

INSTALLATION MANUAL

Notice to Customer

Thank you very much for purchasing our PATLITE product.

- Request the installation and wiring be performed by a professional contractor if construction work is involved.
- Prior to installation, read this manual thoroughly before using this product to ensure correct use.
- After reviewing this manual, if there are any questions regarding this product, please contact the nearest PATLITE office listed on the back cover of this manual.

Notice to Contractor

- Read this manual carefully prior to installation.
- Be sure to return this manual to the customer.

Safety Precautions

In order to prevent any damage to the user and other personnel or to assets, note the following:

- The following symbols classifies the following precautions into two categories and explains the level of harm inflicted when caution is disregarded while using this product.

 WARNING	Indicates an immediately dangerous condition: failure to follow the instructions may lead to death or serious injury.	 CAUTION	Indicates a potentially dangerous condition: failure to follow the instructions may lead to slight injury or property damage.
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1 Safety Precautions

Safety Precautions

WARNING

- Make sure the power is off before wiring, repairing, or replacing parts to avoid a short-circuit, electric shock, or burn.
- Please use this product in a properly maintained condition. (If parts such as the Body or LED Unit are damaged, they should be repaired.)
- Do not use this product with the lens damaged or removed, or without the head cover in order to avoid an electric shock.
- If installing this product requires construction work, please ask a specialist in order to avoid electric shock, fire, or personal injury.
- When this product is used for security purposes, it should be inspected daily. In case a malfunction should occur, it is recommended that you use this product together with other security products.
- Do not use this product to support your weight while climbing onto a machine. Mount the product so that it is clear of any moving parts - such as a machine cover.

CAUTION

- Concerning replacement parts, such as LED unit, bulb or fuse, be sure to use those specified in this manual.
- For safety, make sure to connect an external fuse to the power source as shown in the wiring example.
- Do not substitute parts from other products as this may cause a breakdown.

2 Model Number Configuration

Type ME-A

ME□-□**02A**-□

Body Length Blank : 200mm S : 40mm L : 500mm	Tier 1~5 Tiers	Rated Voltage 02 : 24V DC	Luminous Color R : Red Y : Amber G : Green B : Blue C : White
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Type MP

MP□-□**02**-□

Body Length Blank : 220mm S : 45mm	Tier 1~5 Tiers	Rated Voltage 02 : 24V AC/DC	Luminous Color R : Red Y : Amber G : Green B : Blue C : White
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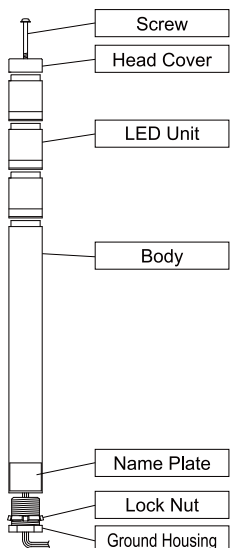
3 Part Names and Outer Appearance

Type ME-A

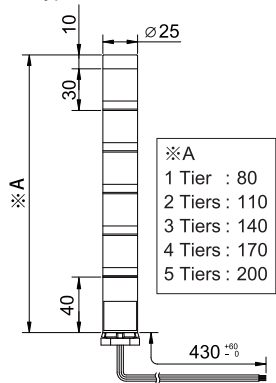
(Part Names)

(Dimensions)

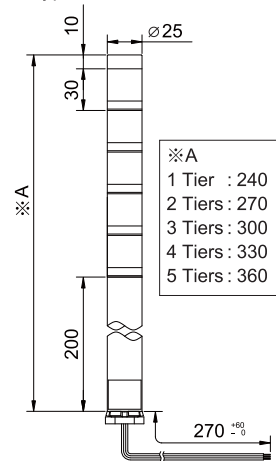
(Unit:mm)



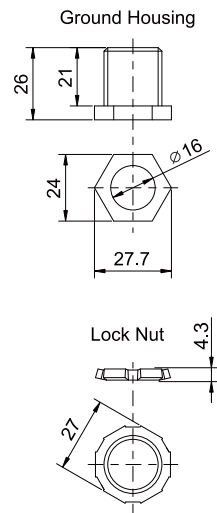
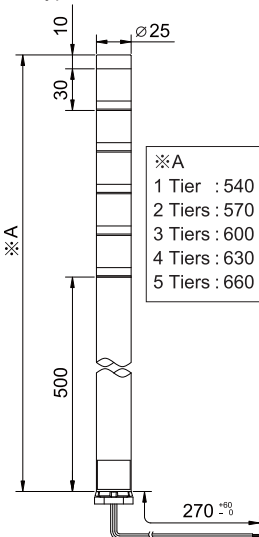
■ Type MES-A



