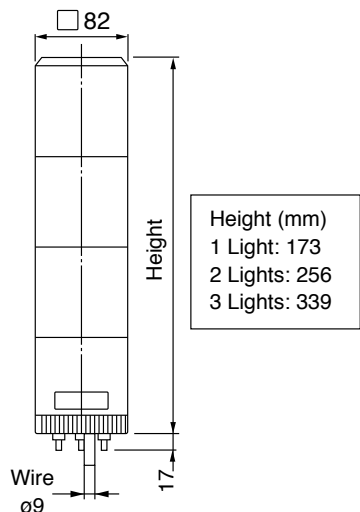
NPN
Open collector



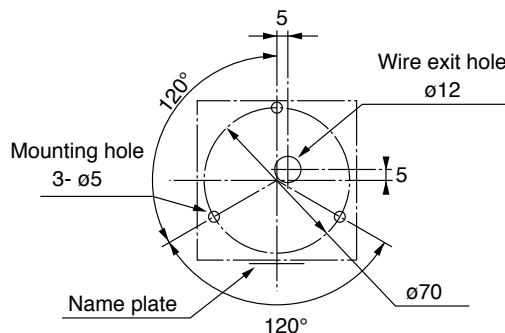
Compact Cube Tower featuring built-in buzzer designed for applications with small equipment.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Flashing Cycle: 160 times/min.
- Built-in Alarm: Intermittent buzzer volume up to 85dB at 1m.
- Installation: Upright only.
- Main Body: Impact and heat resistant ABS resin.
- Lens: Superior weather resistant and light translucent AS resin.
- Spare Bulb: Included.
- Available Colors: Red, Amber, Green, Blue.

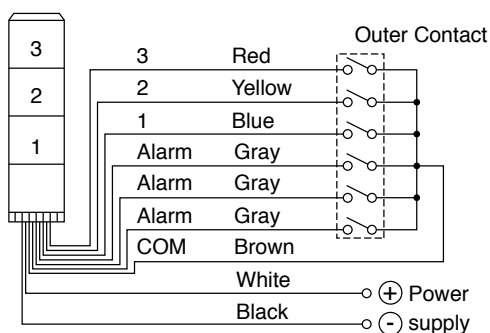
Dimensions



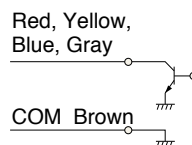
Mounting Dimension



Wiring Diagram



NPN open collector transistor



Transistor Capacity (NPN)

Model	KJS (KJSB)
Current Capacity	Ic ≧ 50mA (Ic ≧ 300mA)
Withstanding Voltage	Vc ≧ 45V

- ※ KJS does not have gray wires.
- ※ Mind the polarity in case of DC power supply.

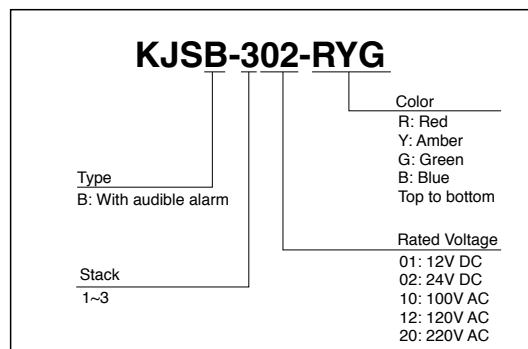
Current consumption and contact capacity per module

Rated Voltage	Lamp Wire Current	Alarm Wire Current	Lamp Wire Contact Capacity	Alarm Wire Contact Capacity
12V DC	34mA	100mA	More than 50mA	More than 300mA
24V DC				
100V AC				
120V AC				
220V AC				

KJS / KJSB Type

Number of Stacks	Model	Rated Voltage	Power Consumption	Bulb	No.
1 Light	KJS/KJSB-101	12V DC	6W	12V 5W	12
	KJS/KJSB-102	24V DC	12W	24V 10W	10
	KJS/KJSB-110	100V AC	8W	12V 5W	12
	KJS/KJSB-112	120V AC			
	KJS/KJSB-120	220V AC			
2 Lights	KJS/KJSB-201	12V DC	11W	12V 5W	12
	KJS/KJSB-202	24V DC	24W	24V 10W	10
	KJS/KJSB-210	100V AC	16W	12V 5W	12
	KJS/KJSB-212	120V AC			
	KJS/KJSB-220	220V AC			
3 Lights	KJS/KJSB-301	12V DC	16W	12V 5W	12
	KJS/KJSB-302	24V DC	35W	24V 10W	10
	KJS/KJSB-310	100V AC	23W	12V 5W	12
	KJS/KJSB-312	120V AC			
	KJS/KJSB-320	220V AC			

How to Order



KJ / KJB

Cube Tower

Bulb



85dB at 1m
(KJB type)

Electronic Sound 1

□116

IP23



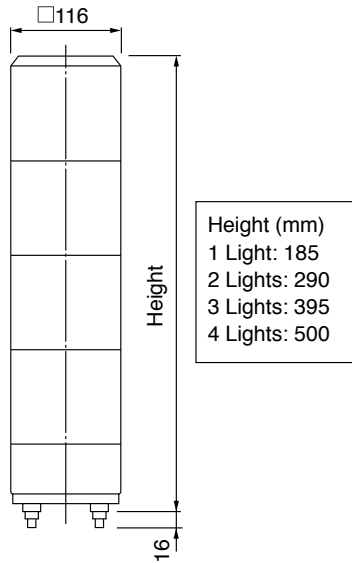
Light-weight Cube Tower featuring built-in buzzer suitable for various indoor applications.

- Integral Rotating Parabolic Reflector: For enhanced visibility from a distance.
- Flashing Cycle: 130 times/min.
- Built-in Alarm: Adjustable intermittent buzzer volume up to 85dB at 1m.
- Installation: Upright only.
- Main Body: Impact and heat resistant ABS resin.
- Lens: Superior weather resistant and light translucent AS resin.
- Spare Bulb: Included.
- Available Colors: Red, Amber, Green, Blue.

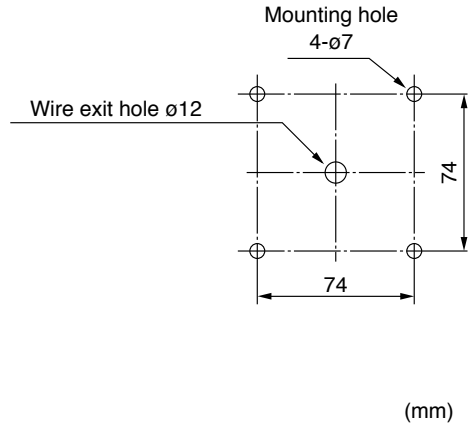
Available by Special Order

- CE Compliance.

Dimensions

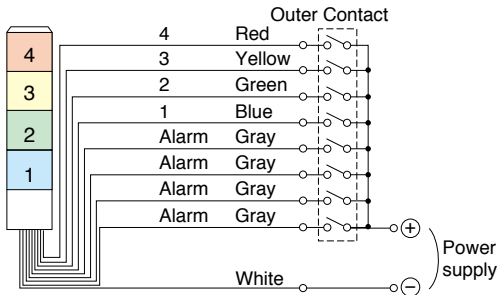


Mounting Dimension

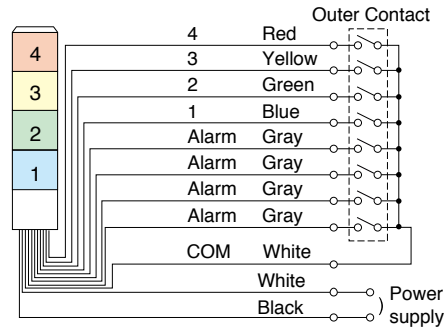


Wiring Diagram

KJ/KJB (24V DC)



KJ/KJB (100V AC, 220V AC)



※ KJ-110/112/120 are voltage contact type (there are no alarm signal wires).
 ※ KJ does not have gray wires.

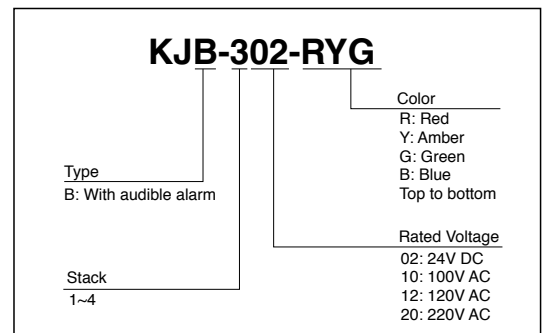
Current consumption and contact capacity per module

Rated Voltage	Signal Wire Current	Inrush Current	Outer Contact Capacity	Alarm Wire Current	Alarm Wire Inrush Current
24V DC	0.42A	4.6A	More than 5A	60mA	500mA
100V AC/120V AC/220V AC					

KJ Type

Number of Stacks	Model	Rated Voltage	Power Consumption	Bulb	No.
1 Light	KJ/KJB-102	24V DC	13.5W	24V 10W	10
	KJ/KJB-110	100V AC	6W	12V 5W	12
	KJ/KJB-112	120V AC	7W		
	KJ/KJB-120	220V AC	5.5W		
2 Lights	KJ/KJB-202	24V DC	25.5W	24V 10W	10
	KJ/KJB-210	100V AC	11W	12V 5W	12
	KJ/KJB-212	120V AC	13W		
	KJ/KJB-220	220V AC	9.9W		
3 Lights	KJ/KJB-302	24V DC	37.5W	24V 10W	10
	KJ/KJB-310	100V AC	16W	12V 5W	12
	KJ/KJB-312	120V AC	18W		
	KJ/KJB-320	220V AC	14.3W		
4 Lights	KJ/KJB-402	24V DC	49.5W	24V 10W	10
	KJ/KJB-410	100V AC	21W	12V 5W	12
	KJ/KJB-412	120V AC	26W		
	KJ/KJB-420	220V AC	18.7W		

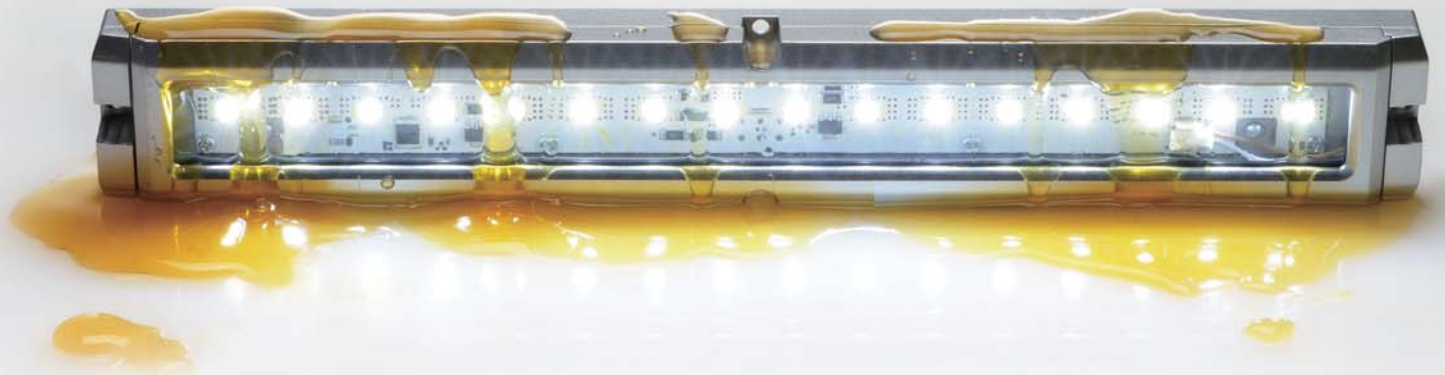
How to Order



Bulb...G18 BA15S

KJB type approx. 130 flashes per minute.

L.E.D. Light



CLF

LED Light Bar



LED



IP67



Vertical mounting

- High power 1,700lx illumination* for precise work operation.
- Water and dustproof IP67 construction.
- Steady Light Source.
- The light emitted from the unit does not contain infrared or UV rays, which radiate heat and damage materials.
- Stable operation from -30°C to $+60^{\circ}\text{C}$.

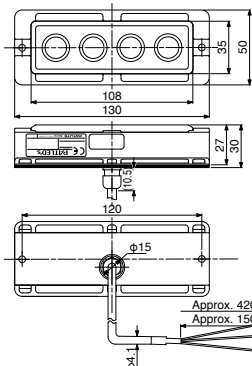
* Luminous intensity at 50cm (CLF20-24-C)

Specifications of red color type and yellow color type may be different from those of white color type

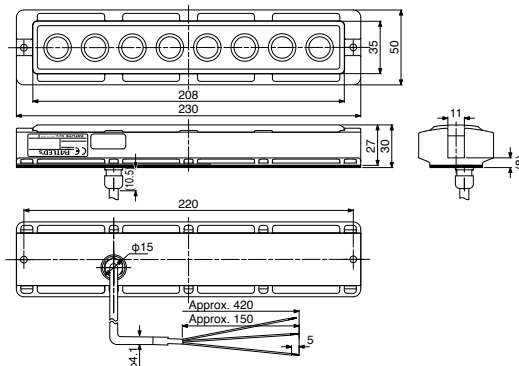
Clear/White	Warm White	Red	Yellow
Machine tool, control panel applications	Inspection test equipment	Semiconductor manufacturing machinery, tester, etc.	Semiconductor manufacturing machinery, cleanroom environment, etc.

Dimensions

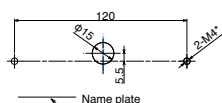
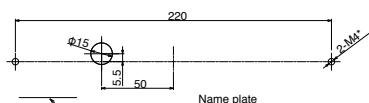
CLF10-24



CLF20-24



Mounting dimensions



* When mounting with supplied nuts : $\phi 4.5$

(Unit : mm)

CLF Type

Model	CLF10-24				CLF20-24			
	C	CL	R	Y	C	CL	R	Y
LED Color	C	CL	R	Y	C	CL	R	Y
Rated Voltage	24V DC (No polarity)							
Operating Voltage Range	Rated voltage $\pm 10\%$							
Power Consumption	2.5W				5W			
Light Source	High intensity LEDx4				High intensity LEDx8			
Luminous Intensity at Optical Center (lx at 50cm)	850	240	320	1,700	470	630		
Main Body	Housing: Aluminum				Cover: Polycarbonate			
Operating Temperature Range	-30°C ~ $+60^{\circ}\text{C}$ (No condensation 90% RH or less)							
Installation	Indoor, Forward Direction							
Protection Rating	IP67							
Vibration Resistance	19.6m/s ²							
Mass	205g ± 10 g				345g ± 10 g			

CLT

LED Light Bar



PATLED[®]s

IP67F

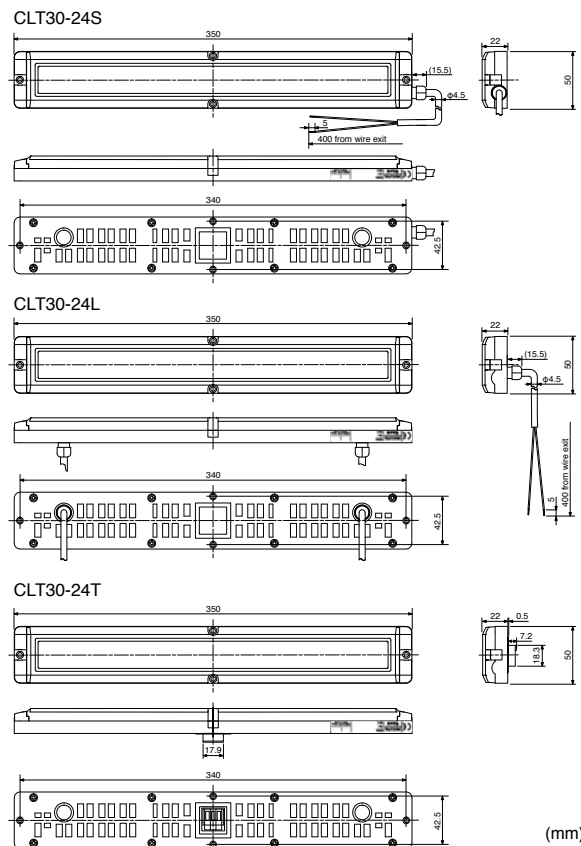
Oil resistant high power LED light bar with even and diffused light distribution.

- Oil, water and dustproof IP67F construction is ideal for harsh environment
- Operation free from flicker and stroboscopic effects.
- 3 cable outlet versions are available for diversified mounting requirements
- LED colors available in daylight color. Long service life and maintenance-free LED light bar is ideal for a machining center and vision system as well as food showcase, and food processing and packaging machine.

CLT Type

Model	CLT30-24S-CD	CLT30-24L-CD	CLT30-24T-CD
LED Color	daylight color		
Rated Voltage	24V DC		
Operating Voltage Range	Rated voltage $\pm 10\%$		
Current Consumption	416mA \pm 40mA		
Light Source	High intensity LED \times 16 pieces		
Luminous Intensity at Optical Center (lx at 50cm)	500		
Main Body	Housing: Aluminum, Cover: Tempered glass		
Operating Temperature Range	-30°C~+60°C (90%RH or less, w/o dew condensation)		
Mounting Direction	Any directions (for indoor use only)		
Protection Rating	IP66G/IP67G JIS C 0920: 2003/Aqueous oil resistant (Internal regulations)		
Vibration Resistance	19.6m/s ²		
Mass	700g	750g	650g

Dimensions

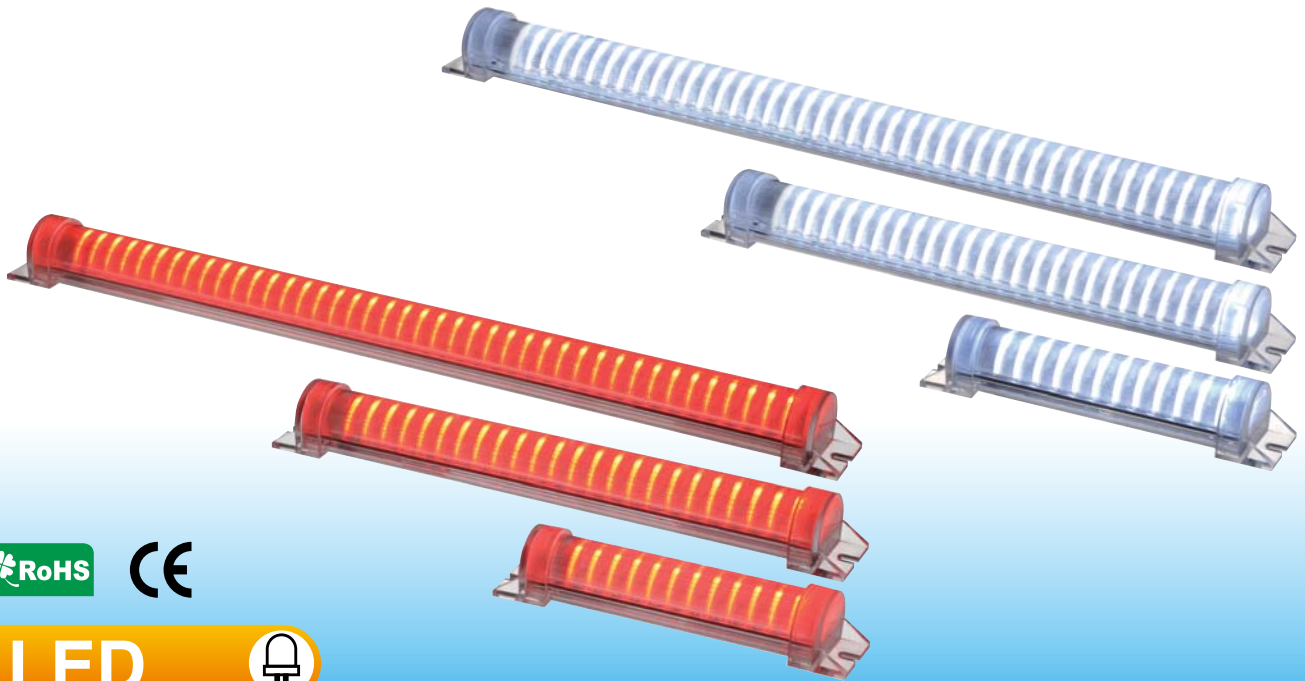


(mm)

CLT

CLB

LED Light Bar



LED



IP42

Long life LED lighting with lower power consumption and less heat generation than conventional fluorescent lamps.

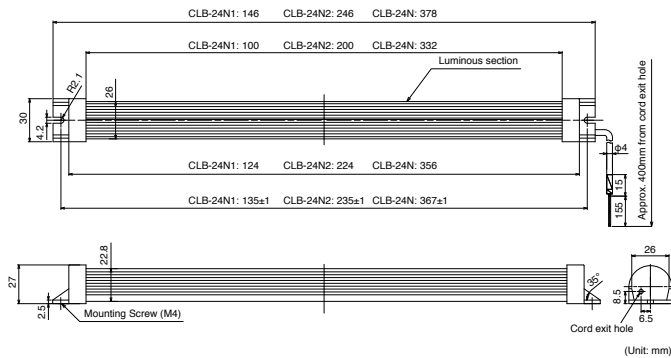
- High illumination in a compact body.
- Super bright LEDs are maintenance-free, providing long service life and lower power consumption and heat.
- Rated voltage: 24V DC (No polarity).
- Luminous Intensity: 300lux at 50cm.
- Housing is made of heat and shock resistant polycarbonate.
- Available in Clear/White, Red.

How to Order

CLB-24N1-R

R: Red C: Clear/White
 N1: 100mm long N2: 200mm long
 N: 332mm long

Dimensions



CLB Type

Model	CLB-24N1-□		CLB-24N2-□		CLB-24N-□	
	R (Red)	C (White)	R (Red)	C (White)	R (Red)	C (White)
Rated Voltage	24V DC (No polarity)					
Operating Voltage Range	24V DC ± 1V					
Current Consumption (mA)	35 ⁺⁵ ₋₅	60 ⁺¹⁰ ₋₁₀	70 ⁺¹⁰ ₋₁₀	120 ⁺²⁰ ₋₂₀	122 ⁺¹⁸ ₋₁₈	224 ⁺⁵⁰ ₋₅₀
Rated Temperature Range	-30°C ~ +60°C					
Relative Humidity	Less than 90% RH (Without Dew)					
Housing Material	Polycarbonate					
Protection Rating	IP42					
Illuminance at 50cm (lx)	20	85	40	185	60	300
Mounting Direction	Indoor, Horizontal, Vertical (Up or Down)					
Vibration Resistance	19.6m/s ²					
Agency Approval	CE / RoHS					
Mass	41g ± 10%		60g ± 10%		86g ± 10%	

CLE

LED Work Light



Wide Spot Type
CLE-24



Narrow Spot Type
CLE-24N



LED

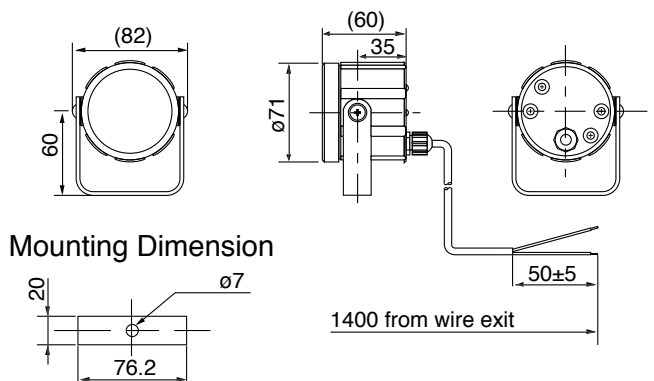
ø71

IP65f

LED Work Light designed for applications for machine tool, inspection and processing industries.

- Enhanced Illumination: Use of ultra-bright LEDs.
- Extended product life even in harsh environment.
- Energy-Efficient: Low power consumption and less heat build-up.
- Installation: Upright, inverted, sideways.

Dimensions



(mm)

CLE Type

Model	Rated Voltage	Power Consumption	Luminosity	Mass
CLE-24	24V DC	3W	20cd	0.3kg
CLE-24N	24V DC	3W	130cd	0.3kg

CLM

LED Work Light



LED



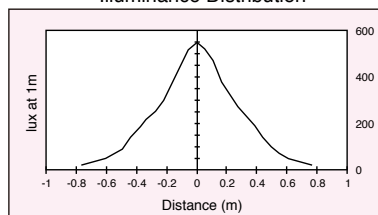
ø85

IP67f

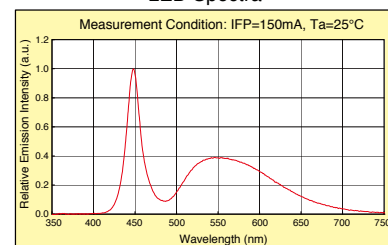
Super bright LED work light with resistance to weather, dust, oil and water.

- Enhanced Illumination: 5 super-bright white LEDs.
- Installation: Direct mount with 1 screw, 1 or 2 point angle-mount.
- Mounting Parts: Corrosion resistant stainless steel bracket and mounting screws.
- Main Body: Impact resistant robust aluminum alloy body.
- Glass: Impact resistant tempered glass.

