

Line type LED module Instruction Manual

For Storage

- The installation of the equipment requires a qualified electrical engineer.
Be sure to ask an electrical shop to perform the installation. Wiring work by an unqualified person is prohibited by law.

| Product Name | Light Color | Rated Power | Rated Input current | Weight |
|-------------------------|-------------|-------------|------------------------------|--------|
| LLM1389A/LIGHTING EQU30 | 3000K | 6.0W | 0.7A $\overline{\text{---}}$ | 230g |
| LLM1389A/LIGHTING EQU40 | 4000K | | | |
| LLM1389A/LIGHTING EQU50 | 5000K | | | |
| LLM1389A/LIGHTING EQU60 | Red | 4.9W | | |
| LLM1389A/LIGHTING EQU70 | Green | 6.6W | | |
| LLM1389A/LIGHTING EQU80 | Blue | 6.8W | | |
| LLM1389A/LIGHTING EQU90 | PC Amber | 6.2W | | |

| | |
|---------------------------------|----------|
| Tightness level | IP65 |
| Rated maximum temperature T_c | 75°C |
| Operating temperature | -30~50°C |

- ※This product is a independent LED module classified as Class III lighting fixture.
- ※In order to use it, a constant current control-gear for lighting is required separately from this product.
- ※In order to attach the product to the wall etc. and to light it, you need an exclusive stand which is sold separately.
- ※This product is not a lighting surge-resistant product. Please apply lightning surge-resistant at the control-gear side if necessary.

Explanation of
installationTo an electrical shop. Please be sure to hand this manual to your customer for
maintenance.

Cautions at installation

WARNING Incorrect handling may cause death or serious injury.

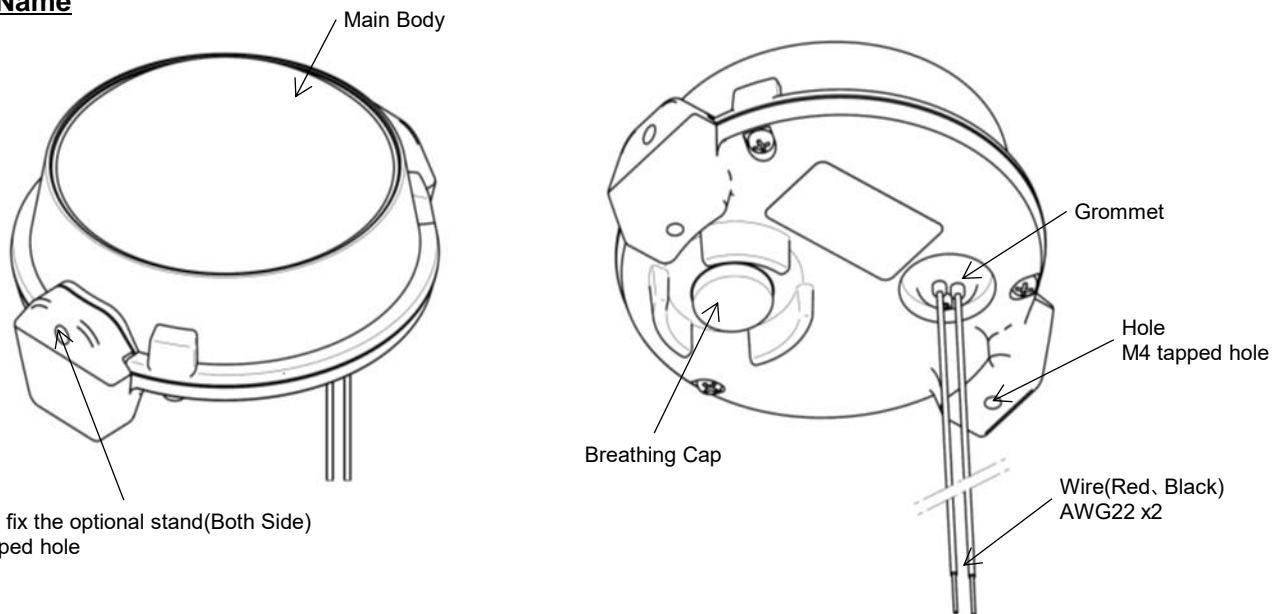
- Securely perform installation according to the instructions for the installation. Poor installation may allow the unit to drop or cause an electric shock or fire.
- Do not use the product in the following use environments and conditions. Doing so may allow the unit to drop or cause an electric shock, fire, or lighting failure.
 - Places directly exposed to organic solvents (acetone, ethyl ether, hexane, etc.)
 - Places filled with corrosive gas (hydrogen sulfide, ammonia, etc.) and flammable gas (hydrogen, methane, propane, etc.)
 - Indoor pools using chlorine
 - Places where flammable liquid (gasoline, kerosene, heavy oil, etc.) is used
 - Inside a metal processing plant and kitchen with a lot of oil mist
 - Places where the humidity exceeds 90% RH or the product is covered with water
 - Places covered with heat insulating materials or combustible materials
 - Places where the product is buried in snow
- Do not disassemble or modify the device. It may cause falling of the device, electric shock or fire.
- Do not use the product when it is damaged. Doing so may allow the unit to drop or cause an electric shock or fire.
- If you find abnormalities such as smoke or unusual odor, turn off the power immediately and contact your dealer.
Using the product with abnormalities may cause a fire or an electric shock.
- In order to use it, a constant current control-gear for lighting is required separately from this product.
Please use within the input voltage range indicated on the control-gear you prepared.
Using it at a voltage outside the specified range may cause electric shock or fire.

