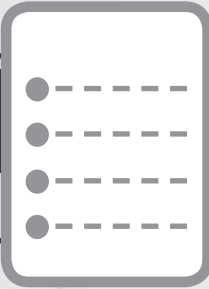


<http://www.kmwgigatera.com>



# Installation & Operation User Guide

Product Installation & Operation User Guide

LED  
Roadway Lighting

**HR**  
85W | 110W | 150W



GigaTera®  
beyond the light

# 『Safety Precautions Installation』



This symbol is intended to remind the user the presence of actions and operation that may cause danger. Please read instructions carefully and follow the instructions to avoid any danger.



This symbol is intended to represent precautions that the user should follow to prevent danger.



## WARNING

Serious injury might result if the following precautions are not followed.



- The installation should be performed by certified workers under the relevant regulations of end user's country / region.
- Never modify or disassemble LED lighting arbitrarily because it can cause serious accidents.
- Never use any input power except the listed rated voltage. If not, it can cause serious accidents.



- Before installation, shut off the power supply and verify it is de-powered using a measuring instrument.
- The wiring should be insulated under end user's respective region's Electric Installations Standards.
- Do not install in a wet environment.



## CAUTION

The user may be injured or there would be property damage if the instructions below are not followed.



- Do not forcefully pull on AC/DC lines when wiring up the lighting. (It causes the wires to snap.)
- Do not use this product for any purposes other than what's specified.  
The manufacturer or sellers are not responsible for breakdowns or accidents caused by its improper use.



- When connecting the wires, use proper connection terminals depending on the site of installation.  
Do not install in a wet environment.
- Make sure to ground fixture by contacting it to metals around it to prevent damage by static.
- The product may be damaged if static is not removed.
- During the operation, be careful not to disconnect the wires.
- Make sure the grounding is performed under Electricity Standards.
- Using it for any voltage other than specified can cause failure or fire.
- Do not use it in moist environment.
- Be mindful of proper ventilation of product.
- Improper installation or disassembly causes a deformation or breakdown of the product.
- Consider proper protection devices, such as circuit breakers, fuses, switches, etc. for safety precautions.
- Do not install in an environment with excessive vibration.
- Do not handle product with contaminated hands or gloves.
- In any event, do not store / install in a contaminated place.
- Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.



### 1) Scope Overview

This manual describes how to compose, install, and operate LED streetlamps.

### 2) LED Streetlight Apparatus

A streetlight is a light that is installed on the side of least four-lane roads to improve traffic safety of vehicles and civilians as well as traffic efficiency.

### 3) Usage

This is a traffic safety facility not only for expressways, streets, parking lots, and industrial facilities, but also for the safety on motorways or sidewalks. It is roughly divided into road lamps, sidewalk lamps, overbridge lamps, and high-mast lightings. The shape varies with the road feature and the beauty concept of your city to give you a lot of choices.

The HR product lineup is 85W, 110W, 150W and all of them are proud of their high lamp efficiency over 100 lm/W. The lamp efficiencies are 8,500 lm, 11,000 lm, and 15,000 lm, respectively.

The light distribution type is diversified. It supports Type II-S, Type II-M, Type III-S, Type-III-M to enable streetlamp installation in all environments.

### 1) Vertically Arranged LED Module Method

HR adopted vertically arranged LED moduled unlike existing streetlamps. The vertically arranged LED modules can help to minimize the heat generating from the LED and further guarantee long life of the device in the long run.

### 2) An Electronic Auto Switch Is Attached

On top of a product is installed an electronic Auto Switch. When the intensity of illumination reaches a certain level, the lamp will be automatically turned off first and then it will be automatically turned off while it is not securing an illumination with sufficient intensity. In other words, it is a very convenient function to automatically turn on or off the lamp without operating the switch whenever necessary.

### 3) Converter (SMPS) Exchange without Tools

HR adopted the Locking Latch type to the locking device in the SMPS enclosure part to open or close the enclosure without any tool when you are exchanging the SMPS. In addition, the internal SMPS is fixed not by bolts but not sockets for more comfortable maintenance.