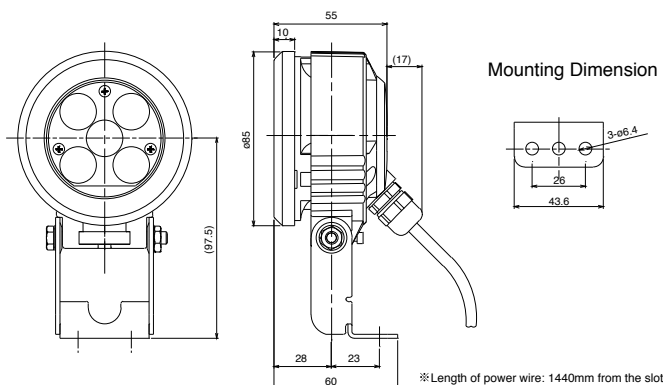
Illuminance Distribution



LED Spectra



Dimensions



CLM Type

Model	Rated Voltage	Power Consumption	Intensity Level	Temperature Range
CLM-24	24V DC (no polarity)	3.0W	500cd (center)	-25°C to +60°C

LAS

Warning Light



 **LED**

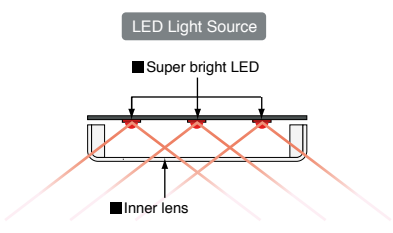
**Water-
Vibration-
proof** *

**12V
24V Compatible**

※Water-proof: JIS D 0203SI-1994
Vibration-proof: 70m/s JIS D 1601-1995

Super bright, compact energy-saving LED auxiliary warning light designed for emergency vehicles to ensure safety.

- Enhanced Illumination: Use of super bright LED with optimized special lens design for highest illumination and wide emission.
- Improved Visibility: From front and sides.
- Lighting Pattern: 10 built-in patterns and multiple units can be flashed synchronously.
- Installation: Direct mount with L-angle bracket.
- Available Colors: Red, Amber, Blue.



LAS Type

Model	Rated Voltage	Operating Voltage Range	Flashing Pattern	Current Consumption				Operating Temperature Range	Mass
				Red / Amber		Blue			
LAS-M1KV	12V / 24V DC	9.5 ~ 30.0V DC	10 Patterns	560 ± 190mA (at 12V DC)	390 ± 110mA (at 24V DC)	830 ± 350mA (at 12V DC)	370 ± 150mA (at 24V DC)	-30°C ~ +80°C*	approx. 0.3kg

※Operating temperature range is -30°C~+40°C when all lit-up

Voice & Sound



BM

Signal Horn



90dB at 1m (BM-H type)
(BM type: 85dB at 1m, BM-D type: 80dB at 1m)

2 channels

∅30

IP34

(BM-D Type: Front only)

**NPN/PNP
Open collector**



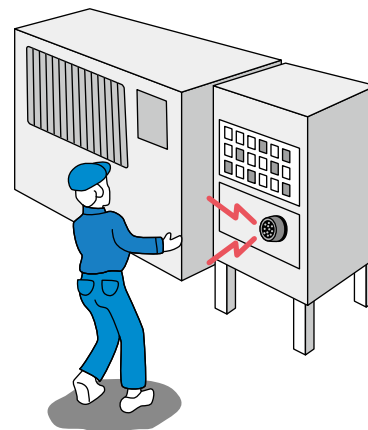
BM-D

Compact Signal Horn designed for integrated applications with control panels, switchboards and production equipments.

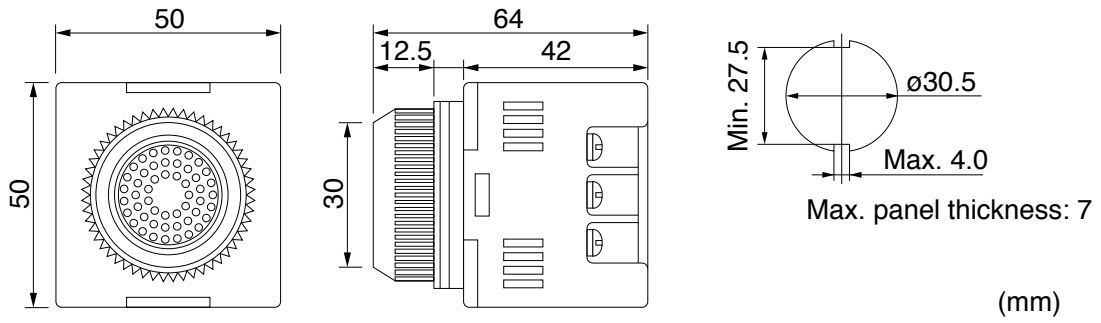
- Built-in Alarm: Audible sound up to 90dB at 1m^{*1}.
- Sound Pattern: Selectable 2 patterns of alarm sound.
- Body: Compact and light weight (100g).
- NPN/PNP Compatible: 24V type only.
- CE Compliant: For 24V AC/DC only.

*1 BM-H type only

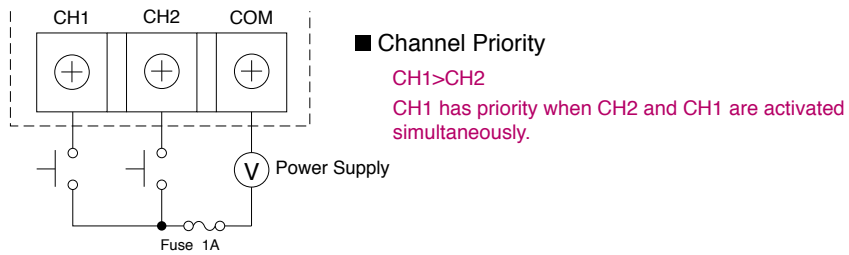
Application Examples



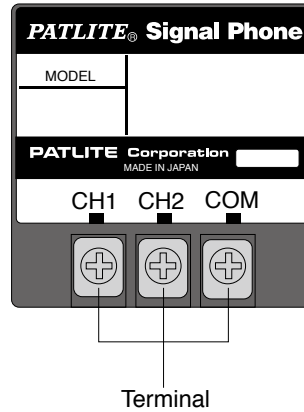
Dimensions



Wiring Diagram



Reverse Side View



BM Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Outer Contact Capacity	Operating Temperature Range	Auxiliary Input	Channel	Protection	Mass					
Standard Type	BM-202	24V AC/DC	AC/DC 22V~26V	0.4W	Max. 80dB at 1m	More than 100mA	Voltage contact	2	—	0.1kg					
	BM-210	100V AC	90V~110V AC	2.5W	Max. 85dB at 1m										
	BM-220	220V AC	200V~240V AC	3.5W											
High Volume Type	BM-202H	24V AC/DC	22V~26V AC/DC	0.4W	Max. 85dB at 1m						-10°C~+60°C Humidity 85% or less.	Voltage contact	2	—	0.1kg
	BM-210H	100V AC	90V~110V AC	2.5W	Max. 90dB at 1m										
	BM-212H	120V AC	108V~132V AC	2.5W											
	BM-220H	220V AC	200V~240V AC	3.5W											
Drip-proof Type	BM-202D	24V AC/DC	22V~26V AC/DC	0.4W	Max. 75dB at 1m									IP34	
	BM-210D	100V AC	90V~110V AC	2.5W	Max. 80dB at 1m										
	BM-220D	220V AC	200V~240V AC	3.5W											

BD

Audible Alarm



90dB at 1m

32 Sounds

□ 80

IP54

NPN
Open Collector

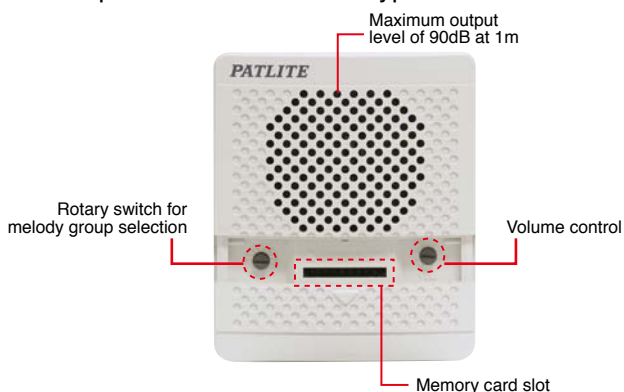


The BD series has a melody, chime and alarm capability, variable audible control, and a compact but loud speaker.

- Maximum output level of 90dB at 1m is suitable for use in a noisy factory.
- 32 sounds are pre-recorded in one unit which can be used for various applications.
- Sound output level and sound group can be selected by rotary switches stored behind the front panel for easier operation even after installation.
- Select one sound group from A to P to playback 4 pre-recorded sounds.
- A new sound group can be created from the 32 sounds by using an optional memory card (Sold separately).
- RoHS compliant.

Available by Special Order

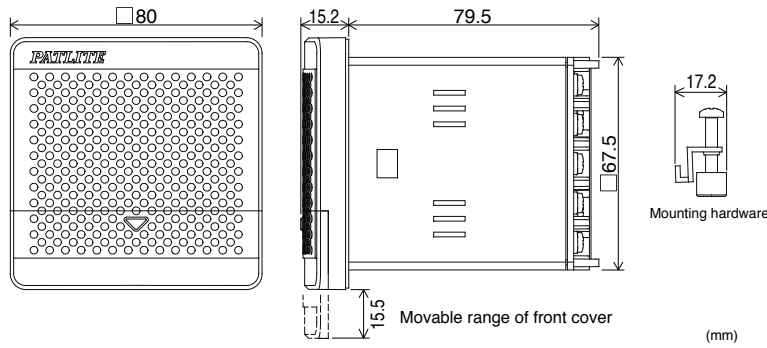
- Binary input controlled 15 sound playback type.
- PNP open collector transistor type.



BD Type

Model	BD-24□	BD-100□
Rated Voltage	12V/24V DC	100V / 220V AC 50/60Hz
Operating Voltage Range	10.8 ~ 26.4V DC	100V±10% AC / 220V±10% AC
Power Consumption	Max. 4W	Max. 6W
Volume	Max. 90dB at 1m (when flush mount), volume level adjustable Volume may be less, depending on sound type and operating conditions	
Input System	1bit input	
Input Signal Time	Continuous	
Boot up Time	For input voltage: 1s or less	For channel signal: 170ms or less
Channel	4 channels	
Recorded Sound	32 alarms and melodies	
Sound Group	16 patterns (A to P)	
Operating Temperature Range	-20°C ~ 50°C	
Relative Humidity	85% RH or less (No condensation)	
Protection Rating	IP54 (when flush mount, front direction only)	
Vibration Resistance	19.6m/s ²	
Mass	205g±10%	325g±10%

Dimensions



How to Order

BD-24A-J

Rated Voltage

24: 24V DC
100: 100V/220V AC

Color

J: Ivory White
K: Dark Gray

Sound Type

A: A Type
C: C Type
D: D Type
E: E Type

Note: See page 175 for wiring diagram

Sound Selection Charts

BD-A type

GROUP	CH1	CH2	CH3	CH4
A _{#1}	Beep (slow intermittent horn)	Slutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
C	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
D	Fur Elise	Maiden's Prayer	Chime	Call sign
E	Minuet	Annie Laurie	Chime	Call sign
F	London Bridge is Falling Down	Holdiridia	Chime	Call sign
G	Mary Had a Little Lamb	Camptown Races	Chime	Call sign
H	Kuck kuck	Der Schmied im Walde	Chime	Call sign
I	On the Bridge of Avignon	Daydream Believer	Chime	Call sign
J	Amaryllis	Mozart Symphony No. 40	Chime	Call sign
K	Itsy Bitsy Spider	Ich bin ein Musikante	Chime	Call sign
L	Jeux Interdits	Katuscha	Chime	Call sign
M	Grandfather's Clock	Ave Maria	Chime	Call sign
N	Holdiridia	Ich bin ein Musikante	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime
O	Mary Had a Little Lamb	Jeux Interdits	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime
P _{#2}	Camptown Races	Kuck kuck	Katuscha	Grandfather's Clock

BD-C type

GROUP	CH1	CH2	CH3	CH4
A _{#1}	Beep (slow intermittent horn)	Slutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
C	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
D	Can't Take My Eyes off of You	Top of the World	Chime	Call sign
E	The Entertainer	Amazing Grace	Chime	Call sign
F	Amairono Kamino Otome	Les Champs-Elysees	Chime	Call sign
G	Canon	Rara Sanshain	Chime	Call sign
H	Uchuusenkan Yamato	Oshiete	Chime	Call sign
I	Makenaide	Gonna Fly Now (Theme for 'Rocky')	Chime	Call sign
J	I Don't Want to Miss a Thing	Yozorano Mukou	Chime	Call sign
K	Aiwa Katsu	Truth	Chime	Call sign
L	Gattsudaze	Odoru Ponpokorin	Chime	Call sign
M	Imasugu Kisu Mi	Haruyo Koi	Chime	Call sign
N	Les Champs-Elysees	Truth	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime
O	Canon	Gattsudaze	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime
P _{#2}	Rara Sanshain	Uchuusenkan Yamato	Odoru Ponpokorin	Imasugu Kisu Mi



T-06B0152
T-0710139
T-0710140

BD-D type

GROUP	CH1	CH2	CH3	CH4
A _{#1}	Beep (slow intermittent horn)	Slutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
C	Runner	Mamotte Agetai	Chime	Call sign
D	Oribiao Kikinagara	A September	Chime	Call sign
E	Doyoubino Koibito	Akino Kehai	Chime	Call sign
F	Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Chime	Call sign
G	Hi Ho	Bear Song	Chime	Call sign
H	Konnako Irukana	Rudolph the Red-nosed Reindeer	Chime	Call sign
I	Oh My Darling Clementine	Yankee Doodle	Chime	Call sign
J	Runner	Mamotte Agetai	Oribiao Kikinagara	A September
K	Doyoubino Koibito	Hi Ho	Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo
L	Happy Birthday	OKonnako Irukana	I've been working on the Railroad	Bear Song
M	Toys Go Cha Cha Cha	Konnako Irukana	Wiegenlied	Rudolph the Red-nosed Reindeer
N	She Wore a Yellow Ribbon	Oh My Darling Clementine	Yellow Rose of Texas	Yankee Doodle
O	When the Saints Go Marching In	Londonderry Air	Runner	Mamotte Agetai
P _{#2}	Hi Ho	I've been working on the Railroad	Yankee Doodle	When the Saints Go Marching In

BD-E type

GROUP	CH1	CH2	CH3	CH4
A _{#1}	Beep (slow intermittent horn)	Slutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
C	Slutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
D	Oribiao Kikinagara	A September	Chime	Call sign
E	Doyoubino Koibito	Akino Kehai	Chime	Call sign
F	Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Chime	Call sign
G	Hi Ho	Bear Song	Chime	Call sign
H	Konnako Irukana	Rudolph the Red-nosed Reindeer	Chime	Call sign
I	Fur Elise	Minuet	Chime	Call sign
J	Annie Laurie	Ave Maria	Chime	Call sign
K	Mary Had a Little Lamb	Camptown Races	Chime	Call sign
L	Amaryllis	Mozart Symphony No. 40	Chime	Call sign
M	Ave Maria	Grandfather's Clock	Chime	Call sign
N	Fur Elise	London Bridge is Falling Down	Chime	Call sign
O	Annie Laurie	Minuet	Chime	Call sign
P _{#2}	Hi Ho	I've been working on the Railroad	Mozart Symphony No. 40	Ave Maria

※ 1 Factory default setting ※ 2 Can be programmed with optional SD Card (SDV-128P/sold separately)

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded in BD-A, C and D types outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. BD-E type is recommended for use outside of Japan as this model does not include copyrighted music or songs, and permission is not required.

Audible Alarm



95dB at 1m

(Actual sound level may vary depending on sound type.)

32 Sounds

IP54

**NPN
Open Collector**



The BK series has melody, chime and alarm capability, variable audible control, and a compact but loud speaker.

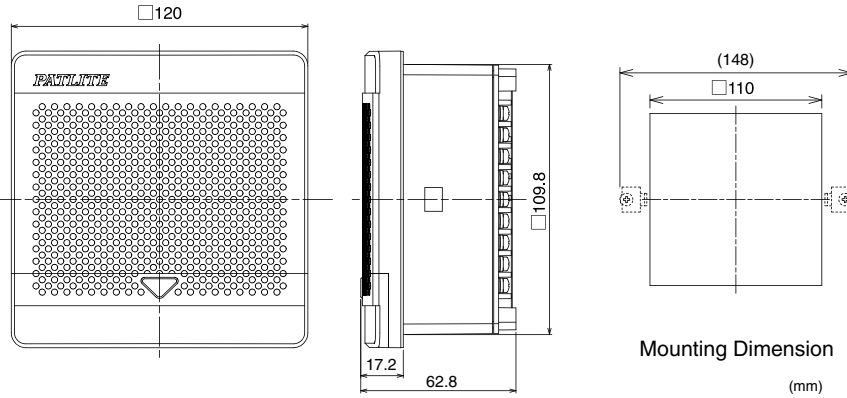
- 32 sounds are pre-recorded in one unit which can be used for various applications.
- Maximum output level of 95dB at 1m is suitable for use in a noisy factory.
- Volume output and sound groups can be changed easily by rotary switches stored inside of the front panel even after installation.
- Select one sound group from A to H to playback 8 pre-recorded sounds (When controlled by bit input).
- A new sound group can be created from the 32 sounds with an optional SD card (Sold separately).
- RoHS compliant.
- Set the sound selection switch from " I " to " O " to test the function or sound volume.
- Sound can be played back by a bit input (8 channels) or binary input (32 channels).

Available by Special Order

- PNP open collector transistor type.



Dimensions



Note: See page 175 for wiring diagram

How to Order

BK-24A-J	
Model	Color
	J: Light Gray K: Dark Gray
Rated Voltage	Sound Type
24: 12-24V DC 100: 100V AC 220: 220V AC	A: Type A C: Type C D: Type D E: Type E

BK Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Operating Temperature Range	Channels	Protection Rating	Mass
BK-24	12-24V DC	10.8V~26.4V DC	12W	Max. 95dB at 1m*	-20°C~+50°C (Humidity 85% or less)		IP54 (when flush mount, front direction only)	350g±10%
BK-100	100V AC	100V AC±10%	10W					530g±10%
BK-220	220V AC	220V AC±10%	11W					530g±10%

*Actual sound level will depend on sound type and operating conditions.

Sound Selection Chart

32 sounds are pre-recorded in one unit. 4 sound types are available.

T-06B0152
T-0710139
T-0710140

BK-A

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Fur Elise	Maiden's Prayer	Minuet	Annie Laurie
London Bridge is Falling Down	Holdiridia	Mary Had a Little Lamb	Camptown Races
Kuck kuck	Der Schmied im Walde	On the Bridge of Avignon	Daydream Believer
Amaryllis	Mozart Symphony No. 40	Itsy Bitsy Spider	Ich bin ein Musikante
Jeux Interdits	Katuscha	Grandfather's Clock	Ave Maria

BK-C

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Can't Take My Eyes off of You	Top of the World	The Entertainer	Amazing Grace
Amairono Kamino Otome	Les Champs-Elysees	Canon	Rara Sanshain
Uchuusenkan Yamato	Oshiete	Makenaide	Gonna Fly Now (Theme for 'Rocky')
I Don't Want to Miss a Thing	Yozorano Mukou	Aiwa Katsu	Haruyo Koi
Gattsudaze	Odoru Ponpokorin	Imasugu Kisu Mi	Truth

BK-D

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call sign
Oribiao Kikinagara	A September	Doyubino Koibito	Akino Kehai
Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Happy Birthday	Hi Ho
I've been working on the Railroad	Bear Song	Toys Go Cha Cha Cha	Konnako Irukana
Wiegenlied	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	Oh My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Air

BK-E

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Inverted Receille	Annie Laurie
Stutter (rapid intermittent horn)	Synthesized Melody Chime	Galactic Motor	London Bridge is Falling Down
Bell (clear high pitched bell)	Chime	Ringin Phone	Mary Had a Little Lamb
Yelp (rapid siren)	Call Sign	Two Tone	Camptown Races
Rapid Hi-Lo	Train Ride	Alarm Clock	Amaryllis
Melody Chime	Galloping Hi-Lo	Ringin Hi-Lo	Mozart Symphony No.40
Synthesized Piano	Alien Chatter	Fur Elise	Ave Maria
Synthesized Bell	Falling Crystals	Minuet in G	Grandfather's Clock

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded in BK-A, C and D types outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. BK-E type is recommended for use outside of Japan as this model does not include copyrighted music or songs, and permission is not required.



EWH / EWHS

Signal Horn



105dB at 1m

32 sounds

IP65

(IP65 available by special order)

**NPN
Open collector**

Original wide horn featuring clear and high volume up to 105dB at 1m, designed for use in noisy environments.

- 32 sounds are pre-recorded in one unit.
- For enhanced durability and safety in the work environment.
- Built-in Alarm: Adjustable audible sound up to 105dB at 1m with volume control.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
(Do not install the horn facing upward).
- Easy Installation: With anti-corrosive stainless steel mounting bracket.
- NPN Compatible: 24V type only (EWH series only).
- CE Compliant: 24V AC/DC only.
- Available: PNP as special order.

Available by Special Order

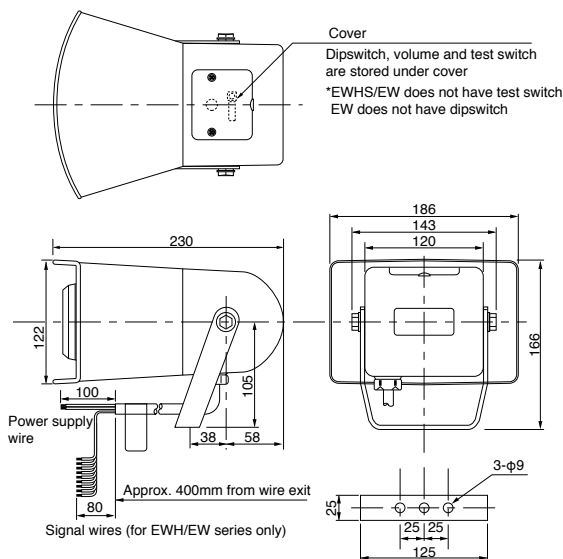
- PNP open collector type.

EWH / EWHS / EW Type

	Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Outer Contact Capacity	Operating Temperature Range	Auxiliary Input	Channel	Protection	Mass			
EWH	EWH-24	12/24V AC/DC	8V~28V AC/9V~35V DC	8W	Max. 105dB at 1m	EW: More than 10mA	-20°C~+60°C Humidity 85% or less.	EWH: Voltage free contact 8/1bit 32/binary	8/1bit or 32/binary	IP53 IP65*	1.2kg			
	EWH-48	48V DC	35V~60V DC	10W							1.4kg			
	EWH-100	100V AC	90V~132V AC	12W										
	EWH-200	200V AC	180V~260V AC	13W										
EWHS	EWHS-24	12/24V AC/DC	8V~28V AC/9V~35V DC	8W							EWS: Voltage contact	1		1.2kg
	EWHS-48	48V DC	35V~60V DC	10W									1.4kg	
	EWHS-100	100V AC	90V~132V AC	12W										
	EWHS-200	200V AC	180V~260V AC	13W										
EW	EW-24TB	24V AC/DC	20V~26V AC/20V~28V DC	5.5W	Max. 103dB at 1m			Voltage free contact 4/1bit	4		1.2kg			
	EW-100TB	100V AC	90V~110V AC	5W								1.4kg		
	EW-220TB	220V AC	180V~240V AC	5W										

* By special order

Dimensions



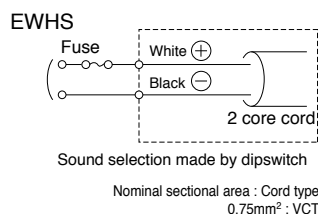
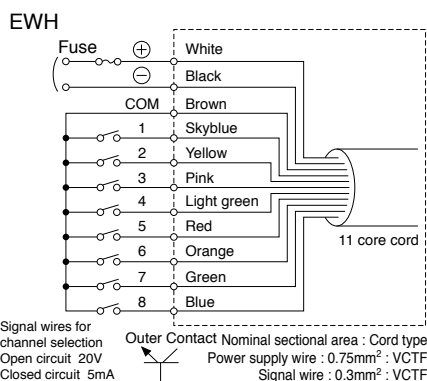
How to Order

EWH-24A-J	
Model EWH: 8 channels/bit input 32 channels/binary input EWHS: 1 channel	Body Color J: Ivory White Y: Yellow R: Red
Rated Voltage 24: 12/24V AC/DC 48: 48V DC 100: 100V AC 200: 200V AC	Sound type A: Type A C: Type C D: Type D

Test switch (for EWH series only)

Test switch is stored under cover. Switch can be used to check the operation or adjust sound volume.

Wiring Diagram



Fuse capacity (EWH/EWHS)

Model	Rated Voltage	Fuse
EWH-24/EWHS-24	12-24V	1A (Anti-rush)
EWH-48/EWHS-48	48V	1A (Normal)
EWH-100/EWHS-100	100V	1A (Normal)
EWH-200/EWHS-200	200V	1A (Normal)

Channel priority (for EWH series)

8 (Blue) > 7 (Green) > 6 (Orange) > 5 (Red) > 4 (Lightgreen) > 3 (Pink) > 2 (Yellow) > 1 (Skyblue)
The greater number has priority when any of the channels are activated simultaneously.