■ Type ME-A



■ Type MES-A

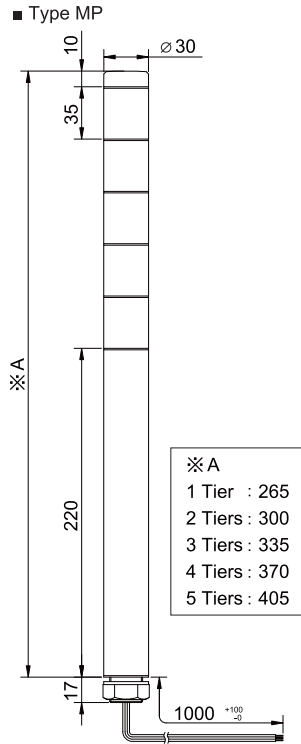
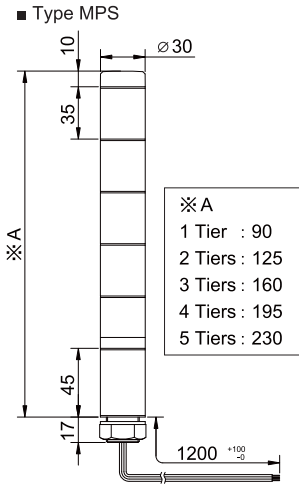
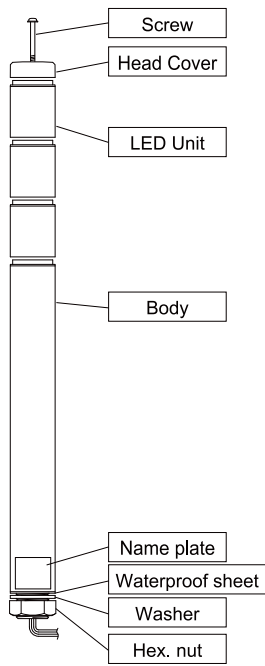


Type MP

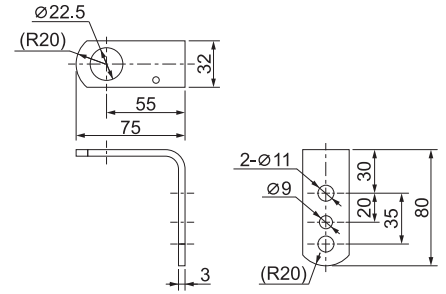
(Part Names)

(Dimensions)

(Unit:mm)



※ Optional Parts
L bracket (Model SZL-001)



4 Installation

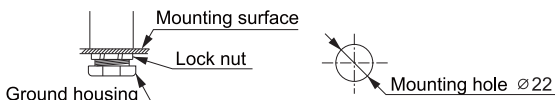
⚠ CAUTION

- The following requirements are necessary for proper installation.
 - Install where no excessive vibration is present.
 - Install on a strong surface.
 - Install in an upright position. (Do not install the Signal Tower sideways or inverted.)
- This product can only be used indoors. (Do not use it outdoors.)
- Use a soft cloth moistened with water when the LED Unit or Body must be cleaned up. (Do not use thinner, benzine, gasoline or oil.)
- When installing this product, do not use excessive torque, or the product may be damaged.
- During installation, do not remove the waterproof sheet, it will increase possible water penetration and may cause a malfunction. (Type MP only)

How to Install

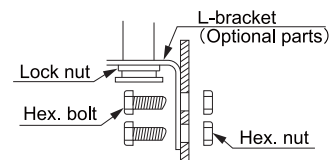
(Unit:mm)

■ Type ME-A

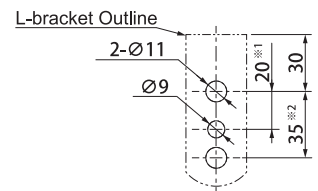


※The possible thickness of the installation plate is 10 mm or less.

1. Turn nut ① three threads (5 mm) or more.
2. Hold nut ① in one hand and tighten nut ② with the other hand as far as the plate surface.
3. Hold nut ① using an 24 spanner, and tighten nut ② using an 27 spanner.

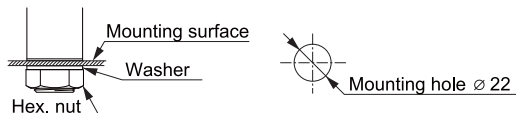


Mounting Dimension



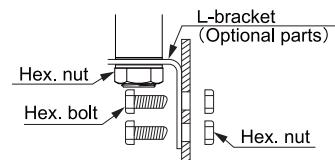
Bolt/Nut	
※1	M8×2pcs.
※2	M10×2pcs.