### 4) Silver Nanoreflecting Plate

A nanoreflecting plate is expected to make effect on raising the intensity of illumination, i.e., improving the brightness when it is used for illumination. Although we install a lamp with lower wattage than those of the other companies, we can realize the intensity of illumination equivalent to or higher than them, eventually with more outstanding electricity-saving effect.

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## Precautions before Installation

This installation manual is based on the assumption an Electronic Auto Switch is installed to each product.

A product with an Electronic Auto Switch may look different from what it looks like in the brochure. Although, the other parts than the Electronic Auto Switch will be installed in the same manner.

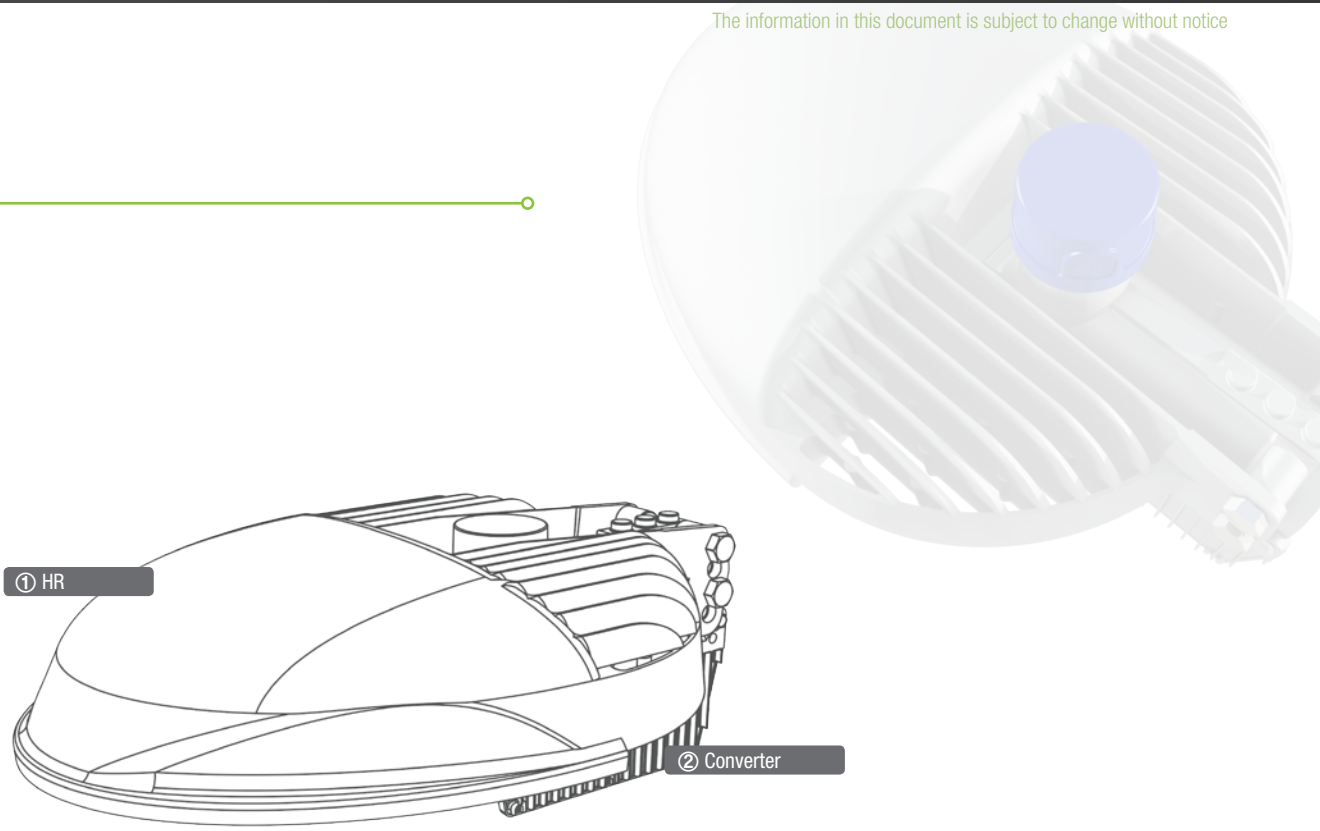
The whole HR lineup will be delivered without AC cables.