Polarity symbol of power source is for EWH and EWHS series, in 12/24V DC and 48V DC types.

Sound Selection Charts

32 sounds are pre-recorded in one unit. 4 sound types are available.



EWH/EWHS-A

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Fur Elise	Maiden's Prayer	Minuet	Annie Laurie
London Bridge is Falling Down	Holdiridia	Mary Had a Little Lamb	Camptown Races
Kuck kuck	Der Schmied im Walde	On the Bridge of Avignon	Daydream Believer
Amaryllis	Mozart Symphony No. 40	Itsy Bitsy Spider	Ich bin ein Musikante
Jeux Interdits	Katuscha	Grandfather's Clock	Ave Maria

EWH/EWHS-C

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Can't Take My Eyes off of You	Top of the World	The Entertainer	Amazing Grace
Amairono Kamino Otome	Les Champs-Elysees	Canon	Rara Sanshain
Uchuusenkan Yamato	Oshiete	Makenaide	Gonna Fly Now (Theme for "Rocky")
I Don't Want to Miss a Thing	Yozorano Mukou	Aiwa Katsu	Haruyo Koi
Gattusdaze	Odoru Ponpokorin	Imasugu Kisu Mi	Truth

EWH/EWHS-D

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call sign
Oribiao Kikinagara	A September	Doyoubino Koibito	Akino Kehai
Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Happy Birthday	Hi Ho
I've been working on the Railroad	Bear Song	Toys Go Cha Cha Cha	Konnako Irukana
Wiegenlied	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	Oh My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Air

EWH/EWHS-E

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Inverted Receille	Annie Laurie
Stutter (rapid intermittent horn)	Synthesized Melody Chime	Galactic Motor	London Bridge is Falling Down
Bell (clear high pitched bell)	Chime	Ringling Phone	Mary Had a Little Lamb
Yelp (rapid siren)	Call Sign	Two Tone	Camptown Races
Rapid Hi-Lo	Train Ride	Alarm Clock	Amaryllis
Melody Chime	Galloping Hi-Lo	Ringling Hi-Lo	Mozart Symphony No.40
Synthesized Piano	Alien Chatter	Fur Elise	Ave Maria
Synthesized Bell	Falling Crystals	Minuet in G	Grandfather's Clock

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded in EWH/EWHS-A, C and D types outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. EWH/EWHS-E type is recommended for use outside of Japan as this model does not include copyrighted music or songs, and permission is not required.

Easy steps to use MP3 products

Model BKV



Model BDV



Model WG



Model LKEH



Model RFV



Model FV-127JP



STEP 1

Get the Playlist Editor

The playlist Editor is free software from Patlite.
Please contact us by e-mail. www.patlite.com

STEP 2

Get the model SDV-128P

The model SDV-128P is a SD card.
PATLITE corporation is a member of the SD card Association.

STEP 3

Create the MP3 messages

Convert the voice messages data to MP3 data.
*It is necessary to remove ID3 tag for WG only.

STEP 4

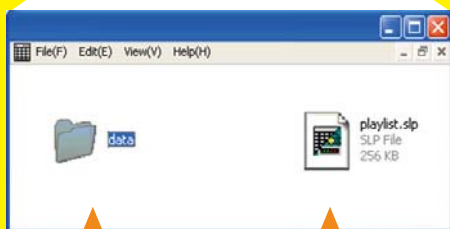
Save the MP3 data to SD card

STEP 5

Install MP3 data to the Products



Preparing the SD Card



Playlist Editor

(FV-Win)

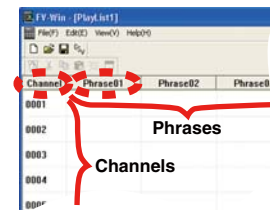
With Windows XP/Windows Vista*,
and PATLITE software,
You can download from the Web.

Creating Play List Using Playlist Editor

Playlist Editor Overview

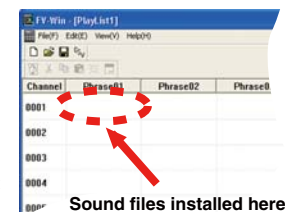
Step1

1. Divided into Channel & Phrases
2. Start software



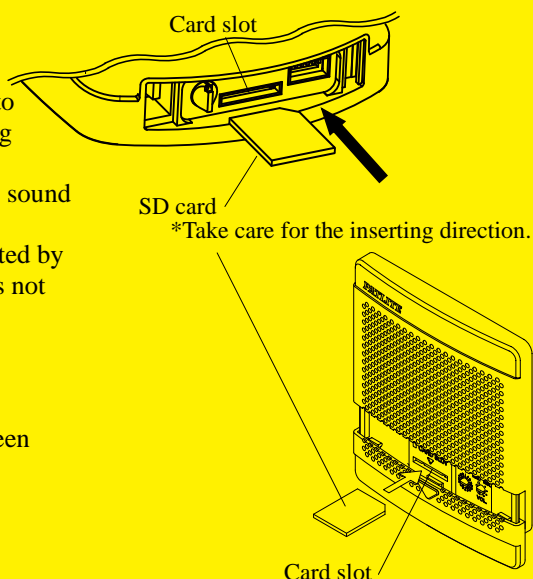
Step2

1. Insert Sound files in appropriate channel & phrase
2. After all files are installed, save file as "playlist.slp"
3. This completes play list creation.



Example (BKV, LKEH)

- (1) Open the front cover.
- (2) By inserting the SD card that has stored the rewritten data into the card slot, it is indicated by the sound "Pipo," and rewriting is started.
- (3) When rewriting of the data has finished, it is indicated by the sound "Pee." Then, pull out the SD card.
 - * Writing will be finished within 60 seconds. If it is indicated by the sound "Pipipipi" or there is no reaction, the rewriting is not completed.
 - Confirm "9. Before Asking for Repair."
 - In addition, verify that the informing sound can be heard by adjusting the volume at the audible level.
- (4) Play the voice of each CH, and confirm that rewriting has been normally completed.



Request

- For the SD card, use the model SDV-128P (Sold Separate). If a SD card of other type is used, its operation is not guaranteed.
- When "formatting" a SD card select FAT16.
- When inserting the SD card into the card slot, pay attention to the direction of the card. Also, do not use force when pressing the SD card into the card slot. Otherwise, there is a risk of damaging this product and the SD card.
- Pay attention so that foreign objects do not enter into the card slot.
- Do not pull out the SD card nor cut off the power supply when the SD card is reading.

Notification

- If the SD card is inserted during playback of a voice, rewriting of messages is started after the voice playback has been finished.
- When the SD card is reading, input of the sound signal line has no effect.

BDV

Voice Annunciator



87 dB at 1m

63 Second

IP54

Upright direction only.

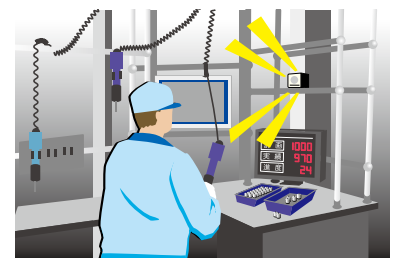
**NPN
Open Collector**



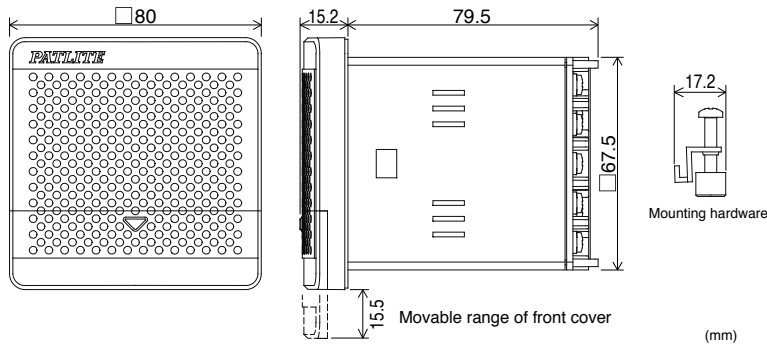
Excellent sound quality with MP3 playback! This panel-mounted MP3 voice annunciator uses SD cards,* allowing messages to be changed easily.

* SD card not included.

- Only embedded mounting style available.
- Able to produce a loud sound of up to 87 dB (at 1m) despite its compact size
- A volume control on the front panel provides an easy way to adjust the sound volume.
- The use of an SD card allows message changes without dis-mounting the device.
- Environmentally friendly since the unit complies with the EU RoHS Directives.
- Several playback modes are available for various applications.
- Includes binary input as a standard option for selecting up to 15 messages.
- Supports input selection using NPN open-collector transistor.
- The unit complies with EU Directives and includes the CE mark (BDV-15JF only)
- Two colors are available for selecting the best color match for the installation.
- Protection rating: IP54 (only the front when flush mounted)



Dimensions



How to Order

BDV-15JF-J

Rated Voltage J: 12-24V DC K: 100V/220V AC	Color J: Ivory White K: Dark Gray
---	--

Note: See page 175 for wiring diagram

BDV Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Voice File	Relative Humidity	Maximum Playing Time	Number of playing messages	Protection Rating	Mass
BDV-15JF	12-24V DC	10.8V~26.4V DC	4W	Max 87dB (at 1m)	MPEG1-Audio Layer (mp3) Standard bit rate : 64kbit/s, Fs=44.1kHz	-10 ~ +50 (Less than 85%RH)	63.5sec.	4 (Bit input) 15 (Binary input)	IP54 When flush mounted	0.22kg±10%
BDV-15KF	100/220V AC	100V AC±10% 220V AC±10%	5W							0.34kg±10%

* Actual sound level will depend on sound type and operating conditions.

Sound Selection Charts

Mode Selector Switch

Several playback modes are available for various applications.

A Bit input mode	Plays back up to 4 messages using Channels 1 to 4
B Binary input mode	Plays back up to 15 messages using Channels 1 to 4
C Bit input/ volume reduction mode	Plays back up to 3 messages using Channels 1 to 3 When Channel 4 receives an input, the volume is reduced by about 10 dB.
D Binary input/ volume reduction mode	Plays back up to 7 messages using Channels 1 to 3 When Channel 4 receives an input, the volume is reduced by about 10 dB.
E Bit input/ prioritized-message playback mode	Plays back up to 4 messages using Channels 1 to 4 If an audio message is input while another audio message is being played back, the current playback is stopped and the most recently input message is played back.
F Binary input/ prioritized-message playback mode	Plays back up to 15 messages using Channels 1 to 4 If an audio message is input while another audio message is being played back, the current playback is stopped and the most recently input message is played back.
G Bit input/ held-message playback mode	Plays back up to 4 messages using Channels 1 to 4 An audio message can be played back only while the input is held. The playback is stopped when the input ends.
H Binary input/ held-message playback mode	Plays back up to 15 messages using Channels 1 to 4 An audio message can be played back only while the input is held. The playback is stopped when the input ends.
I Test playback	Plays back message No. 1

Options

PATLITE Playlist Editor (Free version)

(OS: Windows® 2000/XP/Vista)

- > PATLITE Playlist Editor software is required to change the audio message data.
- > PATLITE Playlist Editor can be downloadable from PATLITE's website, www.patlite.com.
- > The SD card does not contain the Playlist Editor or any audio messages.

SD card (128 MB) SDV-128P





Voice Annunciator



12-24V Type

95dB at 1m

(Actual sound level may vary depending on sound type.)

63 Second

IP54

Upright direction only.

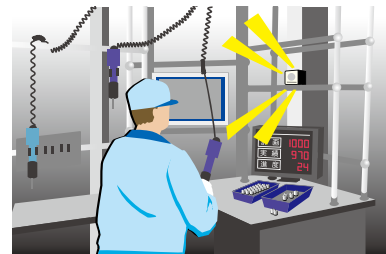
**NPN
Open Collector**



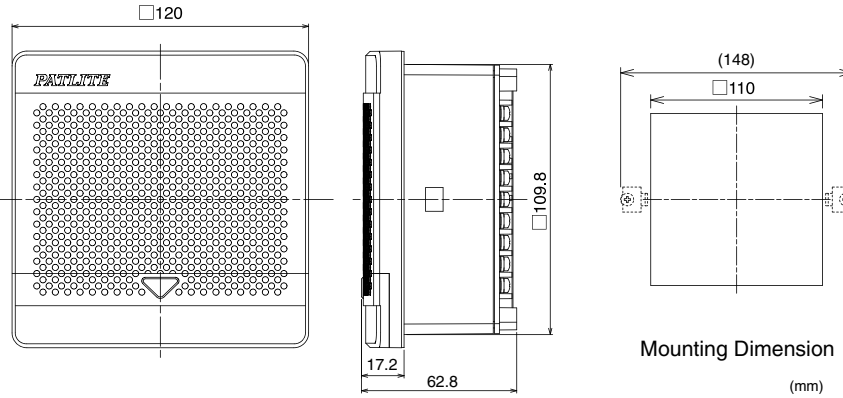
Excellent sound quality with MP3 playback! This panel-mounted MP3 voice annunciator uses SD cards,* allowing messages to be changed easily.

* SD card not included.

- Only embedded mounting style available.
- Able to produce a loud sound of up to 95 dB (at 1m) despite its compact size
- A volume control on the front panel provides an easy way to adjust the sound volume.
- The use of an SD card allows message changes without dis-mounting the device.
- Environmentally friendly since the unit complies with the EU RoHS Directives.
- Several playback modes are available for various applications.
- Includes binary input as a standard option for selecting up to 31 messages.
- Supports input selection using NPN open-collector transistor.
- The unit complies with EU Directives and includes the CE mark (BKV-31JF only)
- Two colors are available for selecting the best color match for the installation.
- Protection rating: IP54 (only the front when flush mounted)



Dimensions



How to Order

BKV-31JF-J

Model: _____ Color: _____
 J: Light Gray
 K: Dark Gray

Rated Voltage
 J: 12-24V DC
 K: 100V AC
 Q: 220V AC

Note: See page 175 for wiring diagram

BKV Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Voice File	Relative Humidity	Maximum Playing Time	Number of Playing Messages	Protection Rating	Mass
BKV-31JF	12-24V DC	DC 10.8V~26.4V	9W	Max. 95dB (at 1m)	MPEG1-Audio Layer (mp3) Standard bit rate : 64kbit/s, Fs=44.1kHz	-10 ~ +50 (Less than 85%RH)	63sec	5 (Bit input) 31 (Binary input)	IP54 When flush mounted	0.35kg
BKV-31KF	100V AC	100V AC±10%	10W							0.53kg
BKV-31QF	220V AC	220V AC±10%	10W							0.53kg

* Actual sound level will depend on sound type and operating conditions.

Slim High-volume Voice Annunciator

Mode Selector Switch

Several playback modes are available for various applications.

A	Bit input mode	Plays back up to 5 messages using Channels 1 to 5
B	Binary input mode	Plays back up to 31 messages using Channels 1 to 5
C	Bit input/ volume reduction mode	Plays back up to 4 messages using Channels 1 to 4 When Channel 5 receives an input, the volume is reduced by about 15 dB.
D	Binary input/ volume reduction mode	Plays back up to 15 messages using Channels 1 to 4 When Channel 5 receives an input, the volume is reduced by about 15 dB.
E	Bit input/ prioritized-message playback mode	Plays back up to 5 messages using Channels 1 to 5 If an audio message is input while another audio message is being played back, the current playback is stopped and the most recently input message is played back.
F	Binary input/ prioritized-message playback mode	Plays back up to 31 messages using Channels 1 to 5 If an audio message is input while another audio message is being played back, the current playback is stopped and the most recently input message is played back.
G	Bit input/ held-message playback mode	Plays back up to 5 messages using Channels 1 to 5 An audio message can be played back only while the input is held. The playback is stopped when the input ends.
H	Binary input/ held-message playback mode	Plays back up to 31 messages using Channels 1 to 5 An audio message can be played back only while the input is held. The playback is stopped when the input ends.
I P	Test playback	Plays back message No. 1

- Up to 95 dB at 1 m**
Able to produce a loud sound of 95 dB (at 1 m) despite being a slim, embedded-type annunciator.
- Volume control**
Volume can be adjusted from the front.
- Memory card slot**
Using an SD card allows for changing messages while leaving the unit mounted.

Options

PATLITE Playlist Editor (Free version)

- (OS: Windows® 2000/XP/Vista)
- > PATLITE Playlist Editor software is required to change the audio message data.
 - > PATLITE Playlist Editor can be downloaded from PATLITE's website, www.patlite.com.
 - > The SD card does not contain the Playlist Editor or any audio messages.

SD card (128 MB) SDV-128P

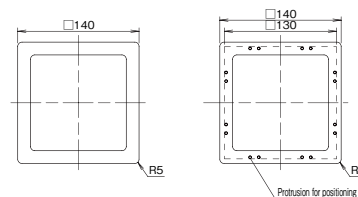
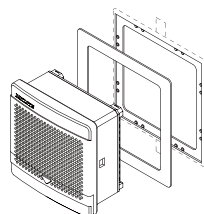


Optional bracket

This is used to install the annunciator in a place where holes have been drilled for a conventional PATLITE product (φ133 mm-type).

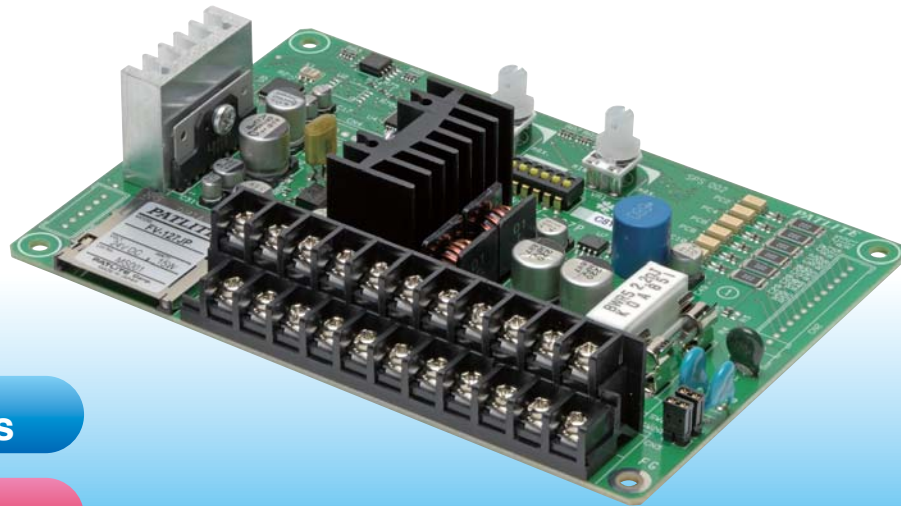
Mounting bracket
BK-001

Temporary fixing tape (2 pieces): included



FV-127JP

MP3 File Playback Circuit Board



127 Channels

24V DC

NPN
Open Collector

Audio messages can be registered on maximum 127 channels, ideal for various equipment or facility purpose where the audio message assistance is required.

High quality sound and long playback time

- MP3 compressed audio file format enables long playback time and high quality sound.
- Approx. 8 minute long audio message data can be stored in an internal memory.
- 240 minute long playback is possible when SD card is used as an external memory.
(MP3 data at 64kb/s with 128MB SD card)

Extraction and overwriting the audio messages

- Audio messages can be reprogrammed and overwritten easily with the playlist editor (included) and optional SD card. Also, the audio message data stored in the device can be extracted to SD card.

3 level volume reduction function

- Volume can be reduced at 3 levels by external signal input.
(-10dB, -20dB, -30dB at 1m)

Various playback modes

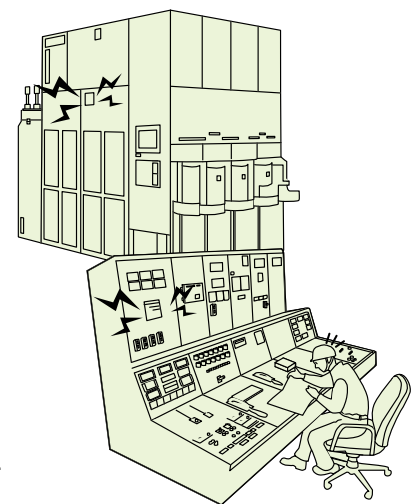
- 5 playback modes are available.

Highly reliable operation

- Duration of input loading can be selected. (10 or 50msec)
- Extending the duration of input loading enhances the noise resistance.
- Countermeasure against noise can be taken according to usage environment by noise countermeasure pin setting.

Other features

- Terminal block provides safe and secure wire connections.
- Speaker output (2W or 4W selectable), AUX output and BUSY output equipped.
- Rated voltage: 24V DC (Operating voltage range: 19 to 29V DC)



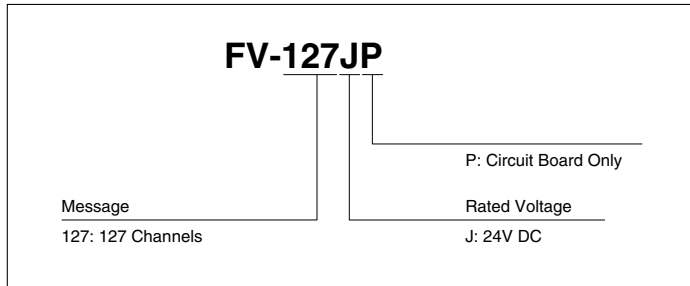
Playback Modes

- Normal Playback**
Designated audio message is played back by distinctive signal input. Audio message is played back once in case of one shot input, and audio message is repeated when the signal is input continuously.
- Memory Playback**
Up to 23 audio message inputs can be memorized in order of input. After one playback is finished, the next memorized audio message will be played back. The inputs exceeding the limit will not be memorized.
- Latest Input Priority Playback**
When the signal is input during the message playback, the audio message being played back will be stopped, and the previous audio message input will be played back.

- Latest Input and Greater Channel Priority Playback**
When the signal for greater channel number is input during the message playback, the audio message being played back will be stopped, and previous audio message input will be played back. When the signal for the same or smaller channel number is input, the signal will not be accepted.
- Momentary Playback**
Audio message is played back only while the signal input is maintained. Playback will be stopped when the signal input is stopped.

* Refer to the instruction manual or specifications for the details of playback mode.

How to Order

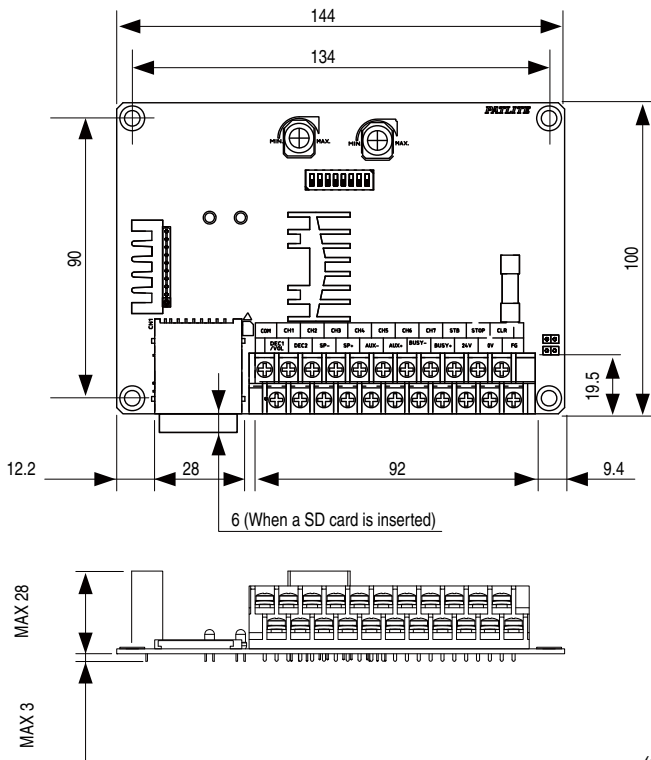


FV-127JP Type

General Specifications	
Model Name	FV-127JP
Rated Voltage	24V DC
Operating Voltage Range	19 to 29V DC
Wiring Method	M3 terminal block
Max. Power Consumption	15W (during -6dB 1kHz sine wave data playback)
Operating Temperature Range	-10 to 50
Storage Temperature	-40 to 80
Relative Humidity	85% RH or less
Usage Environment	Built-in only
Installation Method	4 screws
Vibration Resistance	45m/s ²
Mass	160g ± 10%
External Dimensions	144 x 100 x 28 [mm] (excluding lead dimensions)

Audio Specifications	
Number of Playback Messages	Binary input: 127 Bit input: 7
Audio File Format	MPEG1-Audio Layer (MP3)
Bit Rate	32kbit/s, 64kbit/s (standard), 128kbit/s: Fs = 44.1kHz
Max. Playback Time	When using an internal memory (3968KB): Approx. 8 minutes (when recording with a bit rate of 64kbit/s) When using external memory (SD card): Approx. 240 minutes with 128MB (when recording with a bit rate of 64kbit/s)
Unit Memory Size	3968KB
Audio Startup Time	Approx. 260ms
Audio Silence	If no user specification is defined, silence of 100ms or less is inserted before and after each item of audio data
Audio Rewriting	Possible with SD card + special software (PATLITE Playlist Editor)
Card Format	FAT16
Supported Memory Card	SDV-128P (sold separately)
Audio Rewriting Time	Approx. 180 seconds (when changing the 3968KB internal memory)

Dimensions



(mm)

Input and Output Specifications	
Signal Input Area	CH1, CH2, CH3, CH4, CH5, CH6, CH7, STB, CLR, STOP, DEC1, DEC2
Signal Input Priority	CLR input > STOP input > CH input (priority from the highest channel number)
Sound Reduction Input	Speaker output, AUX output 3-level sound reduction: -10dB, -20dB, -30dB (during -6dB 1kHz sine wave data playback)
Input Loading Time	10ms or more, or 50 ms or more (setting can be selected)
Signal Input Area Circuit Characteristics	Non-voltage contact point or NPN open collector (Vce > 24V, Ice > 10mA)
Signal Input Area	4W (compliant speaker with rating of 4W or more and 8) or 2W (compliant speaker with rating of 2W or more and 8) Can be switched Output can be adjusted with the volume
Max. Sound Pressure	During 4W speaker output: 105dB During 2W: 102dB (during 1m -6dB 1kHz sine wave data playback using SPW-5E (optional speaker))
AUX Output	0dBV 600Ω (output can be adjusted with the volume or sound reduction input)
BUSY Output	Max. 40V DC 500mA

* This product is compliant with the RoHS directive (DIRECTIVE 2002/95/EC)

MV

Voice Synthesizer



85dB at 1m

32 sec

2 channels (MV-02CT)
4 channels (MV-04CT)

70

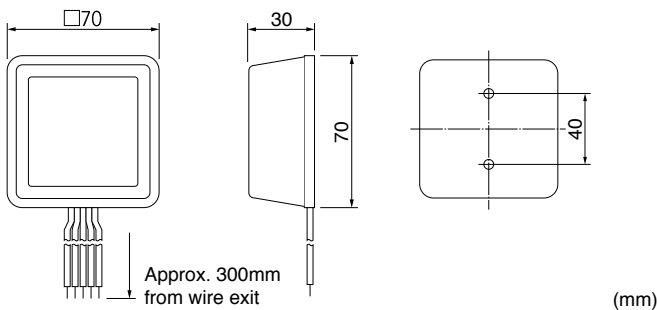
IP20

Compact Voice Synthesizer featuring choice of MP3 messages for in-vehicle and integrated applications*.