■ Type MP

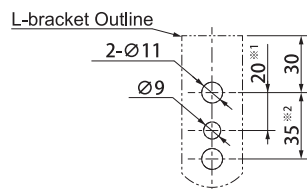


※The possible thickness of the installation plate is 5 mm or less.

1. Install the waterproof sheet ② in the body, and through the mounting hole.
2. Please use the washer and the Hex. nut for installation. (Fasten it with the torque of 3.5±0.5N·m.)



Mounting Dimension



Bolt/Nut	
※1	M8×2pcs.
※2	M10×2pcs.

5 Wiring

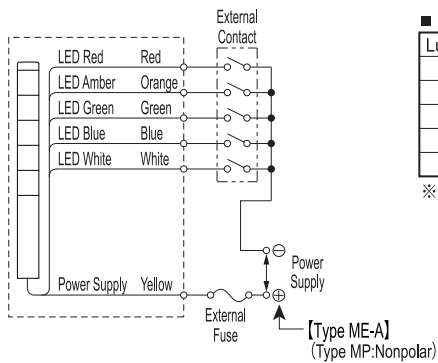
⚠ CAUTION

- Make sure the power is OFF before wiring. A short circuit may damage internal circuits or cause an electric shock.
- Enough attention shall be paid for wiring because if there is any mistakes in wiring a circuit may break down.
- Install the external contact fuse on the power supply side as shown in the wiring example in order to prevent burn in case of a wiring error.
- Do not pull out the lead wire or push it into the body.

How to perform wiring

- Turn the power OFF.
- Make wiring connection according to wiring example.
When wiring 5 layers or less, please make wiring connection by increasing or decreasing external contacts in each layer according to wiring example.
- When using LED units of the same color, calculate the contact current capacity to be equal to the number of the LED units multiplied by the contact capacity for 1 light. (This is because current passes through one signal line for the multiple LED units of the same color.)
- When wiring is completed, insulate the end of each unused lead wire with insulation tape.
- Any questions regarding applications for multiple units, or other special operations, contact your nearest PATLITE Sales Representative before wiring.
【To be recognized as a UL standard.】
- Fuse for protection of external contact should be installed within 305mm from the connected point of the power source wire.
- Use a "Class 2 Circuit" for the power supply source and be sure to use the fuse and fuseholders authorized by UL, Inc.
- Use the fuse conforming to the rated current of the machine which the product was installed on. (Example : Class J type fuse)

Wiring Example



■ Wire Color Table

Luminous Color	Wire Color
Red	Red
Amber	Orange
Green	Green
Blue	Blue
White	White

※ All 5 wires (Red, Orange, Green, Blue, White) are connected regardless of the number of LED units.

■ External Contact (Transistor) Capacity

LED Unit (Per Light)	Type	ME-A		MP	
		Current Consumption	Contact Capacity	Current Consumption	Contact Capacity
		Red·Amber : 25.2mA, Green·Blue·White : 13.3mA	$I_s \geq 50\text{mA}$, $V_s \geq 35\text{V DC}$	Red : 29.0mA, Amber : 29.5mA Green·Blue·White : 17.1mA	$I_s \geq 50\text{mA}$, $V_s \geq 35\text{V DC}$
Power Supply	Current Consumption	200mA (Max.)			
	Contact Capacity	$I_s \geq 200\text{mA}$, $V_s \geq 35\text{V DC}$			
	Leakage Current	$I_L \leq 0.1\text{mA}$			

※ I_s : Current Capacity, V_s : Withstand Voltage, I_L : Leakage Current

■ External Fuse

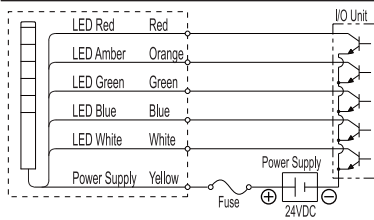
Fuse Rating	250V 1A
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※ Use the fuse conforming to the rated current of the machine which the product was installed in. (Example : Class J type fuse)

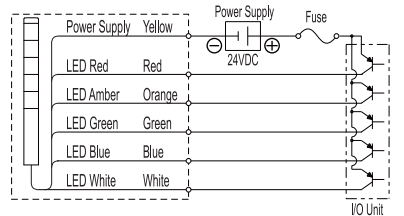
(NPN(PNP)Transistor drive example)

※ Model ME-A : NPN type only

NPN Transistor



PNP Transistor (Type MP only)