CAUTION Incorrect handling may cause injury.

- This equipment is jet-proof. It cannot be used as watertight or underwater lighting equipment
- Be sure to turn off the power before installing or removing the product. Installing, removing, or reconnecting the product without turning off the power may cause damage to the lighting equipment and the control-gear. It may also cause an electric shock or fire.
So, please do not perform such actions.
- The product surface is hot in the condition where it is turned on or immediately after it is turned off. Touching the surface may cause a burn injury. So, careful handling is required.
- Do not use the product in places such as hot springs containing sulfur ingredients. Doing so may cause low brightness, resulting in reduction of the service life.
- Do not install the equipment facing the sun. Concentrated sunlight may damage the LED, resulting in lighting failure or fire.
- When wiring, please do not handle such as pulling electric wire and grommet part. Also, please do not apply tension to the wire.

Power supply specifications for lighting

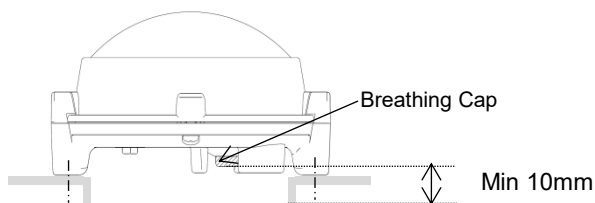
| Type | Output current | Output voltage range |
|------------------|----------------|---|
| Constant current | 700mA±5% | Lower limit: 5Vdc or less, Upper limit: 12Vdc or more |

Part Name**Installation procedure****1. Check point before installation**

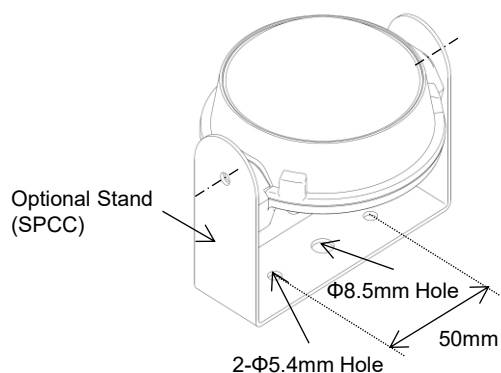
- Please check that the grommet is properly fitted.

2. When mounting the product directly on the structure

- Please tighten the screw with the hole (M4 tapped hole). (M4 screw × 2/body) (recommended torque: 0.8 N·m)
- Please be careful not to hold the wire between the product to mounting surface.
- Please keep a space of 10 mm or more between the breathing cap and the mounting surface.

**3. When mounting the product on the optional stand**

- Please tighten the screw with the hole (M4 tapped hole). (M4 screw × 2/body) (Recommended torque: 0.8 N·m)



Electrical connection

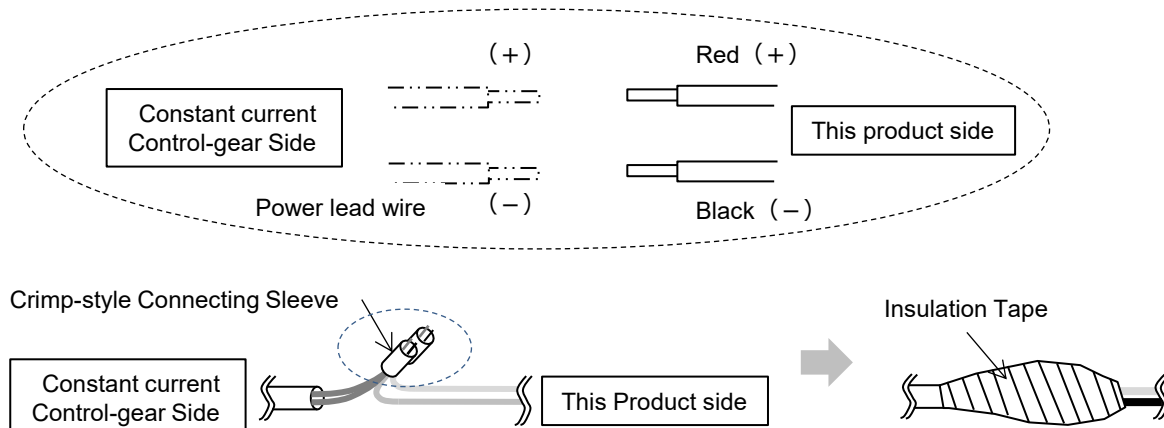
1. Check point before connecting

- To ensure safety, please turn off the switch of the control-gear breaker and the control-gear switch.
 - Be sure to turn off the power before installing or removing the product.
- Installing, removing, or reconnecting the product without turning off the power may cause damage to the lighting equipment and the control-gear. It may also cause an electric shock or fire. So, please do not perform such actions.