*(For example: control panels, switchboards and production equipment)

- Audible messages up to 85dB at 1m.
- MP3 64kbit/s: Clear sound quality.
- Sound Pattern: 2 or 4 messages in 32 sec.
- Installation: Easy mount for indoors only.

Dimensions



MV Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Outer Contact Capacity
MV-02CT	12V~24V DC	10V~32V DC	3W	Max. 85dB at 1m	More than 10mA
MV-04CT			3.2W		

Model	Operating Temperature Range	Auxiliary Input	Channel	Max Message Time	Mass
MV-02CT	-10°C~+55°C Humidity 85% or less.	Voltage contact / Voltage free contact	2	32 sec.	0.095kg
MV-04CT		Voltage free contact	4		

Note: See page 176 for wiring diagram

CT

Voice Synthesizer



ADPCM64 kbit/s



95dB at 1m

16 sec

2 channels

IP53

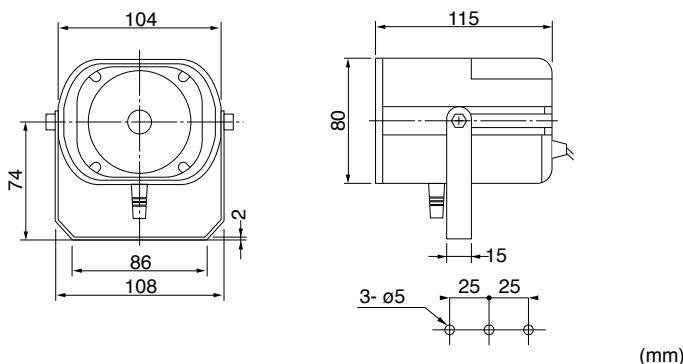
NPN
Open collector

Compact Voice Synthesizer designed for vehicle-mount and outdoor applications.

- Audible message adjustable up to 95dB at 1m .
- Sound Pattern: 2 messages in 16 sec. and custom made messages available*.

* Continuous contact closure replays selected channel repeatedly.

Dimensions



CT Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Outer Contact Capacity
CT-201	12V~24V DC	10V~30V DC	6W	Max. 95dB at 1m	More than 5mA
Operating Temperature Range	Auxiliary Input	Channel	Max Message Time	Protection	Mass
-20°C~+60°C Humidity 85% or less.	Voltage contact Voltage free contact	2	16 sec.	IP53	0.7kg

Note: See page 176 for wiring diagram

PVW

Voice Synthesizer



ADPCM64_{kbit/s}



105dB at 1m

64 sec

15 channels

IP53

Horn-type Voice Synthesizer featuring 4 recordable messages up to 60 sec.

* PVW-04/-15 type: 4 or 15 selectable pre-installed messages up to 64 sec.

- Built-in Alarm: Adjustable audible sound volume up to 105dB at 1m with volume control.
- ADPCM 64kbit/s: Clear sound quality from LSI digital voice synthesizer for PVW type.
- Installation: Indoors—upright, inverted, sideways; Outdoors—upright only.
- Easy Installation: With anti-corrosive stainless steel mounting bracket.

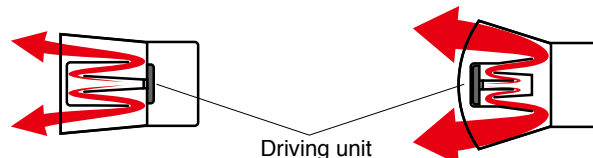
Available by Special Order

- CE Compliance: PVW-**-JF type.

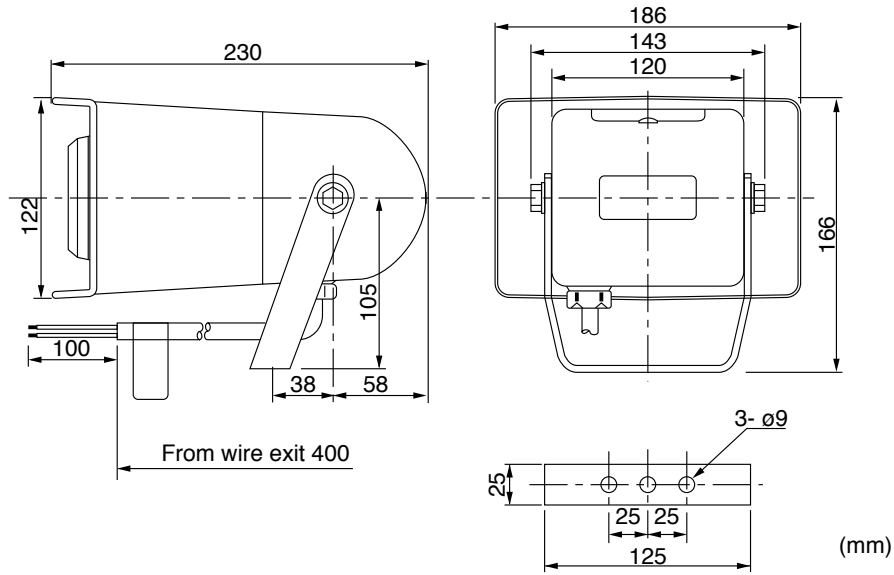
Concept of Horn Configuration.

■ Conventional type

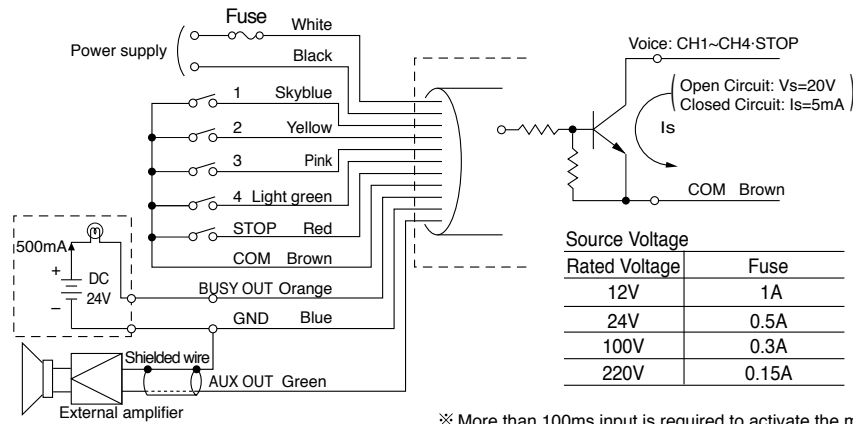
■ New wide Horn Type



New design increases volume output by changing the location of the driving unit from the back to the front.



Wiring Diagram



※ More than 100ms.input is required to activate the message.

Channel Priority

STOP (Red) > CH4 (Light green) > CH3 (Pink) > CH2 (Yellow) > CH1 (Skyblue)

Note: The greater number has priority when any of the channels are activated simultaneously.

PVW Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Outer Contact Capacity	Operating Temperature Range	Auxiliary Input	Channel	AUX Output	BUSY Output	Max Message Time	Protection	Mass			
PVW-04JF	12/24V AC/DC	8~28V AC 9~35V DC	12W	Max. 105dB at 1m	More than 10mA	-10°C~+55°C Humidity 85% or less.	Voltage free contact 4/1bit	4	-10dBv 600Ω	Max. load 24V DC 500mA	64 sec.	IP53	1.3kg			
PVW-04DF	48V DC	35V~60V DC	10W										1.3kg			
PVW-04KF	100V AC	90V~132V AC	18W										1.4kg			
PVW-04QF	220V AC	180V~260V AC	18W										1.4kg			
PVW-15JF	12/24V AC/DC	8~28V AC 9~35V DC	12W				Max. 105dB at 1m	More than 10mA	-10°C~+55°C Humidity 85% or less.	Voltage free contact 15/binary	15	-10dBv 600Ω	Max. load 24V DC 500mA	64 sec.	IP53	1.3kg
PVW-15DF	48V DC	35V~60V DC	10W													1.3kg
PVW-15KF	100V AC	90V~132V AC	18W													1.4kg
PVW-15QF	220V AC	180V~260V AC	18W													1.4kg

KJPV / KJT

Voice Synthesizer / Melody Alarm



ADPCM64 kbit/s



Bulb



KJPV 95dB at 1m
KJT 95dB at 1m

□ 116

IP23

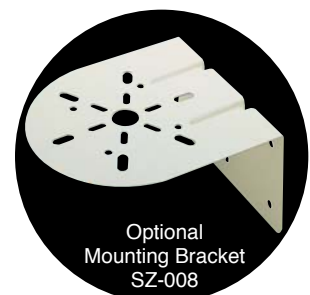
NPN
Open collector

Multi-layer Revolving Warning Lights combined with integrated voice synthesizer or melody alarm for various applications.

- Built-in Alarm: Adjustable audible sound volume up to 95dB at 1m* with volume control.
- ADPCM 64kbit/s: High sound quality from LSI digital voice synthesizer (KJPV).
- Sound Pattern: 4 messages in 16 sec. for KJPV, 8 sounds for KJT (KJT-L: 6 melodies & 2 chimes, KJT-K: 8 alarms).
- Alarm and light signal units can be replayed together or separately.
- Installation: Upright only.
- Lens: Superior weather resistant and light translucent acrylic resin.
- Available Colors: Red, Amber, Green, Blue.

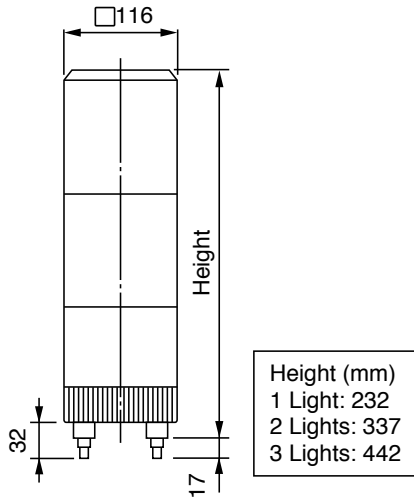
* KJT type: 90dB at 1m

Ch	KJT-K type 8 alarm sounds.	KJT-L type 6 melodies and 2 chimes.	
	A type	S type	Q type
1	Beep (slow intermittent horn)	Amaryllis	Mary Had a Little Lamb
2	Stutter (rapid intermittent horn)	Symphony No.40	The camptown Races
3	Bell (clear high pitched bell)	Silent Lakeside	Cuckoo
4	Yelp (rapid siren)	Mountain Musician	Blacksmith in the Village
5	Rapid Hi-Lo	Romance De Amour	On the Avignon Bridge
6	Melody Chime	Petrouchka	Ob-La-Di,Ob-La-Da
7	Synthesized Piano	Chime	
8	Synthesized Bell	Call Sign	

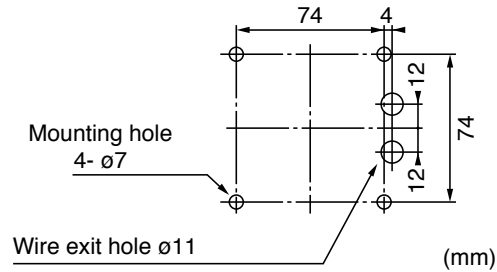


Optional
Mounting Bracket
SZ-008

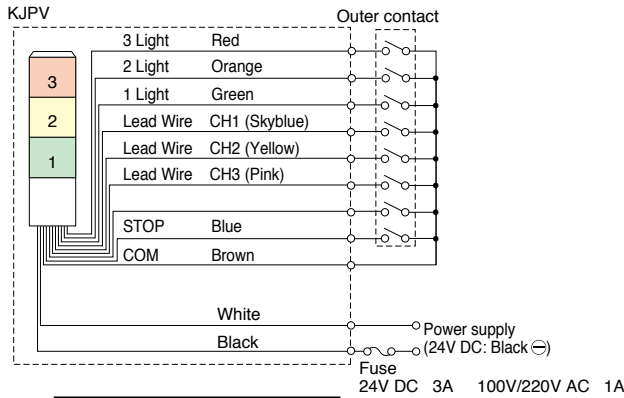
Dimensions



Mounting Dimension



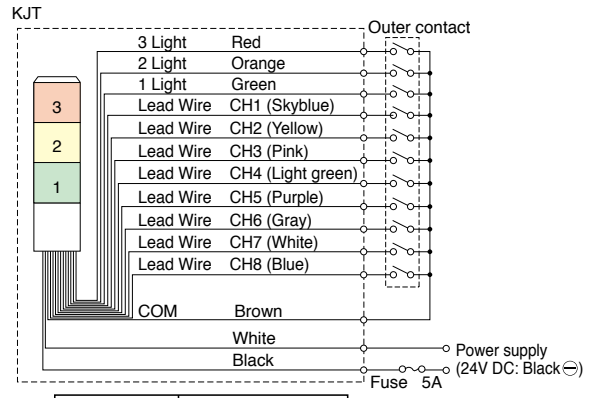
Wiring Diagram



Supply Voltage	KJPV
100V AC 200V AC	Open Circuit: 12V Closed Circuit: 5mA
24V AC/DC	Open Circuit: 24V Closed Circuit: 5mA

Channel priority

CH4 (Light green)>CH3 (Pink)>
CH2 (Yellow)>CH3 (Skyblue)
Note: The greater number has priority when any of the channels are activated simultaneously.



Supply Voltage	KJT
100V AC 200V AC	Open Circuit: 12V Closed Circuit: 5mA
24V AC/DC	Open Circuit: 24V Closed Circuit: 5mA

Channel priority

CH8 (Blue)>CH7 (White)>CH6 (Gray)
>CH5 (Purple)>CH4 (Light green)>
CH3 (Pink)>CH2 (Yellow)>CH1 (Skyblue)
Note: The greater number has priority when any of the channels are activated simultaneously.

KJPV / KJT Type

Model		Rated Voltage	Voltage Range	Power Consumption	Bulb	No.	Rotations per Minute	Volume	Outer Contact Capacity	Operating Temperature Range	Auxiliary Input	Channel	Mass
Voice	1 stack	⊙KJPV-102S	24V DC	20V~27V DC	20W	24V 10W	10	130	Max. 95dB at 1m	More than 10mA	-10°C~+55°C Humidity 85% or less.	4 (Up to 16 sec.)	1.4kg
		⊙KJPV-110S	100V AC	90V~110V AC	20W	12V 5W	12						1.7kg
		⊙KJPV-120S	220V AC	180V~240V AC	20W	12V 5W	12						2.0kg
	2 stacks	⊙KJPV-202S	24V DC	20V~27V DC	30W	24V 10W	10						2.4kg
		⊙KJPV-210S	100V AC	90V~110V AC	26W	12V 5W	12						2.6kg
		⊙KJPV-220S	220V AC	180V~240V AC	26W	12V 5W	12						3.0kg
-K: Alarm	1 stack	⊙KJPV-302S	24V DC	20V~27V DC	40W	24V 10W	10	135	Max. 90dB at 1m	-20°C~+50°C Humidity 85% or less.	8	2.6kg	
		⊙KJPV-310S	100V AC	90V~110V AC	31W	12V 5W	12					3.0kg	
		⊙KJPV-320S	220V AC	180V~240V AC	31W	12V 5W	12					1.4kg	
	2 stacks	KJT-102	24V AC/DC	21V~27V AC/DC	25W/18W	24V 10W	10					1.7kg	
		KJT-110	100V AC	90V~110V AC	20W	12V 5W	12					2.0kg	
		KJT-120	200V AC	180V~240V AC	20W	12V 5W	12					2.4kg	
-L: Chime	3 stacks	KJT-202	24V AC/DC	21V~27V AC/DC	36W/28W	24V 10W	10	2.6kg					
		KJT-210	100V AC	90V~110V AC	26W	12V 5W	12	3.0kg					
		KJT-220	200V AC	180V~240V AC	26W	12V 5W	12	1.4kg					
Melody	3 stacks	KJT-302	24V AC/DC	21V~27V AC/DC	47W/38W	24V 10W	10	2.6kg					
		KJT-310	100V AC	90V~110V AC	32W	12V 5W	12	3.0kg					
		KJT-320	200V AC	180V~240V AC	32W	12V 5W	12	1.4kg					

© Special order

RFT

Audible Alarm with LED Revolving Warning Light



24V Type

90dB at 1m

(Actual sound level may vary depending on sound type.)

IP54

(front direction only)

**NPN
Open Collector**



Total of 32 pre-stored alarm sounds! This LED rotating light with built-in electronic alarm sounds can be controlled by both binary and bit input signals.

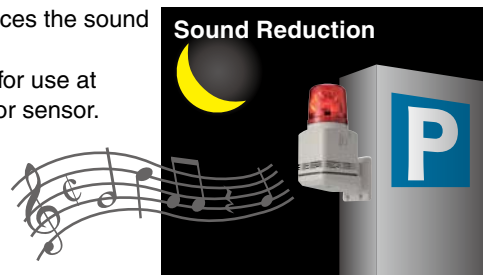
- Produces a loud sound up to 90dB (at 1 m)
- The volume can be reduced by about 10dB (at 1 m) when an input signal is received (Binary Mode only).
- A volume control on the side panel provides an easy way to adjust the sound volume.
- The use of an SD card allows one sound group to be re-arranged by the user using any of the pre-installed sounds.
- Environmentally friendly since the unit complies with the EU RoHS Directives.
- Supports input selection using NPN open-collector transistor.
- The unit complies with EU Directives and includes the CE mark (RFT-24 only)

**Side access design enables
easy post-installation maintenance**



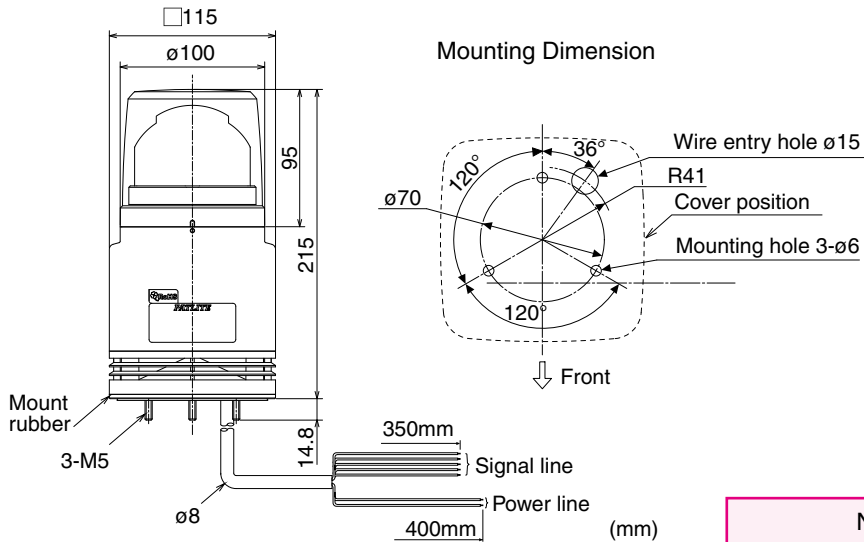
Sound reduction function reduces the sound volume by approx. 10dB (at 1m). This function is ideal for use at night time together with timer or sensor.

Sound Reduction



Dimensions

How to Order



RFT-24A-R	
Rated Voltage	Color of revolving light
24: 24V DC	R: Red
100: 100V AC	Y: Yellow
220: 220V AC	G: Green
	B: Blue
Sound Type	
A: A type	
C: C type	
D: D type	
E: E type	

Note: See page 177 for wiring diagram

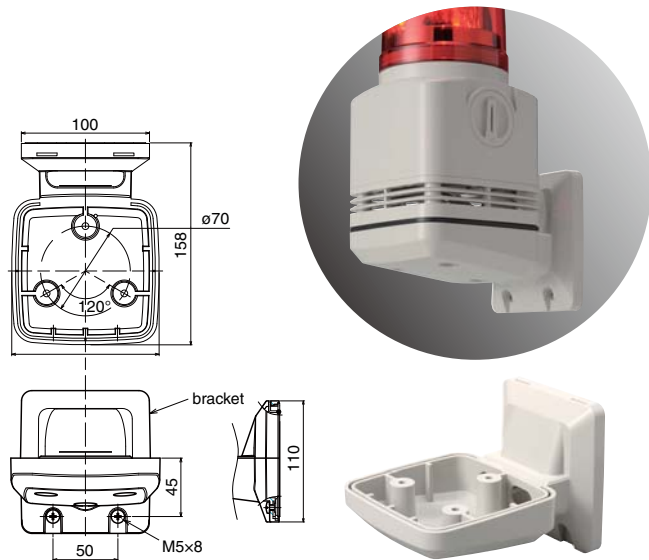
RFT Type

Model	Rated Voltage	Voltage Range	Power Consumption	Volume	Number of Playback Sounds	Operating Temperature Range	Flashes per Minute	Mass	Protection Rating
RFT-24	24V DC	24V DC $\pm 10\%$	12W	Max. 90dB (at 1m)	Bit input mode: 8 sounds Binary input mode: 32 sounds	-10 ~ +50 (Less than 85%RH)	115 ± 15 回/分	1.0kg	IP54 (when flush mount, front direction only)
RFT-100	100V AC	100V AC $\pm 10\%$	13W					1.2kg	
RFT-220	220V AC	220V AC $\pm 10\%$	13W					1.2kg	

* Sound pressure level may be lower depending on the sound and usage environment. It is very difficult to synchronize the play back of the same sound from different units.

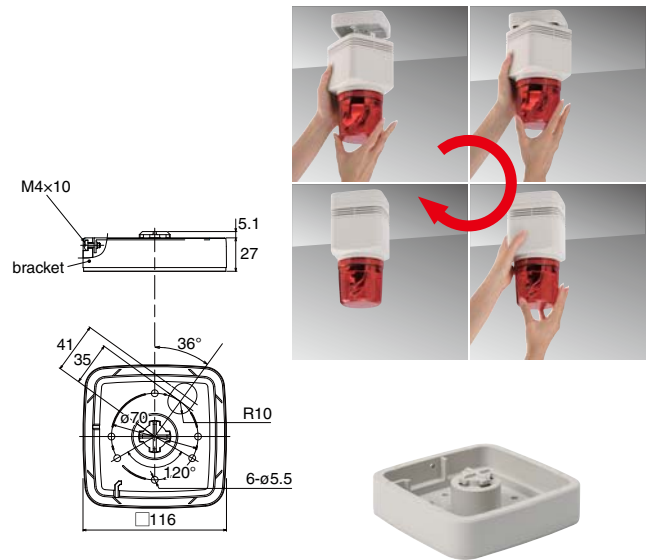
Optional Bracket

Wall Mount Style



RF-001 : Wall Mount Bracket

Ceiling Mount Style



RF-002 : Ceiling Mount Bracket

MP3 compatible annunciator with LED Revolving Warning Light



95dB at 1m

(Actual sound level may vary depending on sound type.)

IP54

(front direction only)

**NPN
Open Collector**



RFV

The RFV series is a combination of LED rotating beacon light and MP3 programmable sound unit.

- Field programmable with SD card. (Sold separately)
Message capacity of up to 64 seconds (64kbit/s) can be played back by a bit input (4 channels) or binary input (15 channels).
- Volume is adjustable from 0 to 95dB (at 1m) to fit various environments.
- Safe for use at high vibration environments with robust 4.5G vibration resistant design.
- CE, RoHS, IP54, (UL, c-UL pending)
- Unique features
 1. Reduced maintenance with long service-life power LED that lasts over 5 years with 24/7 continuous operation.
 2. High visibility with Special Optical Reflector.
 3. Special gear driven mechanism provides reliable operation even after 10 years of no operation.
 4. Tight Locking Dome will stay on even in high vibration situations.