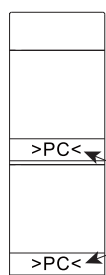
6 Changing LED Unit positions

⚠ CAUTION

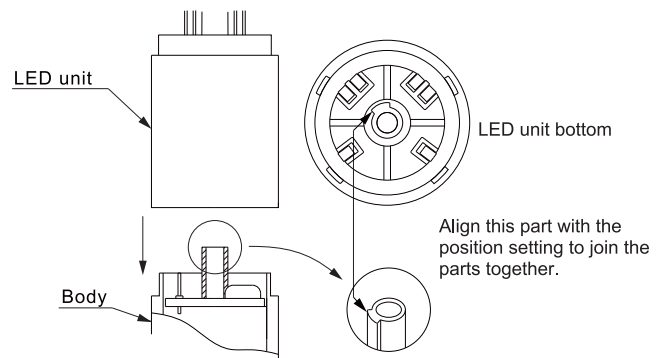
- Make sure the power is off before wiring to avoid a short-circuit, electric shock, or burn.
- Do not remove the LED unit forcibly as it may damage the unit.
- When the center screw is loosened or removed, the LED units become unstable and may separate. Therefore, handle carefully to avoid damage.
- Handle the LED units carefully to avoid warping or damage when changing their positions on the tower.
- Screwing the head cover too tight may damage it. The recommended torque is about 0.6N·m.

Changing LED Unit positions

- Turn the power off before changing LED unit positions.
- Unscrew the head cover and remove the LED unit.
- The upper and lower LED units are secured to align the marks on the lens surface. (Type ME-A:>PC<, Type MP:>SAN<.)
- When you join the bottom LED unit with the body, make sure the center of the LED unit is aligned with the center of the chassis in the center of the body. (Make sure the marks on the lens surface is facing the same direction as the name plate. (Type ME-A:>PC<, Type MP:>SAN<.)
- When changing the number of modules, install a center screw to match the number of tiers.



With marks (Type ME-A:>PC<, Type MP:>SAN<.) aligned between the upper and lower units, press the two parts straight together.



7 Specifications

■ Type ME-A

Tiers	Model	UL Registration Model	Rated Voltage	Power Consumption	Mass	Wire type/Diameter
1 Tier	ME-102A	ME-02A	24V DC	Red/Amber 0.60W Green/Blue/White 0.32W	0.22kg	UL1007/AWG22
	MES-102A	MES-02A			0.12kg	
	MEL-102A	MEL-02A			0.34kg	
2 Tiers	ME-202A	ME-02A			0.23kg	
	MES-202A	MES-02A			0.13kg	
	MEL-202A	MEL-02A			0.35kg	
3 Tiers	ME-302A	ME-02A			0.24kg	
	MES-302A	MES-02A			0.14kg	
	MEL-302A	MEL-02A			0.36kg	
4 Tiers	ME-402A	ME-02A			0.25kg	
	MES-402A	MES-02A			0.15kg	
	MEL-402A	MEL-02A			0.37kg	
5 Tiers	ME-502A	ME-02A			0.26kg	
	MES-502A	MES-02A			0.16kg	
	MEL-502A	MEL-02A			0.38kg	

■ Type MP

Tiers	Model	UL Registration Model	Rated Voltage	Power Consumption	Mass	Wire type/Diameter
1 Tier	MP-102	MP-02	24V AC/DC (50/60Hz)	Red 0.70W Amber 0.71W Green/Blue/White 0.41W	0.21kg	UL1007/AWG22
	MPS-102	MPS-02			0.11kg	
2 Tiers	MP-202	MP-02			0.23kg	
	MPS-202	MPS-02			0.13kg	
3 Tiers	MP-302	MP-02			0.25kg	
	MPS-302	MPS-02			0.15kg	
4 Tiers	MP-402	MP-02			0.27kg	
	MPS-402	MPS-02			0.17kg	
5 Tiers	MP-502	MP-02			0.29kg	
	MPS-502	MPS-02			0.19kg	

- This product is recognized as a UL standard.
For recognition as a UL standard;
- Use on a flat surface with a Type 1 Enclosure.
- For type ME-A, maximum surrounding air temperature is at 40°C.
- For type MP, maximum surrounding air temperature is at 60°C.
- This product conforms to EN standard and shows the CE Marking.
This product has been tested and found to comply with the limits for a Class A device, pursuant to EMC DIRECTIVE.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This product must not be used in residential areas.

Caution

- PATLITE Corporation disclaims all liability for any malfunction or damage occurring as a result of handling contrary to the instructions, cautions and warnings mentioned in this manual.
- Specifications may change without notice due to continual product improvement.

PATLITE Corporation

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