2. Connecting to the control-gear

- Please Connect to the recommended control-gear.
- Please connect the lead wire of the control-gear and extension harness by crimp-style connecting sleeve, checking polarity of each side, waterproofing with self-adhesive tape and insulating by insulation tape is required.

[Details of the connection part with the constant current control-gear side for lighting]



Explanation of
installation

To customers. Be sure to store this manual.

Precautions

WARNING Incorrect handling may cause death or serious injury.

- When cleaning the product, be sure to follow the Instruction Manual. Failure to do so may allow the unit to drop or cause an electric shock or fire.
- Be sure to turn off the power before cleaning the product. Failure to do so may cause an electric shock.
- Be sure not to repair, disassemble, or remodel the product by yourself. Doing so may allow the unit to drop or cause an electric shock or fire.
- High brightness LEDs are used for the light source. Do not look directly at the light source part.

CAUTION Incorrect handling may cause injury.

- Make sure that the product is turned off and completely cooled down before cleaning. Failure to do so may cause a burn injury.
- Environment with a high ambient temperature may shorten the service life.
- If you find abnormalities even before the service life is reached, turn off the power immediately and contact your dealer. Using the product with abnormalities may cause a fire or an electric shock.
- When using the product in a snowy area, remove the snow to prevent the product from being buried in snow.
- Dirt on the glass cover part will cause low brightness. It is recommended to perform cleaning by yourself once a year. Removing dirt will return the brightness to normal.
- Perform self-inspection at least once a year for safe use.
- Ask your electrical shop to perform an expert inspection at least once every three years. (A product used for more than three years requires a thorough inspection.) Using the product with abnormalities may cause smoking, ignition, or electric shock or the unit may drop from kits installation location.
- Please note that there are variations in LED elements, which may cause different light color and brightness levels even among products with the same model number.
- Please note preliminarily that there may be concerns about the lighting unevenness owing to short irradiation distance and irradiation surface.
- High luminosity LED is used as a light source. Please do not look directly at the light source part.
- Please keep radios, TV or equipment with infrared remote-control systems away from the lighting device.
- Please do not install in an environment where the product will undergo sudden cooling or heating, which may cause dew condensation inside the product.
- Do not modify or add parts so that water gathers around the breathing cap.
- Do not deliberately touch or remove the breathing cap. It may cause waterproofness to be impaired.

Cleaning

- Be sure to turn off the power before cleaning the equipment.
The equipment is hot immediately after the power is turned off. So, wait for a while (about 20 to 30 minutes) to cool before cleaning.
- When cleaning the outer surface of the equipment or the cover, use a soft cloth soaked in water or neutral soap water and well squeezed.
- Do not use volatile substances, such as thinner and benzine, or acid-alkaline detergent for cleaning. Using such substances may cause discoloration or deformation.
- Do not spray water directly on the equipment with a hose or the like. Also, do not perform cleaning with a mop, a deck brush, or the like. Doing so may cause flooding or damage to the equipment.

Warranty

- Immediately after delivery, you are requested to conduct an acceptance inspection to make the judgment of acceptance or rejection.
If no special problems are raised, we will judge that the acceptance inspection has been passed after quality confirmation.
- For the warranty period, please check the period described on the warranty card.
The warranty covers each single article delivered. It does not cover costs such as work fees and damage compensation incurred because of replacement work.
- The warranty does not cover failure caused by the following:
 - (1) Inadvertent handling and misuse
 - (2) Remodeling or repair by yourself
 - (3) Use under improper use environment and conditions
 - (4) Natural disasters (fire, earthquake, and typhoon)
 - (5) Water condensation that occurs when the product is used out of the use and preservation temperature conditions specified in the specification sheet
 - (6) Electrical stress, such as excessive voltage surge, including lightning
- If the cause of the failure cannot be identified, negotiations shall be conducted between the two companies.
- The application of this product is intended as a lighting or light source.
We shall not assume any responsibility for any damage caused by use under an application not intended by us.

Requests for Replacement

- During the warranty period, ask your dealer (an electrical shop) for replacement with a document identifying the delivery date.
- When the warranty period has expired, consult your dealer (an electrical shop).
The product is replaced for a fee upon request.
- For inquiries about after-sales service and consultation about replacement, contact your dealer (an electrical shop) or our contact window shown below.
In that case, do not forget to report the equipment item name and the time of purchase.

Product Consultation Window

- Before making inquiries, check the equipment type with the nameplate on the equipment.
- The telephone number or other information may change. Please check with our website.

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