Available by Special Order

- PNP open collector transistor type.

Voice message is field recordable with SD card (sold separately), and sound volume also can be changed easily from side panel even after installation.

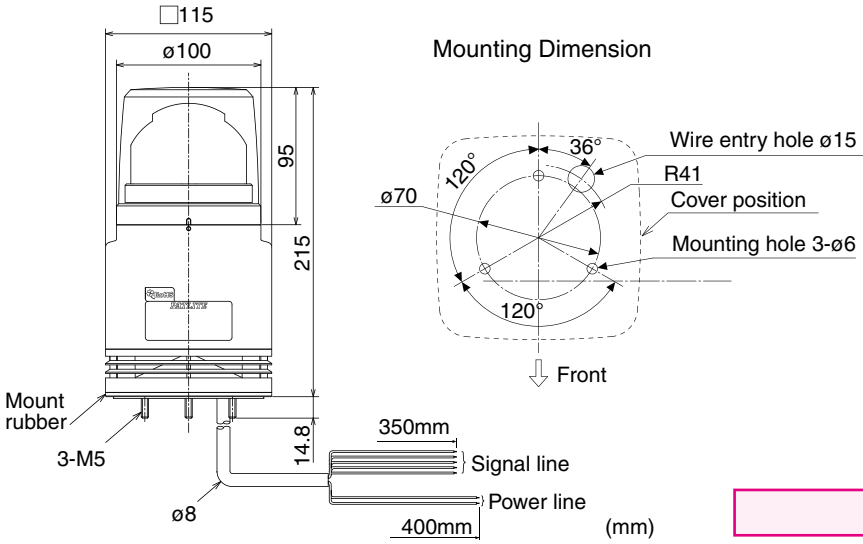


Sound reduction function reduces the sound volume by approx. 15dB (at 1m). This function is ideal for use at night time together with timer or sensor.



Dimensions

How to Order



RFV-100F-R

Rated Voltage	Color
24: 24V DC	R: Red
100: 100V AC	Y: Amber
220: 220V AC	

Note: See page 177 for wiring diagram

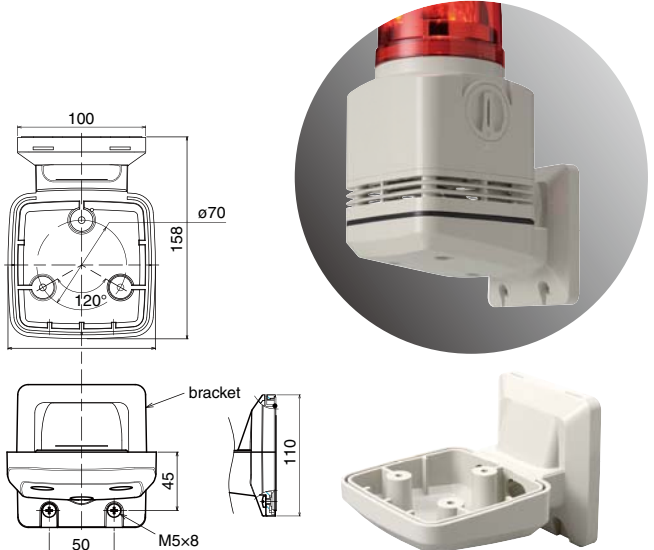
RFV Type

Model	Rated Voltage	Voltage Range	Power Consumption	Flashes per Minute	Volume	Audio File Type	Operating Temperature Range	Message Time	Channel	Protection Rating	Mass
RFV-24F	24V DC	24V DC±10%	Max. 18W	115±15	Max. 95dB at 1m [※]	MPEG1-Audio Layer III (mp3) bitrate: 64kbit/s, Fs=44.1kHz	-10°C~+50°C (Humidity 85% or less)	Max. 64 seconds	4 (bit input) or 15 (binary input)	IP54 (when flush mount, front direction only)	1.0kg
RFV-100F	100V AC	100V AC±10%	Max. 16W								1.2kg
RFV-220F	220V AC	220V AC±10%									

Actual sound level will depend on sound type and operating conditions.
 ※ The play back sound may not be synchronized in case the multiple units are activated simultaneously.

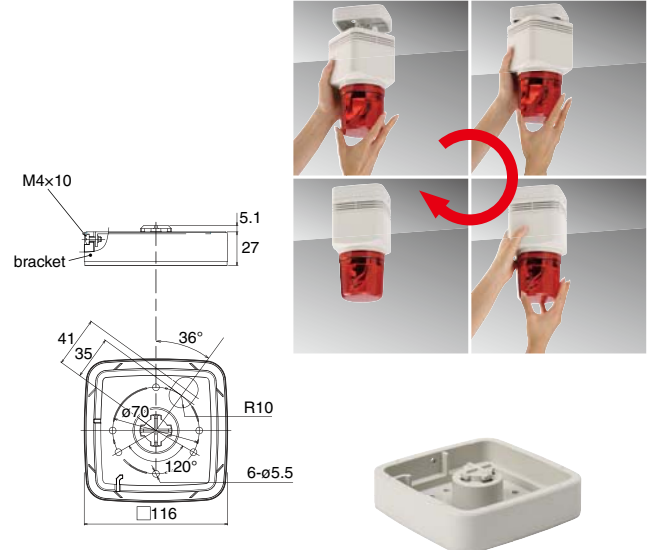
Optional Bracket

Wall Mount Style



RF-001 : Wall Mount Bracket

Ceiling Mount Style



RF-002 : Ceiling Mount Bracket

MP3 compatible annunciator with LED Signaling Light



90dB at 1m

(Actual sound level may vary depending on sound type.)

32 Second

3 messages

**NPN
Open Collector**

WG-03KT



WG-03KT-R

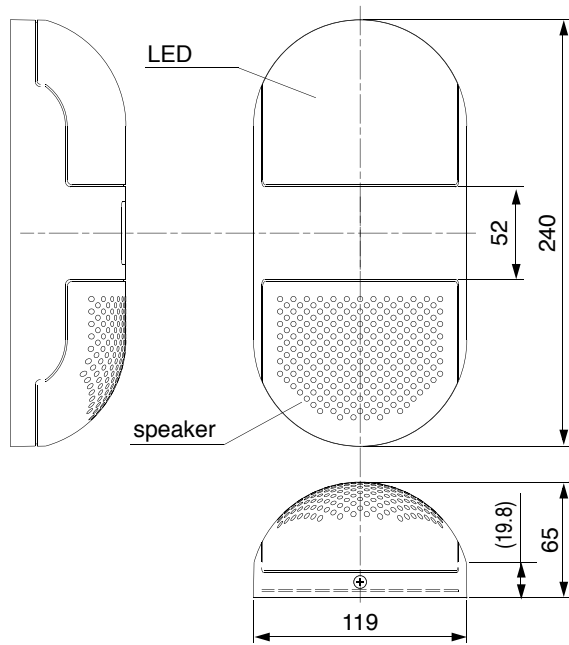


The WG series is wall mountable and will easily blend into any environment such as hospitals, airports and office buildings, providing audible messages and visual signal with LED.

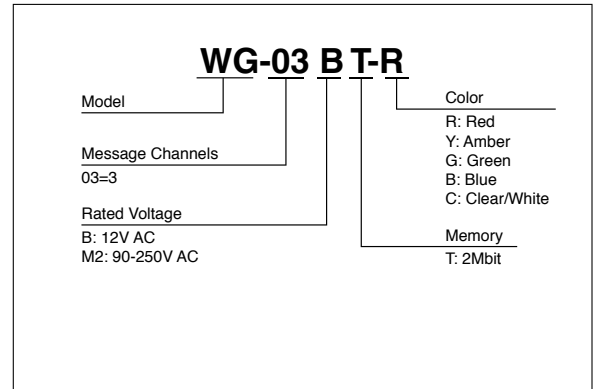
- Colors available: red, yellow, green, blue and clear/white.
- Alert operators or the public with voice messages or chimes or any other sound and flashing LED light.
- Effective for audio/visual guidance at public facilities such as train platforms, bathrooms, etc.
- Record your own messages using Patlite's Playlist Editor, and MP3 sound files or use Patlite's custom recording services.
- High quality sound with a max. output of 90dB (at 1m) provide clear messages, even in a crowd.
- 3 message channels for various applications.
One channel has priority for emergency/security purposes.
- Has 3 messages for a total of 32 seconds.
- NPN open collector transistor compatible
- 12V DC or 90-250V AC



Dimensions



How to Order



WG Type

Model	WG-03BT	WG-03M2T
Rated Voltage	12V DC (No Polarity)	90-250V AC
Power Consumption: Standby	1Watt	1Watt
Power Consumption: Operation	6Watt Max	6Watt Max
Lens Colors Available	None, Red, Amber, Green, Blue	None, Red, Amber, Green, Blue
Operating Temperature Range	-10°C~+60°C	-10°C~+60°C
Volume	90dB at 1m (Adj.from zero)	90dB at 1m (Adj.from zero)
Message Memory Capacity	32 seconds @ 64kbits/sec	32 seconds @ 64kbits/sec
No. of Messages (Inputs)	3	3
Protection Rating	IP20	IP20
Illuminance	300lx at 50cm	300lx at 50cm
Mounting Direction	Horizontal, Vertical (Up or Down)	Horizontal, Vertical (Up or Down)
Vibration Resistance	19.6m/s ²	19.6m/s ²
Mass	600g	600g

RT

Voice Synthesizer



ADPCM 64kbit/s

Bulb



105dB at 1m

IP23

NPN
Open collector

Large horn with revolving warning light featuring clear sound up to 105dB at 1m.

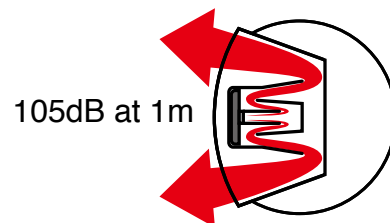
- Built-in Alarm: Adjustable audible sound volumes up to 105dB at 1m with volume control.
- ADPCM 64kbit/s: High sound quality from LSI digital voice synthesizer (RT-VS only)*.
- Installation: Upright only.
- Dome: Superior weather resistant and light translucent acrylic resin.
- Available Colors: Red, Amber, Green, Blue.

* RT-VS requires a professionally recorded message.

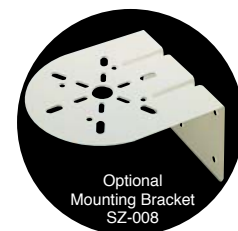
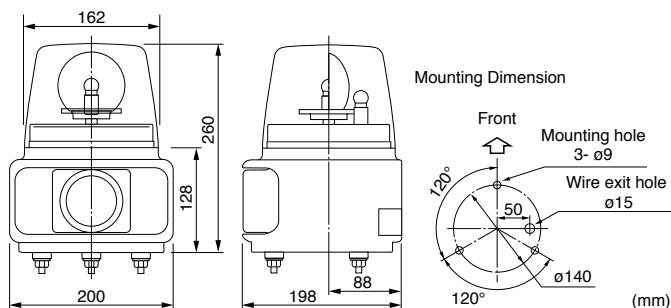
Available by Special Order

- Cabtyre Cable: Versatile and flexible 3m cable.
- IP65.
- CE Compliance.
- 120V AC.

Concept of
Horn Configuration.

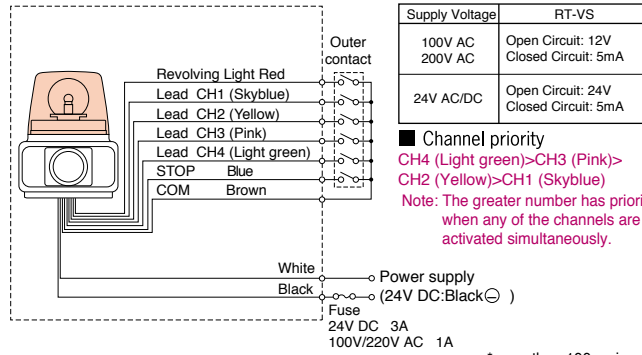


Dimensions

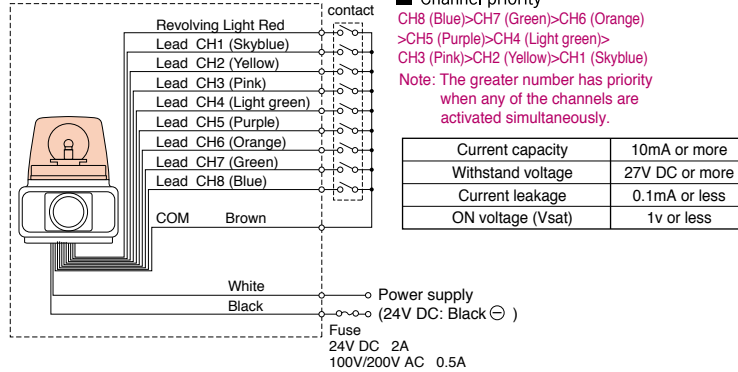


Wiring Diagram

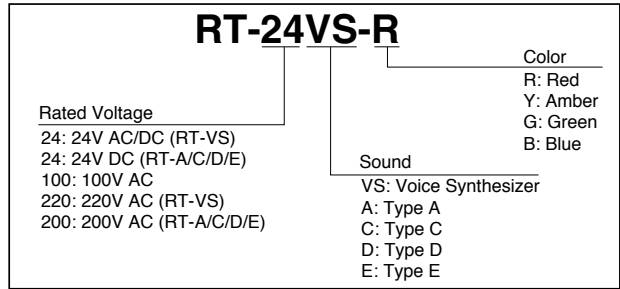
RT-VS



RT-A/C/D/E



How to Order



RT Type

Model	Rated Voltage	Voltage Range	Power Consumption	Bulb	No.	Rotations per Minute	Volume	Outer Contact Capacity	Operating Temperature Range	Auxiliary Input	Channel	Max Message Time	Mass
Voice type	RT-24VS	24V AC/DC	20V~27V AC/DC	36W	24V 20W	55	Max. 105dB at 1m	More than 10mA	-10°C~+55°C Humidity 85% or less.	Voltage free contact 5/1bit	4	16 sec.	2.0kg
	RT-100VS	100V AC	90V~110V AC	30W	12V 15W	54							2.3kg
	RT-220VS	220V AC	180V~240V AC										
Sound type	RT-24A/C/D/E	24V DC	21V~27V DC	24W	24V 20W	55	Max. 105dB at 1m	More than 10mA	-20°C~+55°C Humidity 85% or less.	Voltage free contact 9/1bit	8/1 impulsion 32/binaire	—	2.0kg
	RT-100A/C/D/E	100V AC	90V~110V AC	32W	12V 15W	54							2.5kg
	RT-200A/C/D/E	200V AC	180V~240V AC	30W		95							

Sounds Selection Chart

32 sounds are pre-recorded in one unit. 4 sound types are available.



RT-A

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Fur Elise	Maiden's Prayer	Minuet	Annie Laurie
London Bridge is Falling Down	Holdiridia	Mary Had a Little Lamb	Camptown Races
Kuck kuck	Der Schmied im Walde	On the Bridge of Avignon	Daydream Believer
Amaryllis	Mozart Symphony No. 40	Itsy Bitsy Spider	Ich bin ein Musikante
Jeux Interdits	Katuscha	Grandfather's Clock	Ave Maria

RT-C

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Can't Take My Eyes off of You	Top of the World	The Entertainer	Amazing Grace
Amairono Kamino Otome	Les Champs-Elysees	Canon	Rara Sanshain
Uchuusenkan Yamato	Oshiete	Makenaide	Gonna Fly Now (Theme for "Rocky")
I Don't Want to Miss a Thing	Yozorano Mukou	Aiwa Katsu	Haruyo Koi
Gattsudaze	Odoru Ponpokorin	Imasugu Kisu Mi	Truth

RT-D

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call sign
Oribiao Kikinagara	A September	Doyoubino Koibito	Akino Kehai
Saatu Tengoku Sukii Tengoku	Iro Howaitoburendo	Happy Birthday	Hi Ho
I've been working on the Railroad	Bear Song	Toys Go Cha Cha Cha	Konnaku Irukana
Wiegenlied	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	Oh My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Air

RT-E

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Inverted Recelle	Annie Laurie
Stutter (rapid intermittent horn)	Synthesized Melody Chime	Galactic Motor	London Bridge is Falling Down
Bell (clear high pitched bell)	Chime	Ringin Phone	Mary Had a Little Lamb
Yelp (rapid siren)	Call Sign	Two Tone	Camptown Races
Rapid Hi-Lo	Train Ride	Alarm Clock	Amaryllis
Melody Chime	Galloping Hi-Lo	Ringin Hi-Lo	Mozart Symphony No.40
Synthesized Piano	Alien Chatter	Fur Elise	Ave Maria
Synthesized Bell	Falling Crystals	Minuet in G	Grandfather's Clock

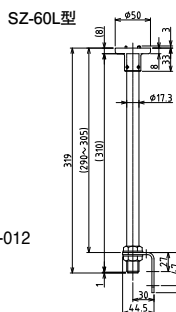
PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded in RT-A, C and D types outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. RT-E type is recommended for use outside of Japan as this model does not include copyrighted music or songs, and permission is not required.

Optional Parts

Mounting Pole

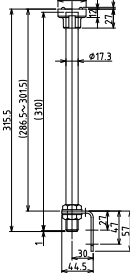
φ50 (φ40)

SZ-60L
SZ-80L



Includes SZ-012

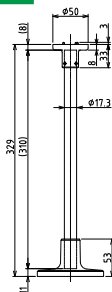
SZ-80L型



SZ-60T



Includes SZ-011

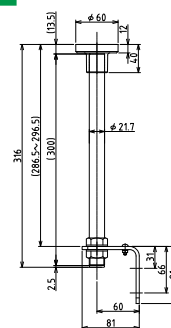


φ60

SZ-70L



Includes SZ-013

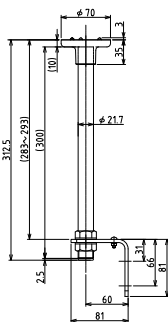


φ70

SZ-50L



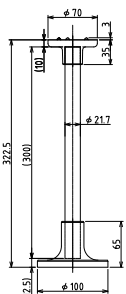
Includes SZ-013



SZ-50T



Includes SZ-010

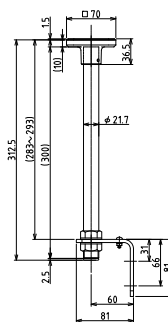


□70

SZ-40L



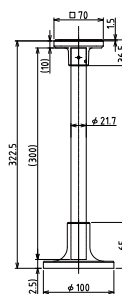
Includes SZ-013



SZ-40T



Includes SZ-010



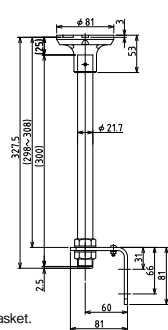
φ81

SZ-30L



Includes SZ-013

Can not use Rubber Gasket.

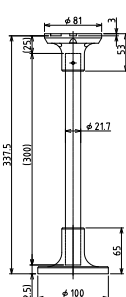


SZ-30T



Includes SZ-010

Can not use Rubber Gasket.

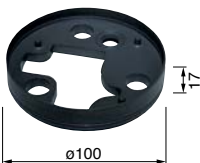


Model	Material					
	Upper bracket	Pole	L Bracket	Cord bushing	Circular	For
SZ-80L	ABS resin	Carbon steel pipe	SPHC	6/6 nylon	—	LCE-W
SZ-60L	ADC12		SPHC	6/6 nylon	—	LE-W
SZ-60T	—		—	—	ADC12	LES-AW
SZ-70L	ABS resin	Carbon steel pipe	SPHC	EPT	—	LME-W
SZ-50L	ADC12		SPHC	EPT	—	LU7
SZ-50T	—		—	—	ADC12	LHE-A
SZ-40L	ADC12	Carbon steel pipe	SPHC	EPT	—	KUS
SZ-40T	—		—	—	ADC12	
SZ-30L	—		—	SPHC	EPT	—
SZ-30T	ABS resin	—	—	—	ADC12	RH,PS PES

ADC12 ··· Aluminum alloy die-cast SPHC ··· Hot rolled mild (sheet) steel
EPT ··· Ethylene propylene rubber

Rubber Gasket

SZ-200A



SZ-210



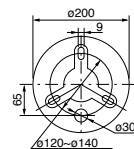
Model	Material	For
SZ-200A	Ethylene propylene rubber	KX, RH(B)
SZ-210		RU, RLE, PS(F), PSX, PES

Tripod stand



SZ-009

SZ-009

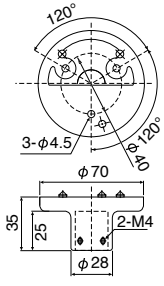


Model	For	Height
SZ-009	Pitch diameter φ120~φ140	1,285~2,285mm

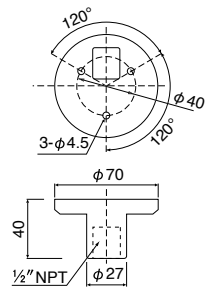
Upper Bracket For LU7



(For $\phi 21.7\text{mm}$ Pole)

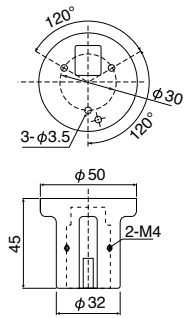


SZ-50NPT
(For 1/2" NPT Pole)

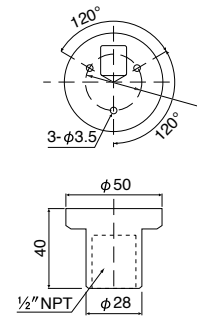


Upper Bracket For LU7

SZ-60-U
(For $\phi 21.7\text{mm}$ Pole)

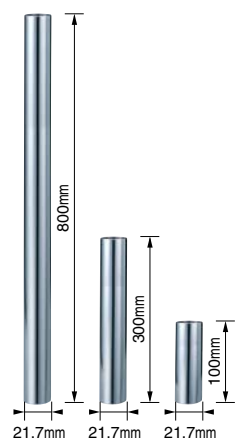


SZ-60NPT
(For 1/2" NPT Pole)



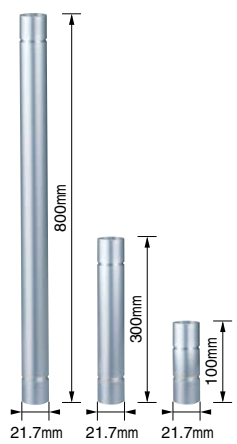
Pole

Steel Pole



800mm : **POLE-800S21**
300mm : **POLE-300S21**
100mm : **POLE-100S21**

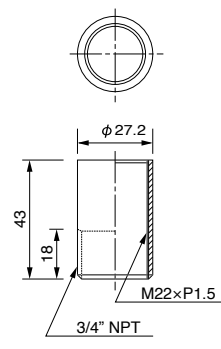
Aluminum Pole



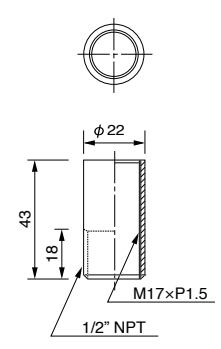
800mm : **POLE-800A21**
300mm : **POLE-300A21**
100mm : **POLE-100A21**

NPT Adapter

SZ-904

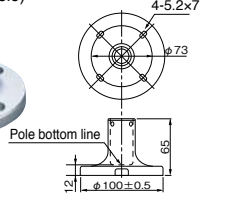


SZ-903

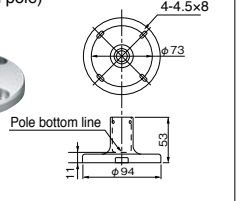


Mounting Bracket

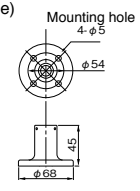
SZ-010
(For $\phi 21.7\text{mm}$ pole)



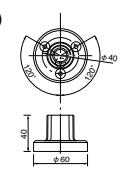
SZ-011
(For $\phi 17.3\text{mm}$ pole)



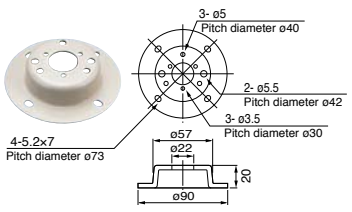
SZ-016A
(For $\phi 21.7\text{mm}$ pole)



SZ-70-B
(For $\phi 21.7\text{mm}$ Aluminum Pole Only)



SZ-014



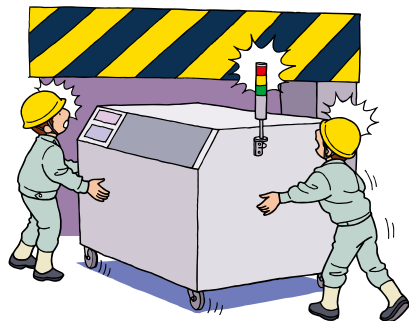
Model	Material	For
SZ-010	Aluminum alloy die-cast	STD, RUP, LME, LMS, LHE
SZ-011		LCE, LCS, LE, LES-A
SZ-016A		LU5, LU7, STD, RUP, LME, LMS, LHE
SZ-70-B	Cold rolled mild steel	LE, LES-A
SZ-014		

Optional Parts

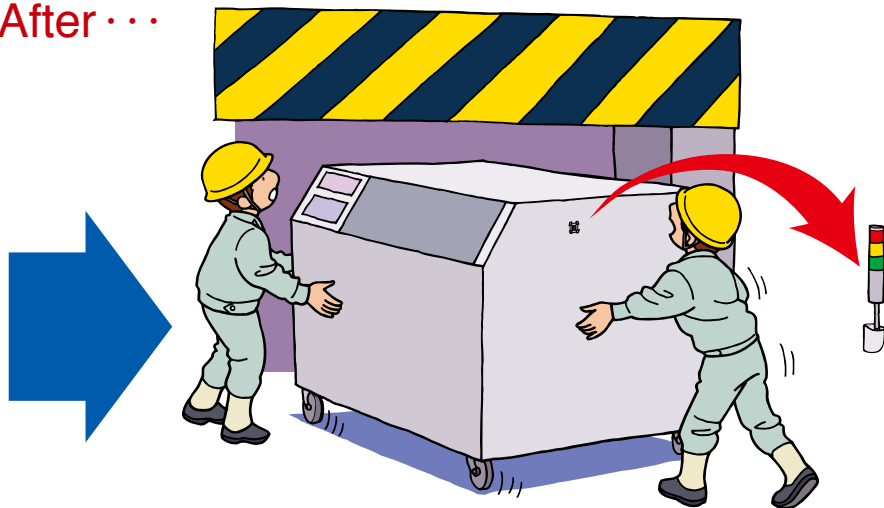
Wall Mount Bracket

- Bracket is detachable from machinery by loosening a screw and taking off the connectors.
- Bracket can be removed or installed upside-down during transportation.
- Wiring should not be exposed.
- Silver color type: available with special order.

Before...



After...



How to install



Drill a hole on the mounting surface of machinery.



Fix a mounting part and connector on the hole.



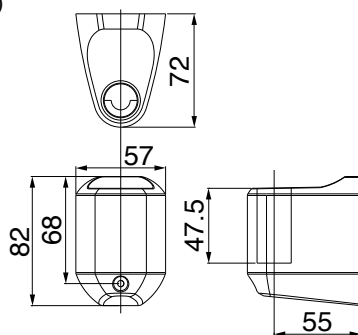
Join the connectors.



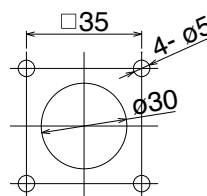
Hook the mounting bracket to the metal part by tightening with a screw.

SZ-020 (For $\phi 21.7\text{mm}$ pole)

SZ-021 (For $\phi 17.3\text{mm}$ pole)



Mounting dimensions



Wire connector (SZ-020-001) sold separately

Wall Mount Bracket



SZ-018

Ivory White

SZ-018U

Silver Color

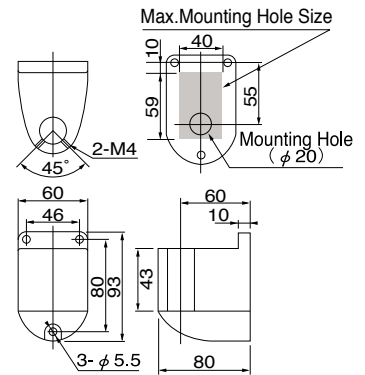
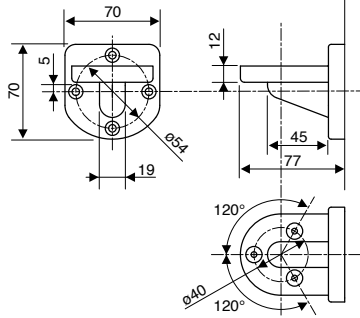
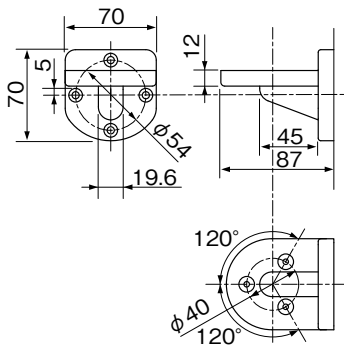
SZ-018K

Black

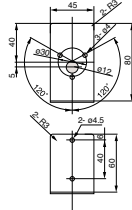
SZ-028

SZ-017

(For $\phi 21.7$ mm Pole)

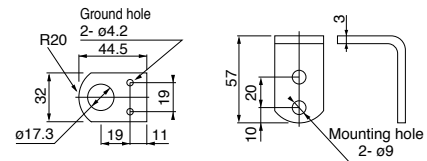


SZ-005C

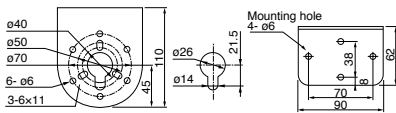


SZ-012

Pole is not included

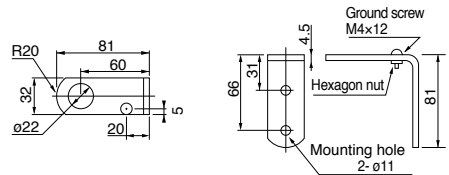


SZ-007

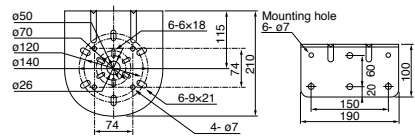


SZ-013

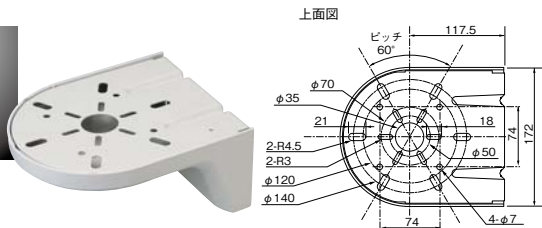
Pole is not included



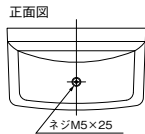
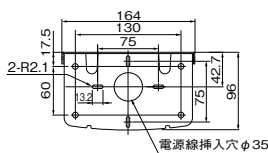
SZ-008



SZ-023

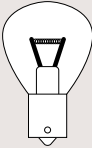




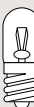







取付面寸法図



Model	Material	For
SZ-017	Aluminum alloy die-cast	LME, STD, RUP
SZ-018	PBT/ABS resin	LU7, LHE
SZ-028		LME
SZ-020	ABS resin	LU5, LU7, LME, LMS, RUP, STD
SZ-021		LC, LCS, LE, LES-A
SZ-005C	Electro-galvanized steel	LCE
SZ-007		LU7, LHE-A Pitch diameter $\phi 50$, 70
SZ-008		Pitch diameter $\phi 50, 70, 120, 140$ and $\square 74$
SZ-023		
SZ-012	Hot rolled mild steel	LCE, LCS, LE, LES
SZ-013		LME, STP, ME, MP

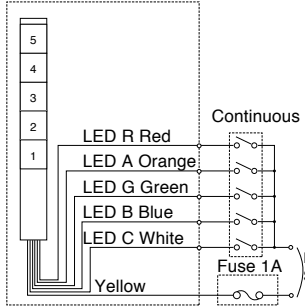
Replacement Bulbs

Model	Bulb No.	Wattage	Part No.
 RP35/BA15S	1	12V35W	D01203501
	2	24V35W	D02403501
 RP35/BA15D	5	48V35W	D04803502
	6	120V40W	D12004002A
 G18/BA15S	8	6V3W	D00600303
	9	12V10W	D01201003A
	10	24V10W	D02401003A
	11	48V10W	D04801003
	12	12V5W	D01200503A
 T20/E12	13	30V10W	D03001006A
	14	110V10W	D11001006A
	15	220V10W	D22001006A
	16	110V15W	D11001506A
	17	220V15W	D22001506A
 G14/BA9S	18	12V6W	D01200604
	19	24V6W	D02400604
 T10/E10	22	110V3W	D11000307
	23	110V5W	D11000507
	24	220V3W	D22000307
	26	240V5W	D24000507
	27	12V0.11A	D012/1107
	28	24V0.11A	D024/1107
 RP35/BA15D	36	120V40W	D12004024
	37	220V30W	D22003024
	38	240V30W	D24003002

Model	Bulb No.	Wattage	Part No.
 S25/BA15S	42	12V23W	D01202305
	43	24V25W	D02402505
 T10/BA15S	44	12V55W	D01205515-02
	45	24V70W	D02407015-02
 T20/E12	46	140V10W	D14001006
 G18/BA15S	54	12V15W	D01201503
	55	24V20W	D02402003

ME/MES/MP/MPS/STD Wiring Diagram

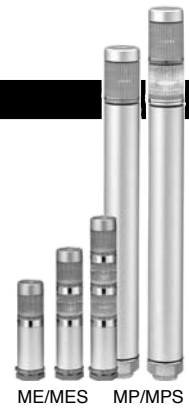
[ME/MES/MP/MPS Model]



ME/MES/MP/MPS Signal line voltage and current per LED module

Rated Voltage	Signal Line Voltage	ME-A/MES-A	MP/MPS
		Signal Line Current	Signal Line Current
24V DC	24V DC	R, Y: 25mA G, B, C: 20mA	R, Y: 30mA G, B, C: 25mA
24V AC (MP/MPS only)	24V AC (MP/MPS only)	-	-

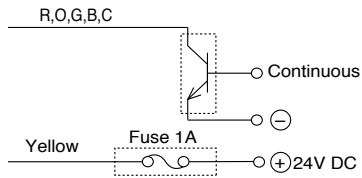
Color of LED unit	Color of Lead wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear	White



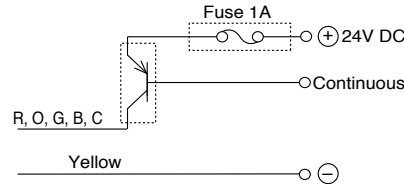
※ MP/MPS has no polarity.
(ME/MES: positive(+) on yellow)

DC 24V: NPN(PNP) Transistor

(NPN Transistor)



(PNP Transistor) ※MP/MPS only

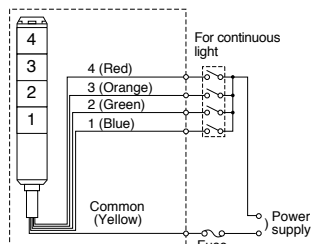


Transistor Capacity

Model	ME/MES	MP/MPS
	Transistor (NPN)	Transistor (NPN/PNP)
Current Capacity	$I_c \geq 0.1A$	$I_c \geq 50mA$
Withstanding Voltage	$V_c \geq 35V$	$V_c \geq 35V$
Current Leakage	$I_l < 0.1mA$	$I_l < 0.1mA$

[STD Model]

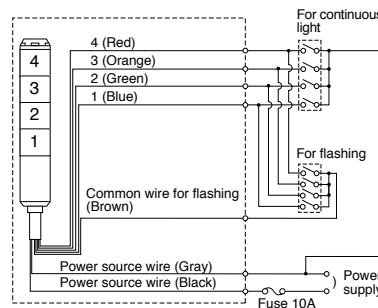
STD (Continuous lighting type)



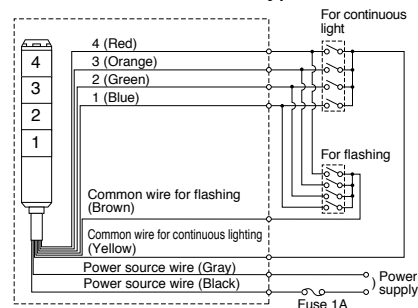
Amperage rating for the fuse

Voltage Type	Amperage rating
24V AC/DC	3A
100~240V AC	1A

STD-F
24V type



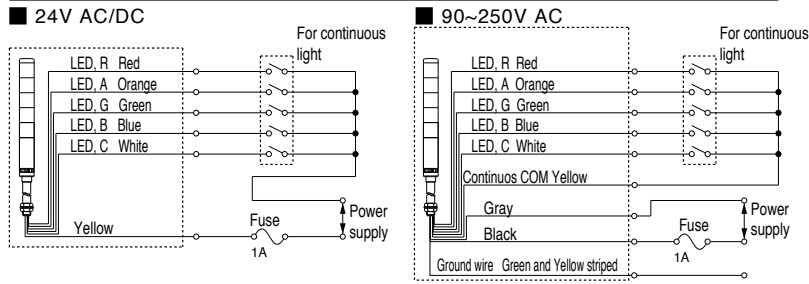
STD-F
100V/120V/200~240V type



LCE/LCS Wiring Diagram

(LCE/LCS-□□□(FB)(W)(K) Model)

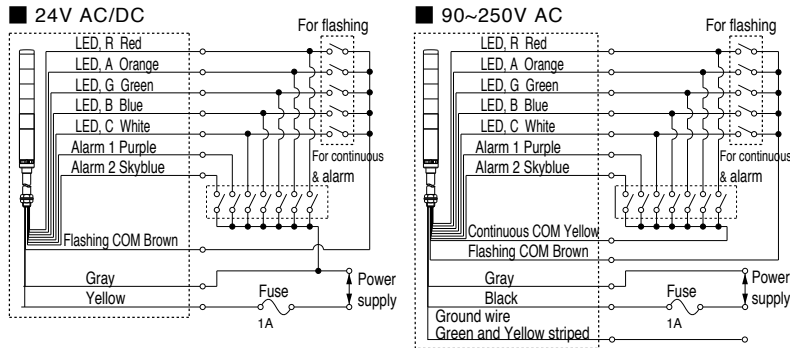
LCE/LCS [Continuous only]



LCS

LCE

LCE [Continuous and Flashing with Alarm]



Lead wire color correspondence table

Color of LED unit	Color of Lead wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear	White

Alarm	Color of Lead wire
Alarm 1	Purple
Alarm 2	Skyblue

Signal line voltage and current per LED module

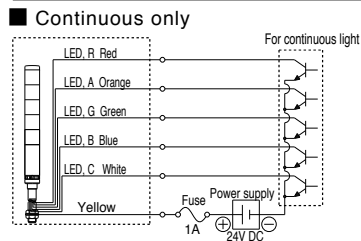
Model	Rated Voltage	Signal Line Voltage	LED		Alarm	
			Signal Line Current	Signal Line Current	Inrush Current	Inrush Current
LCE/LCS	24V AC/DC	AC/DC 24V	30mA	25mA	40mA	250mA
LCE-M2	90~250V AC	24V DC	30mA	25mA	40mA	250mA

Fuse for outer contact protection

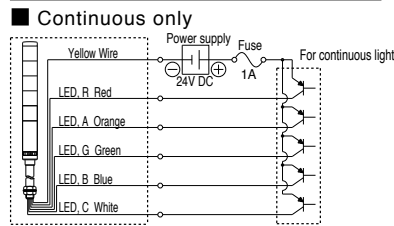
Voltage	Fuse
All voltage types	1A

NPN(PNP) Transistor

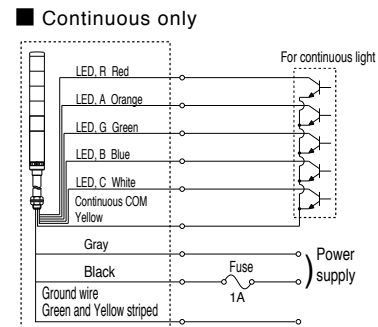
24V DC NPN Transistor



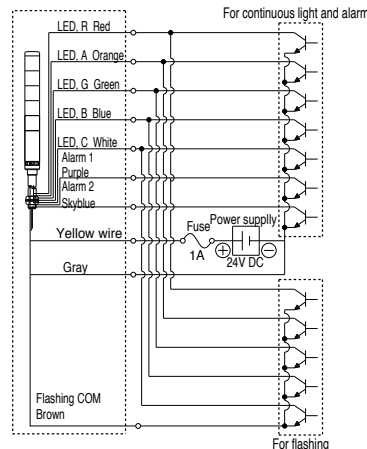
24V DC PNP Transistor



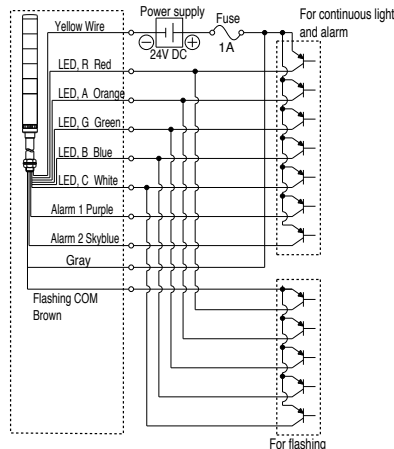
90~250V AC NPN Transistor



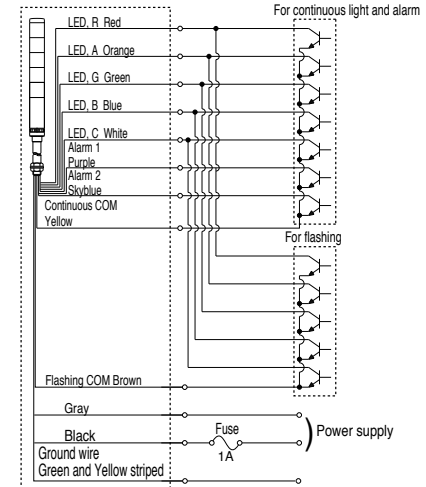
Continuous and Flashing with Alarm



Continuous and Flashing with Alarm



Continuous and Flashing with Alarm

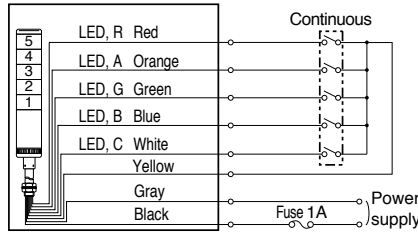
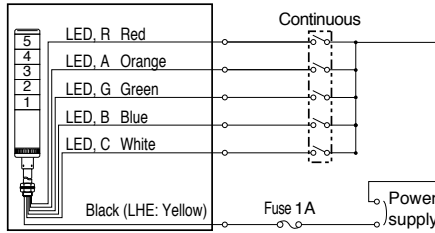


Model	Transistor (NPN or PNP)	Withstanding Voltage	$V_c \geq 35V$
Current Capacity	$I_c \geq 100mA$ (LED UNIT) $I_c \geq 300mA$ (Alarm)	Current Leakage	$I_L \leq 1mA$

LES/LE/LHE Wiring Diagram

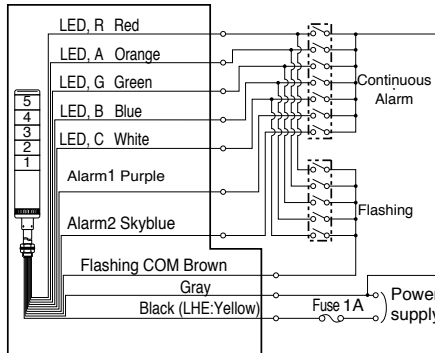
(LE-□□□(FB)(W)(P) Model)

■ LES/LE/LHE 12/24V AC/DC (LES:24V type only) ■ LE/LHE 100/220V AC

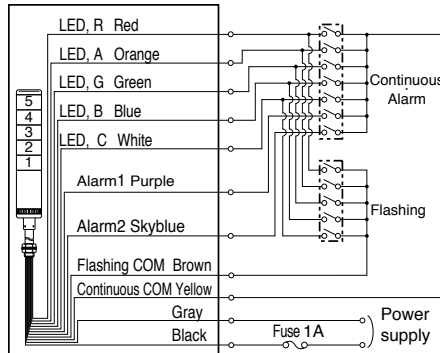


LE LES LHE

■ LE/LHE-FB 12/24V AC/DC



■ LE/LHE-FB 100/220V AC



■ Lead wire color correspondence table

Color of LED unit	Color of Lead wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear	White

※LE type: All 5 light wires are supplied even if all colors are not used.

Alarm	Color of Lead wire
Alarm 1	Purple
Alarm 2	Skyblue

※Alarm wires do not exist for continuous only model.

■ Fuse for outer contact protection

Voltage	Fuse
All voltage types	1A

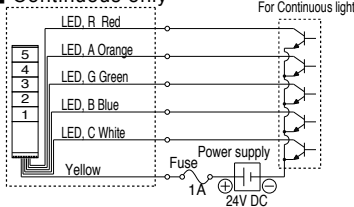
■ Signal line voltage and current per LED module

Model	Rated Voltage	Signal Line Voltage	LED			Alarm
			R, A: 50mA	G, C: 40mA	B: 44mA	
LE	12V AC/DC	12V AC/DC	R, A: 50mA	G, C: 40mA	B: 44mA	Signal Line Current 40mA
LHE-A	24V AC/DC	24V AC/DC	R, A: 50mA	G, C: 40mA	B: 40mA	
LES/LE			R, A: 25mA	G, C: 20mA	B: 22mA	
LHE-A	100V, 220V AC	24V DC	R, A: 50mA	G, C: 40mA	B: 40mA	Rush Current 150mA
LE			R, A: 25mA	G, C: 20mA	B: 22mA	

NPN(PNP) Transistor

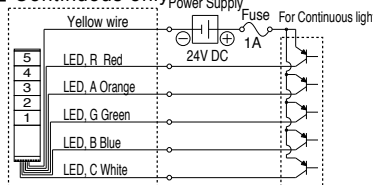
24V DC NPN Transistor

■ Continuous only



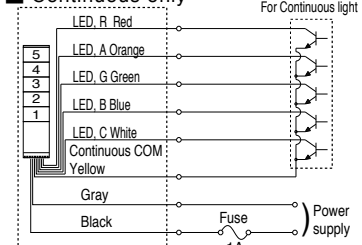
24V DC PNP Transistor

■ Continuous only

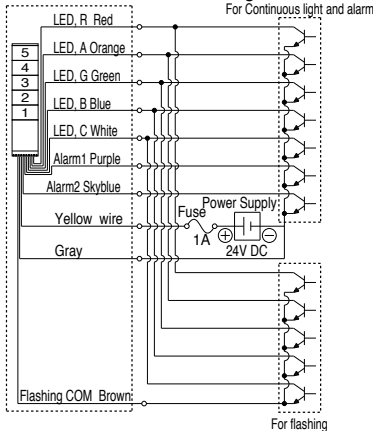


100/220V AC NPN Transistor

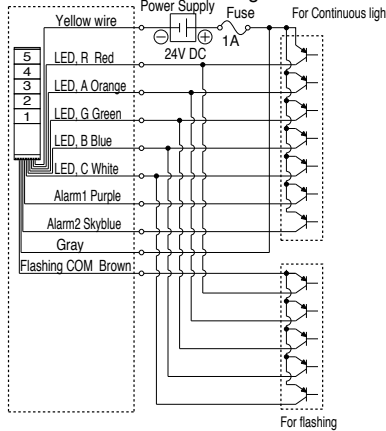
■ Continuous only



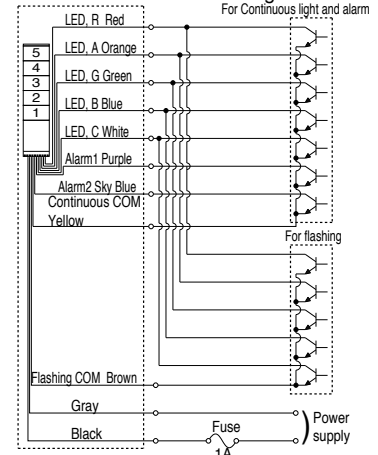
■ Continuous and Flashing with Alarm



■ Continuous and Flashing with Alarm



■ Continuous and Flashing with Alarm

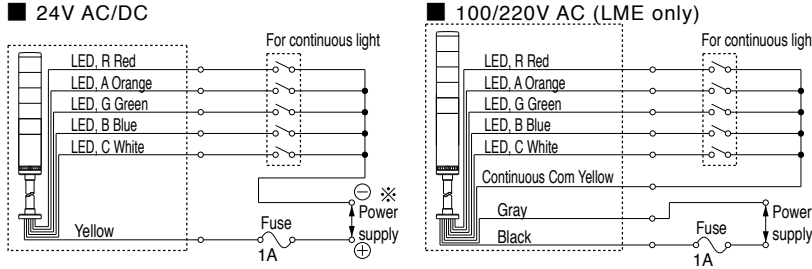


	Transistor	Current Capacity	Withstanding Voltage	Current Leakage
LES	NPN or PNP	$I_c \geq 100\text{mA}$ (LED UNIT)	$V_c \geq 35\text{V}$	$I_L \leq 1\text{mA}$
LE		$I_c \geq 300\text{mA}$ (Alarm)		
LHE		$I_c \geq 50\text{mA}$ (LED UNIT)	$V_c \geq 50\text{V}$	

LME/LMS Wiring Diagram

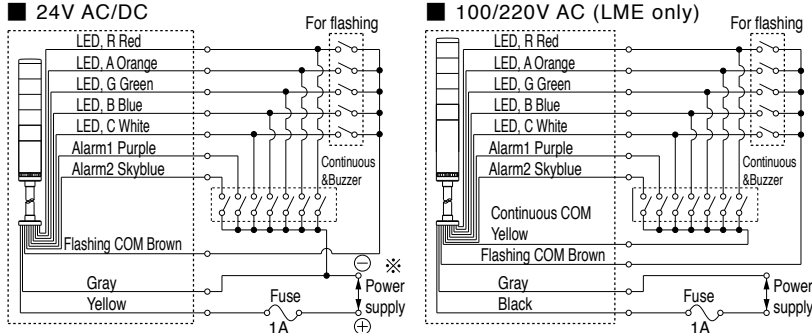
[LME/LMS-□□□(FB)(W)(L)(K) Model]

LME(-W)/LME(-W)-S-Q/LMS [Continuous type]



LME LMS

LME-FB(W)/LME(-W)-S-Q [Continuous/Flashing/Alarm type]



※LME-FB-S/Q Series: 24V model is DC only, with only one polarity: positive (+) on Yellow (NPN)

Signal line voltage and current per LED module

Model	Rated Voltage	Signal Line Voltage	LED		Buzzer	
			Signal Line R,A	Current G,B,C	Signal Line Current	Inrush Current
LME	24V AC/DC	24V AC/DC	50mA	20mA	40mA	250mA
	100V AC	24V DC				
	220V AC	24V DC				
LME-S	24V DC	24V DC	50mA	40mA	40mA	250mA
	100V AC	24V DC				
	220V AC	24V DC				

Lead wire color correspondence table

Color of LED unit	Color of Lead wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear	White

LME-S/Q

Color of LED unit	Color of Lead wire
S1 Red-Amber-Green	Red-Orange-Green
S4 Red-Green-Blue	Red-Green-Blue
S7 Amber-Green-Blue	Orange-Green-Blue
Q1 Red-Amber-Green-Blue	Red-Orange-Green-Blue
Q2 Red-Amber-Green-Clear	Red-Orange-Green-White
Q4 Amber-Green-Blue-Clear	Orange-Green-Blue-White

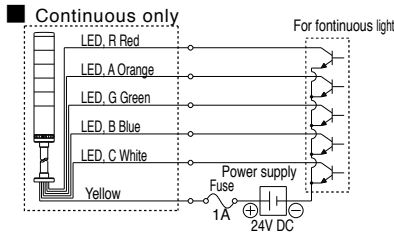
Alarm	Color of Lead wire
Alarm 1	Purple
Alarm 2	Skyblue

Fuse for outer contact protection

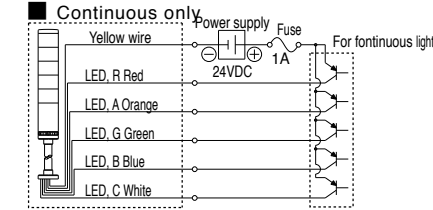
Voltage	Fuse
All voltage types	1A

NPN(PNP)Transistor

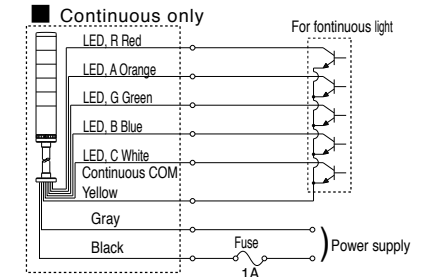
24V DC NPN Transistor



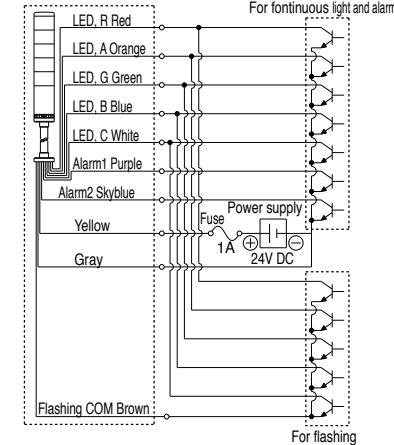
DC24V PNP Transistor(except for S/Q type)



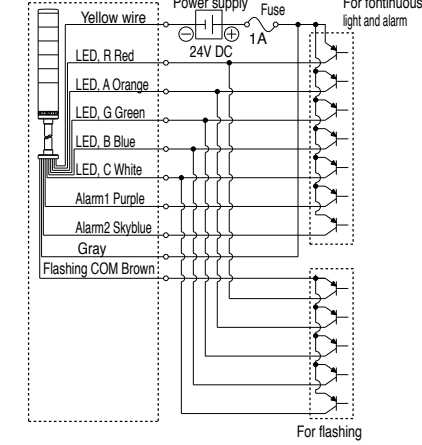
AC100/220V NPN Transistor



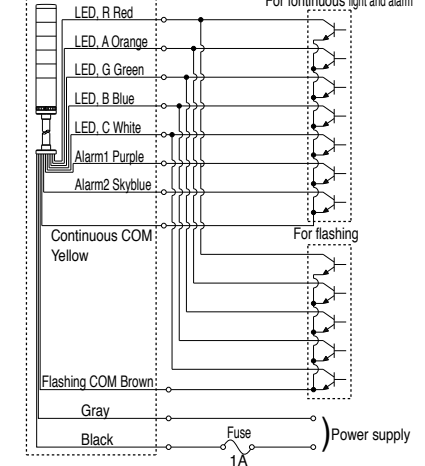
Continuous and Flashing with Alarm



Continuous and Flashing with Alarm



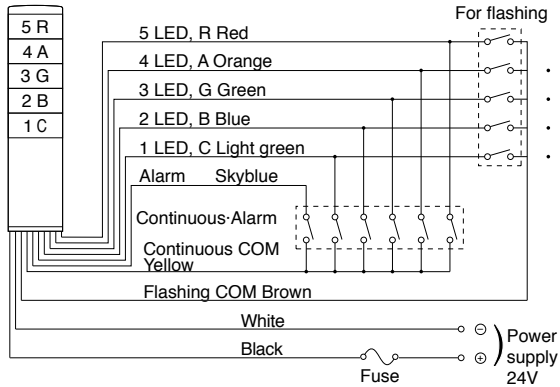
Continuous and Flashing with Alarm



Model	Transistor (NPN or PNP)	Voltage	$V_c \geq 35V$
Current Capacity	$I_c \geq 100mA$ (LED UNIT) $I_c \geq 300mA$ (Buzzer)	Current Leakage	$I_L \leq 1mA$

LGE Wiring Diagram

[LGE-□□□(FB) Model]



LGE

Signal line voltage and current per LED module

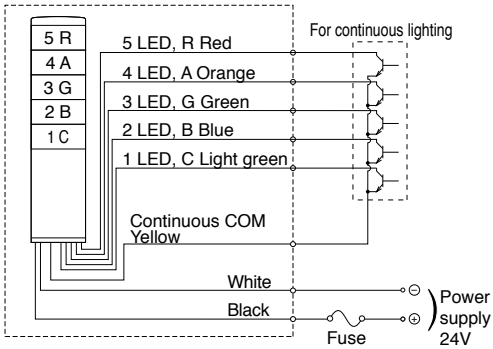
Rated Voltage	Signal Line Voltage	LGE		
		LED Signal Line Current	Alarm Signal Line Current	Inrush Current
24V AC/DC	24V AC/DC	90mA	20mA	250mA
100V AC	24V AC			
220V AC				

Continuous signal has priority when Continuous signal and Flashing signal are activated simultaneously.

DC 24V: NPN(PNP) Transistor

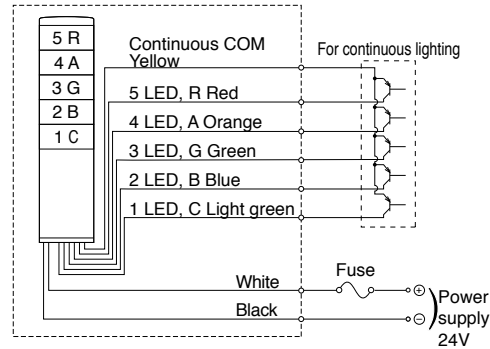
NPN

LGE

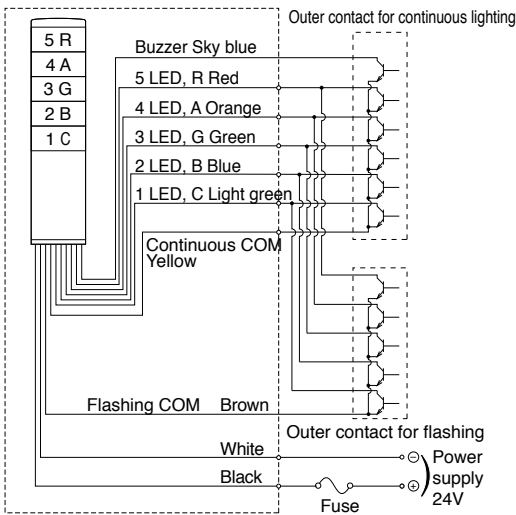


PNP

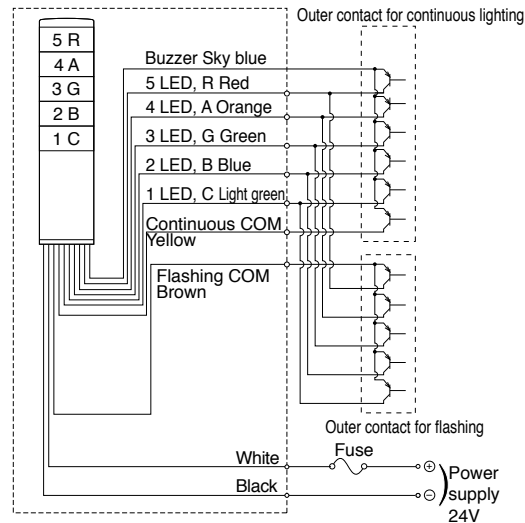
LGE



LGE-FB



LGE-FB



Fuse rate

Model	LGE
Voltage Type	All types
Fuse	Miniature glass tube fuse ø5x20mm
Rated Current	1A

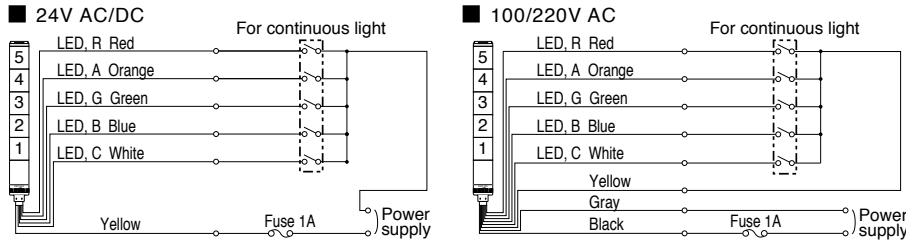
Transistor Capacity (NPN/PNP)

Model	LGE
Current Capacity	$I_c \geq 0.1A$ (LED unit) $I_c \geq 0.3A$ (Alarm)
Voltage	$V_c \geq 35V$

SE-D Wiring Diagram

[SE(F)(B)(W)-□□□D Model]

SE-D [Continuous type]



Wire color

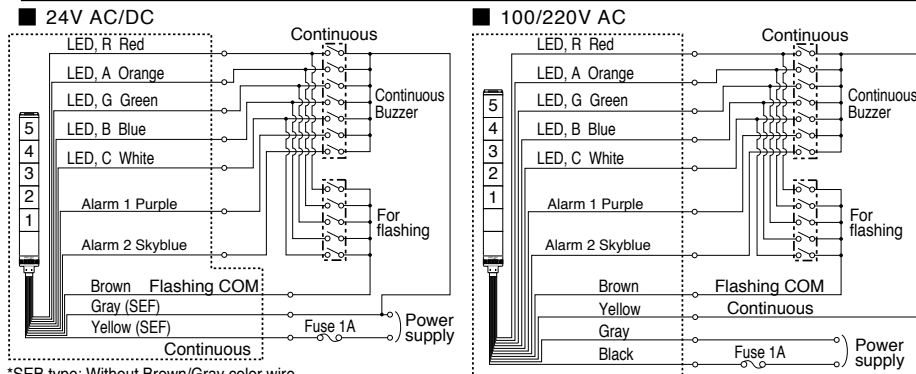
Light

Color of LED unit	Color of Lead Wire
Red	Red
Amber	Orange
Green	Green
Blue	Blue
Clear	White

Alarm

Alarm	Color of Lead Wire
Alarm 1	Purple
Alarm 2	Skyblue

SE-D [Flashing type]



*SEB type: Without Brown/Gray color wire.

*SEF type: Without Purple/Skyblue color wire.

*SEB type: Without Brown/Gray color wire.

*SEF type: Without Purple/Skyblue color wire.

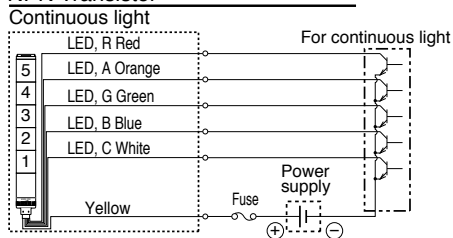
Signal line voltage and current per LED module

Rated Voltage	Signal Line Voltage	LED		Alarm	
		Signal Line Current	LED	Signal Line Current	Inrush Current
12V AC/DC	12V AC/DC	R,A:100mA	G,B,C:80mA	Max 40mA	150mA
24V AC/DC	24V AC/DC	R,A: 50mA	G,B,C: 40mA		

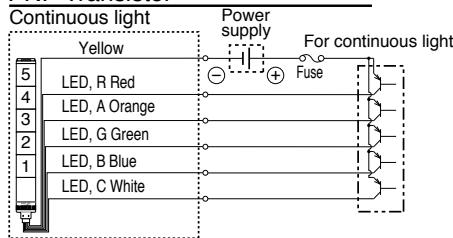
100V-AC220V AC AC 24V

24V DC NPN(PNP) Transistor

NPN Transistor



PNP Transistor



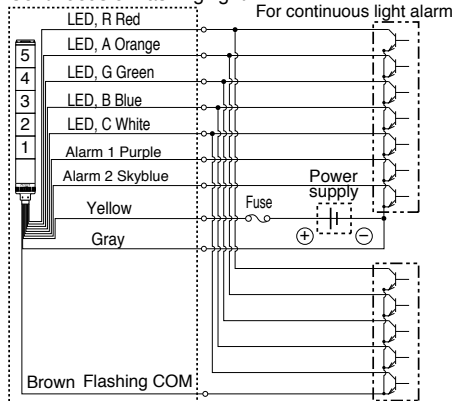
Capacity of Transistor

Model	Transistor (NPN or PNP)
Current Capacity	Ic ≥ 0.1A (LED unit) Ic ≥ 300mA (Alarm)
Withstanding Voltage	Vc ≥ 35V
Current Leakage	IL < 0.1mA

Fuse for outer contact protection

Voltage	Fuse
All voltage type	1A

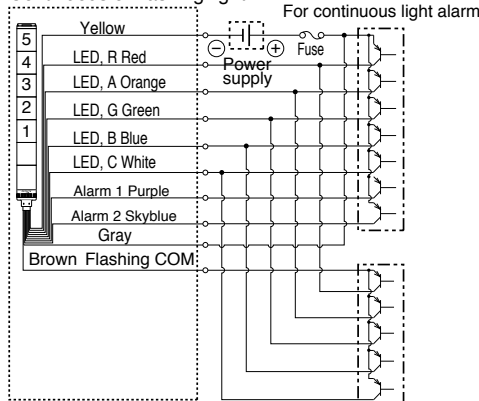
Continuous or flashing light



*SEB type: Without Brown/Gray color wire.

For flashing

Continuous or flashing light



*SEB type: Without Brown/Gray color wire.

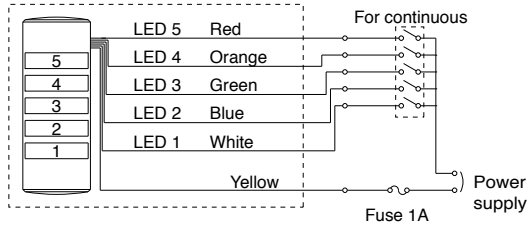
For flashing

WEP Wiring Diagram

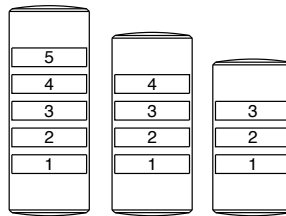
[WEP-□□□(FB) Model]



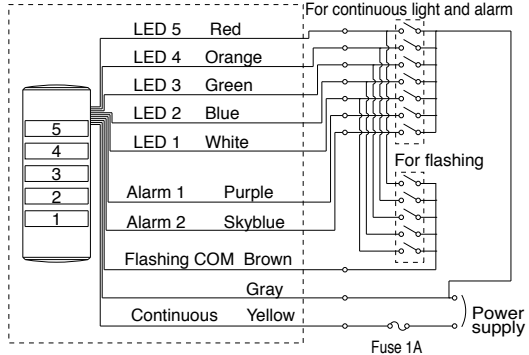
Continuous light



Wire color



Continuous or flashing light with audible alarm



Light

Wire color	5 Lights	4 Lights	3 Lights
Red	5	4	3
Orange	4	3	2
Green	3	2	1
Blue	2	1	-
White	1	-	-

Alarm

	Wire color	Sound
Alarm 1	Purple	Short pips
Alarm 2	Skyblue	Long beeps

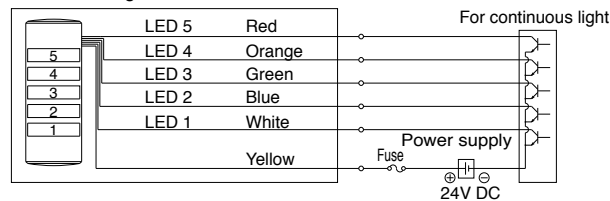
Signal line voltage and current per LED module

Model	Rated Voltage	Signal Line Voltage	LED		Alarm	
			Signal Line Current	Signal Line Current	Inrush Current	
			R,A	G,B,C		
WEP	24V AC/DC	24V AC/DC	30mA	25mA	40mA	250mA

24V DC NPN(PNP) Transistor

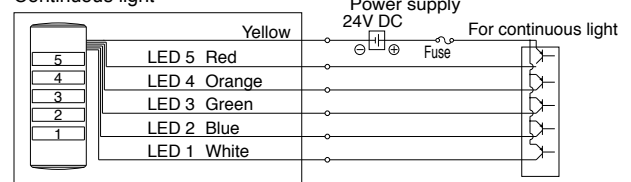
NPN Transistor

Continuous light

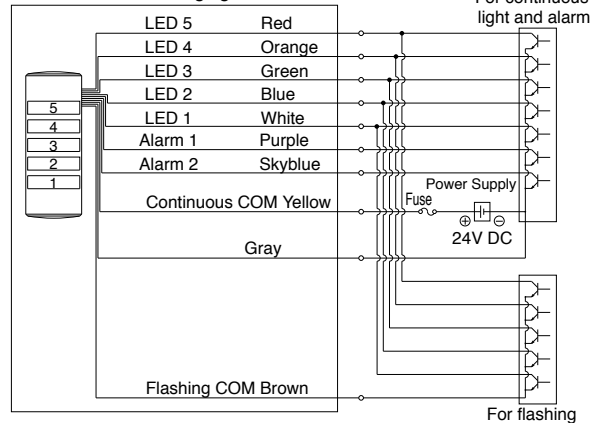


PNP Transistor

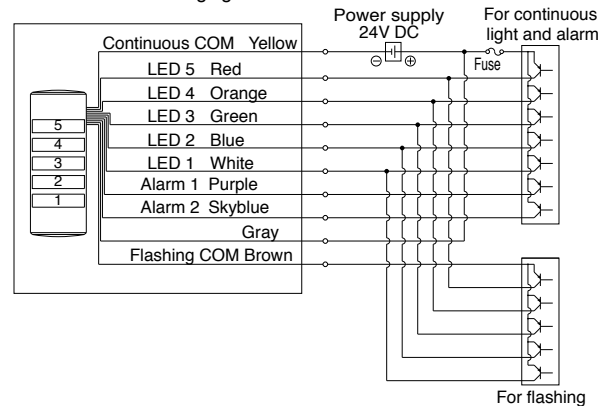
Continuous light



Continuous or flashing light with audible alarm



Continuous or flashing light with audible alarm



[Fuse Rating]

Type	Transistor (NPN or PNP)	Voltage	Vc ≥ 35V
Current Capacity	Ic ≥ 0.1A Buzzer 300mA	Current Leakage	IL ≤ 0.1A

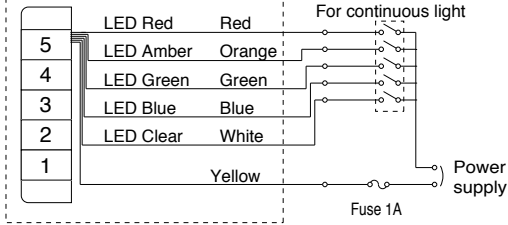
1A

WME-A Wiring Diagram

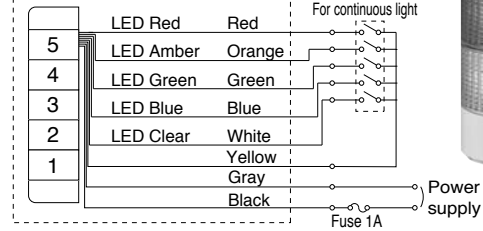
[WME-A-□□□(FB) Model]



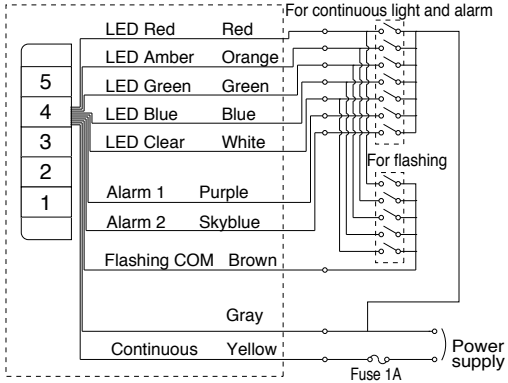
- Continuous light
- 24V AC/DC



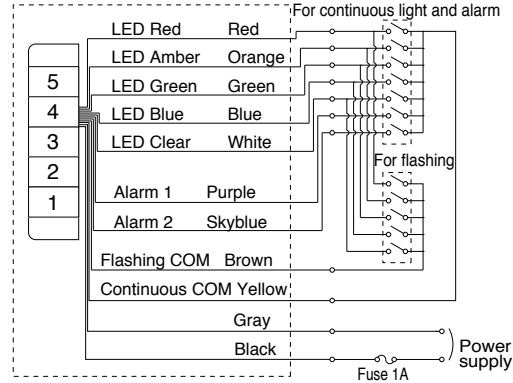
- 90V~250V AC



- Continuous or flashing light with audible alarm
- 24V AC/DC



- 90V~250V AC



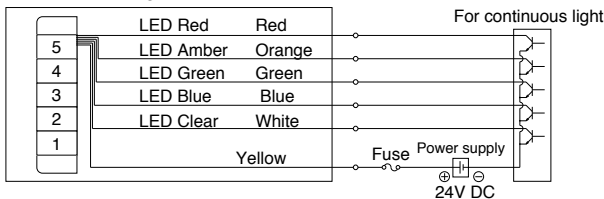
Signal line voltage and current per LED module

Model	Rated Voltage	Signal Line Voltage	LED					Alarm		
			Signal Line Current					Signal Line Current	Inrush Current	
			R	A	G	B	C			
WME-A	24V AC/DC	24V AC/DC	35mA					50mA	40mA	250mA
	90V~250V AC	24V DC	35mA					50mA	40mA	250mA

24V DC NPN(PNP) Transistor

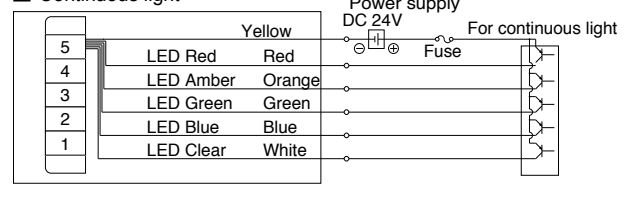
NPN Transistor

- Continuous light

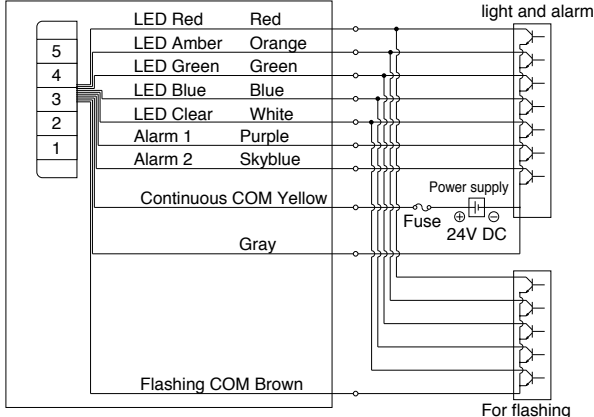


PNP Transistor

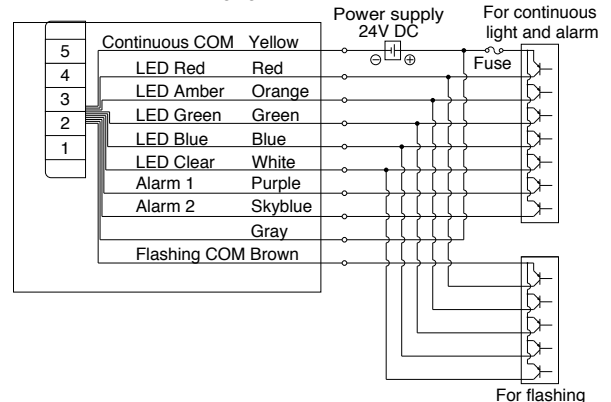
- Continuous light



- Continuous or flashing light with audible alarm



- Continuous or flashing light with audible alarm



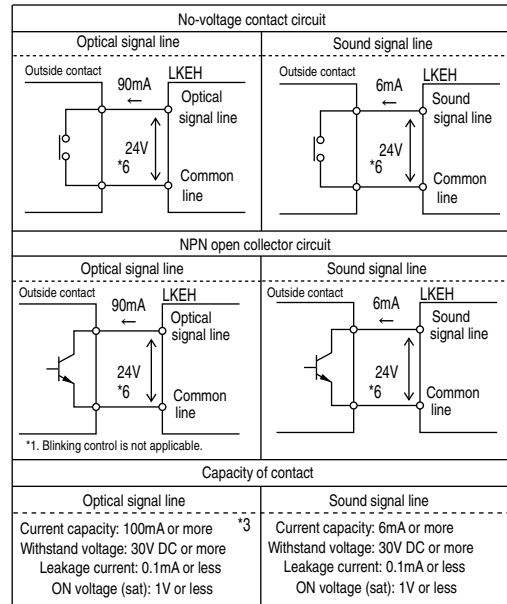
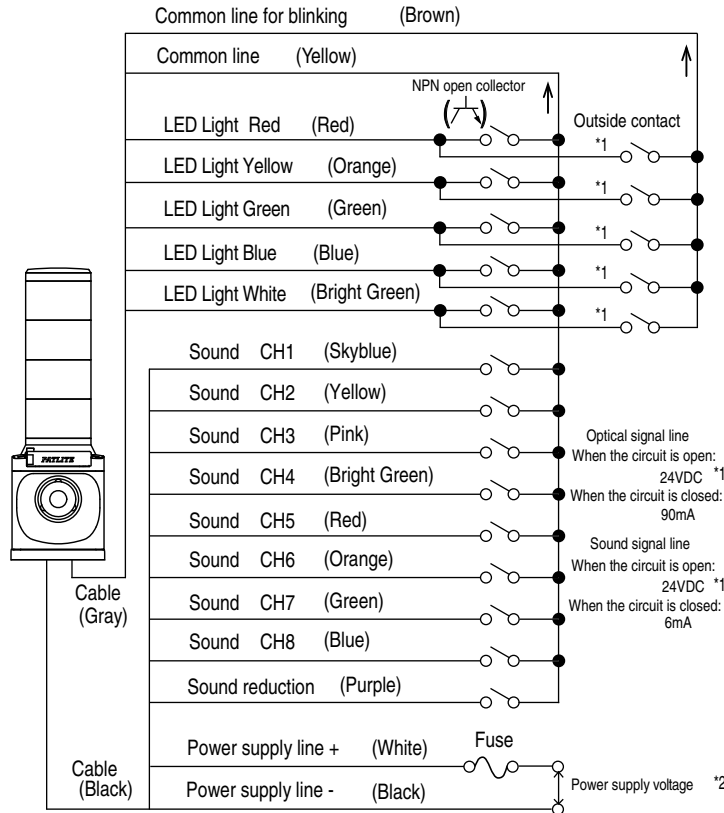
[Fuse Rating]

Type	Transistor (NPN or PNP)	Voltage	$V_c \geq 35V$ ($48V: V_c \geq 63V$)
Current Capacity	$I_c \geq 0.1A$ Buzzer 300mA	Current Leakage	$I_L \leq 0.1A$

1A

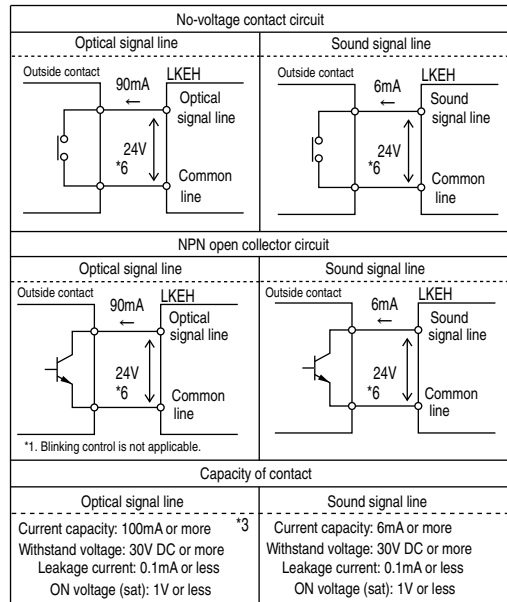
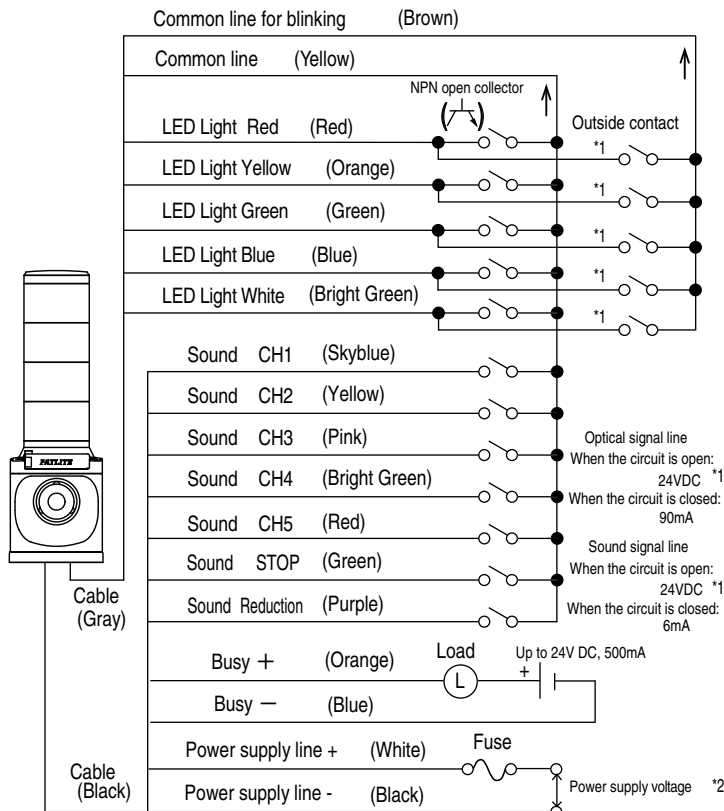
LKEH-F□/LKEH-FV Wiring Diagram

[LKEH-F□ Model]



Model	Rated Voltage	Inrush Current *4	Fuse Capacity *5
LKEH-□02	24V DC	10A	2A(Normal)
LKEH-□10	100V AC	12A	0.5A(Time lag)
LKEH-□12	120V AC	12A	0.5A(Time lag)
LKEH-□20	220V AC	6A	0.5A(Normal)

[LKEH-FV Model]



Model	Rated Voltage	Inrush current *4	Fuse Capacity *5
LKEH-□02	24V DC	10A	2A(Normal)
LKEH-□10	100V AC	12A	0.5A(Time lag)
LKEH-□12	120V AC	12A	0.5A(Time lag)
LKEH-□20	220V AC	6A	0.5A(Normal)

* Do not apply voltage to the signal lines.
Failure to do so may damage the product.

BD/BK BDV/BKV Wiring Diagram

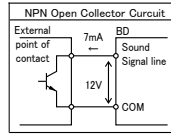
[BD Model]

● Contact Capacity

Withstanding voltage	DC12V or higher
Current capacity	7mA or higher
Leakage current	0.1mA or lower
ON voltage (Vsat)	1V or lower (0.5V or lower in case of DC12V)

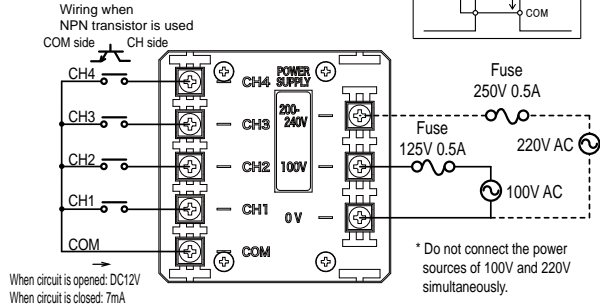
● Inrush current

BD-24	5.5A/6ms at maximum
BD-100	None



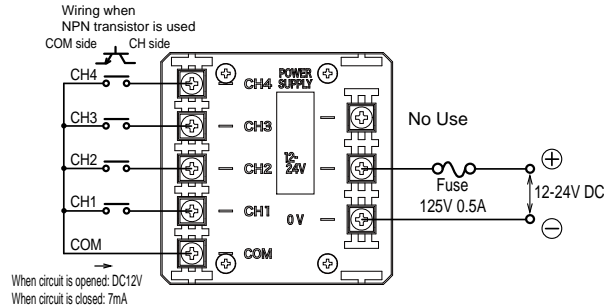
Wiring Examples

● BD-100



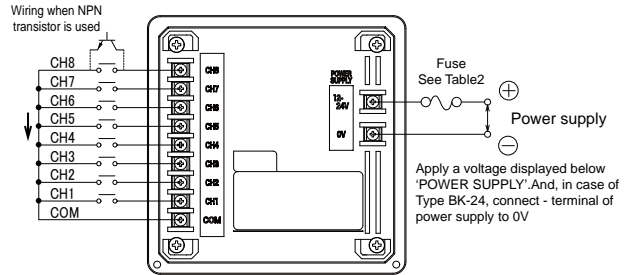
When circuit is opened: DC12V
When circuit is closed: 7mA

● BD-24



When circuit is opened: DC12V
When circuit is closed: 7mA

[BK Model]



Do not apply voltage to the signal lines.
Failure to do so may damage the product.

Table1. CH circuit

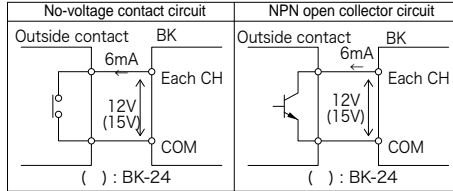


Table2. Inrush current and Fuse

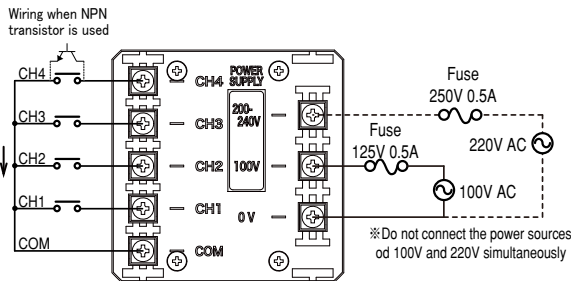
Model	Inrush current	Fuse
BK-24	Max 20A/ 5ms	125V 1A
BK-100	None	125V 0.5A
BK-220	None	250V 0.5A

Table3. Contact capacity of CH

Current Capacity	10mA or higher
Withstanding Voltage	DC20V or higher
Leakage Current	0.1mA or lower
ON Voltage (Vsat)	1V or lower

[BDV Model]

● BDV-15KF



● BDV-15JF

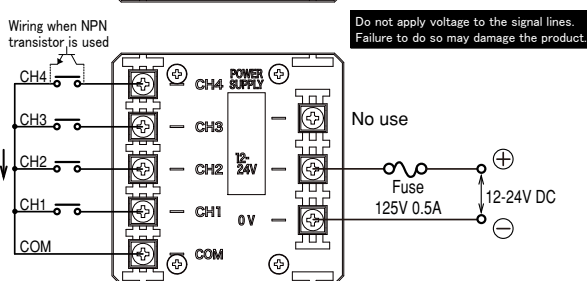


Chart1. Specifications of Signal Line

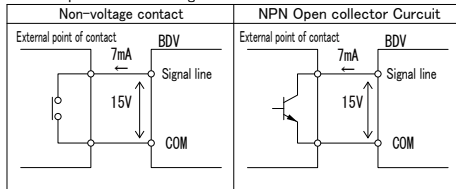
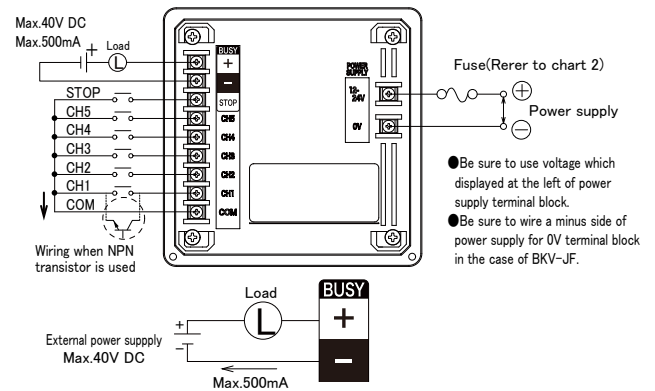


Chart2. Contact Capacity

Current Capacity	10mA or more
Withstanding Voltage	20V DC or more
Leakage Current	0.1mA or less
ON Voltage (Vsat)	1V or less

[BKV Model]



Do not supply a voltage for the signal line.
Do not supply overvoltage, overload or reverse connection for the busy line.
Failure to do so may be damaged to the product.

Chart1. Specifications of Signal line

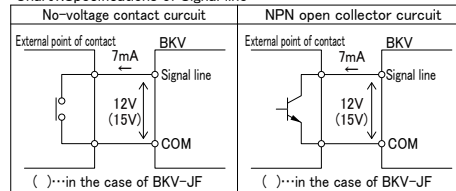


Chart2. Inrush current*Fuse

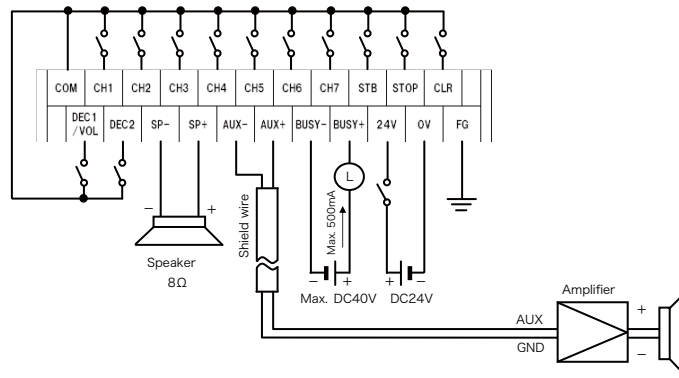
Model	Inrush current	Fuse
BKV-JF	Max.10A / 5ms	125V 1A
BKV-KF	Max.1.5A / 12ms	125V 0.5A
BKV-QF	Max.1.2A / 0.5ms	250V 0.5A

Chart3. Contact Capacity

Current capacity	10mA or more
Withstanding Voltage	20V DC or more
Leakage current	0.1mA or less
ON voltage (Vsat)	1V or less

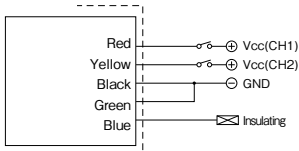
MV/CT Wiring Diagram

[FV-127JP Model]

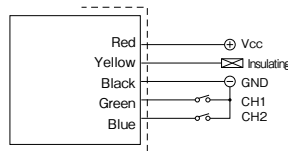


[MV Model]

Power Supply Voltage Input (MV-02CT)



Use of the non-voltage contact (MV-02CT)



Use of the non-voltage contact (MV-04CT)

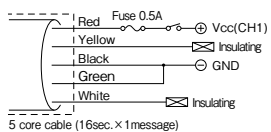
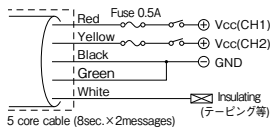


■ The order of priority on playback
 MV-02CT : CH2 > CH1
 MV-04CT : CH4 > CH3 > CH2 > CH1

Signal line
 Open: 1V
 Close: 4mA(12V)~8.5mA(24V)

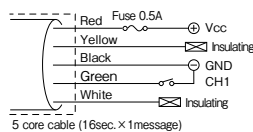
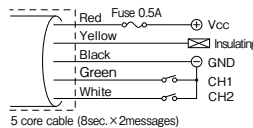
[CT Model]

Power Supply Voltage Input



Contact capacity	
Current capacity	500mA or more
Withstand voltage	50V or more
Leakage current	1mA or less
On Voltage	1V
Rush current	approx 10A

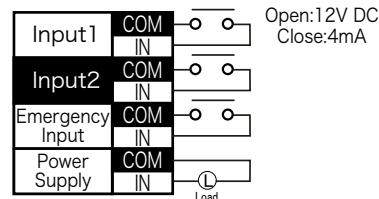
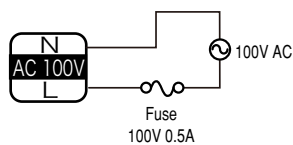
Use of the non-voltage contact



Contact capacity	
Current capacity	110mA or more
Withstand voltage	30V or more
Leakage current	1mA or less
On Voltage	1V
Rush current	approx 10A

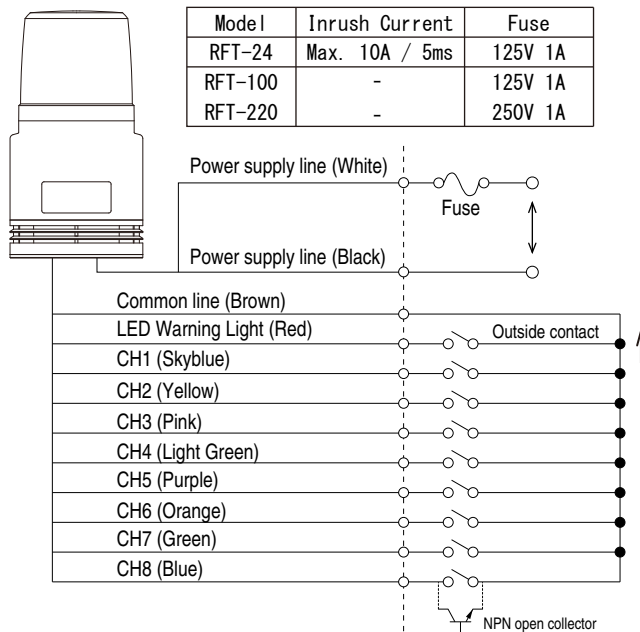
■ The order of priority on playback
 Input the power supply voltage
 CH2 (Yellow) > CH1 (Red)
 With the non-voltage contact
 CH2 (White) > CH1 (Green)

[WG Model]

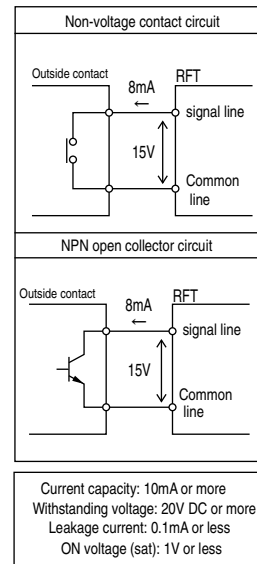


RFT/RFV Wiring Diagram

RFT Model]

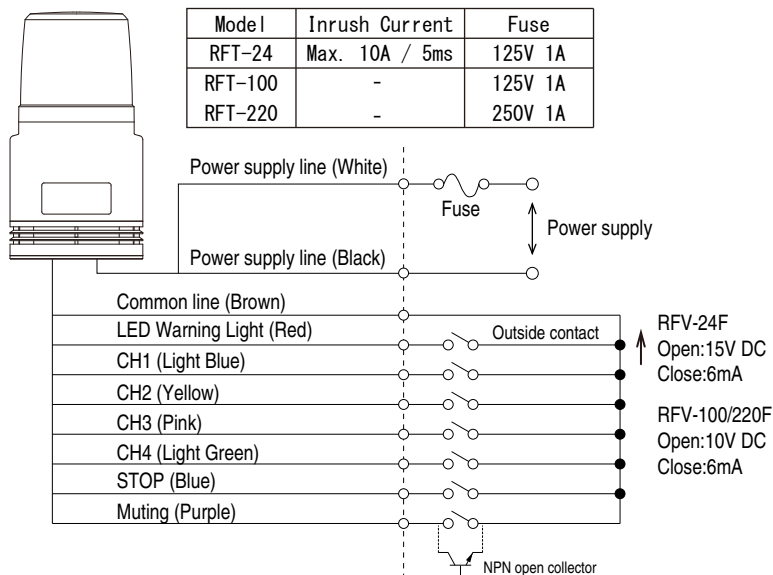


Power supply

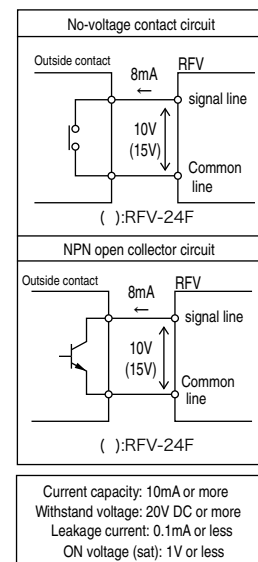


Do not apply voltage to the signal lines.
Failure to do so may damage the product.

RFV Model]



Power supply



Do not apply voltage to the signal lines.
Failure to do so may damage the product.

Sound Type Selection Chart



32 sounds are pre-recorded in one unit. 4 sound types are available.



A Type

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Fur Elise	Maiden's Prayer	Minuet	Annie Laurie
London Bridge is Falling Down	Holdiridia	Mary Had a Little Lamb	Camptown Races
Kuck kuck	Der Schmied im Walde	On the Bridge of Avignon	Daydream Believer
Amaryllis	Mozart Symphony No. 40	Itsy Bitsy Spider	Ich bin ein Musikante
Jeux Interdits	Katuscha	Grandfather's Clock	Ave Maria

D Type

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call sign
Oribiao Kikinagara	A September	Doyoubino Koibito	Akino Kehai
Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Happy Birthday	Hi Ho
I've been working on the Railroad	Bear Song	Toys Go Cha Cha Cha	Konnako Irukana
Wiegenlied	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	Oh My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Air

C Type

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear high pitched bell)	Yelp (rapid siren)
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter (rapid intermittent horn) Bell (clear high pitched bell)	Synthesized Melody Chime	Chime	Call sign
Can't Take My Eyes off of You	Top of the World	The Entertainer	Amazing Grace
Amairono Kamino Otome	Les Champs-Elysees	Canon	Rara Sanshain
Uchuusenkan Yamato	Oshiete	Makenaide	Gonna Fly Now (Theme for "Rocky")
I Don't Want to Miss a Thing	Yozorano Mukou	Aiwa Katsu	Haruyo Koi
Gattsudaze	Odoru Ponpokorin	Imasugu Kisu Mi	Truth

E Type

Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Inverted Receille	Annie Laurie
Stutter (rapid intermittent horn)	Synthesized Melody Chime	Galactic Motor	London Bridge is Falling Down
Bell (clear high pitched bell)	Chime	Ringling Phone	Mary Had a Little Lamb
Yelp (rapid siren)	Call Sign	Two Tone	Camptown Races
Rapid Hi-Lo	Train Ride	Alarm Clock	Amaryllis
Melody Chime	Galloping Hi-Lo	Ringling Hi-Lo	Mozart Symphony No.40
Synthesized Piano	Alien Chatter	Fur Elise	Ave Maria
Synthesized Bell	Falling Crystals	Minuet in G	Grandfather's Clock

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded in BD-A, C and D types outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. BD-E type is recommended for use outside of Japan as this model does not include copyrighted music or songs, and permission is not required.



<http://www.patlite.com> e-mail:overseas@patlite.co.jp

PATLITE Corporation

8-8, Matsuyamachi, Chuo-ku, Osaka, Japan 542-0067
International Division, Sales and Marketing Department
TEL: +81-6-6763-8220 FAX: +81-6-6763-8221

PATLITE (U.S.A.) Corporation E-mail:sales@patlite.com

20130 S. Western Ave. Torrance, CA90501, U.S.A.
TEL: +1-310-328-3222 FAX: +1-310-328-2676

PATLITE Europe GmbH E-mail:info@patlite.eu

Am Soeldnermoos 8, D-85399 Hallbergmoos, Germany
TEL.+49-0-811 9981 9770-0 FAX.+49-0-811 9981 9770-9

PATLITE (SINGAPORE) PTE LTD E-mail:sales@patlite.com.sg

No.2 Leng Kee Road, #05-01 Thye Hong Centre, Singapore 159086
TEL: +65-6226-1111 FAX: +65-6324-1411

PATLITE (CHINA) Corporation E-mail:sales@patlite.cn

Room 512, Jufeng Business Building, No.697-3 Lingshi Road, Shanghai China 200072
TEL: +86-21-6630-8969 FAX: +86-21-6630-8938

P.T. PATLITE INDONESIA (FACTORY)

LOT 321 Batamindo Industrial Park, Jalan Beringin Mukakuning, Batam 29433 Indonesia
TEL: +62-770-61-1123 FAX: +62-770-61-2444



To ensure correct use of these products, read the Instruction Manual prior to use.
Failure to follow all safeguards can result in fire, electric shock, or other accidents.
Specifications are subject to change without notice.



PATLITE ECO PROJECT

For the benefit of mankind and the earth, PATLITE is committed to developing environmentally friendly products.

ISO14001/ISO9001Certified



Headquarters/Sanda Plant/Techno Center

PT. PATLITE INDONESIA

This publication is chlorine free.



Sanda Plant	
Headquarters	PATLITE (U.S.A.)
PATLITE Europe GmbH	
PATLITE (SINGAPOLE)	