The AC power cables shall be purchased at the cost of the user but we would like to recommend the cables with the following specifications.

### AC Power Cable Specification: SJTW Outdoor Power Cable

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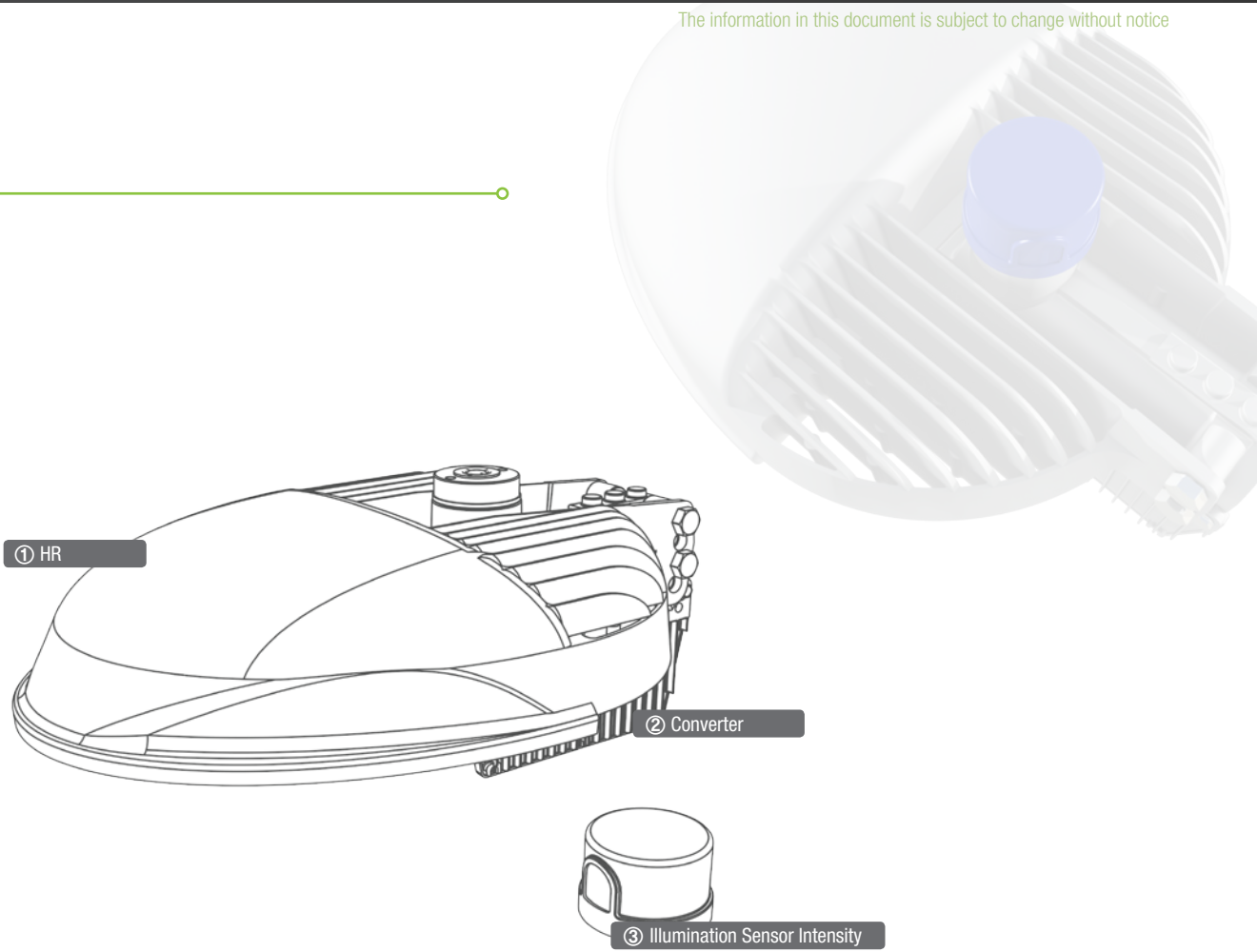
Package 1 (Standard Type)



### Detail Description

No	Item	Purpose
①	HR	LED Streetlight
②	Converter	Lamp and Brightness Sensor Power Supply Device (SMPS)

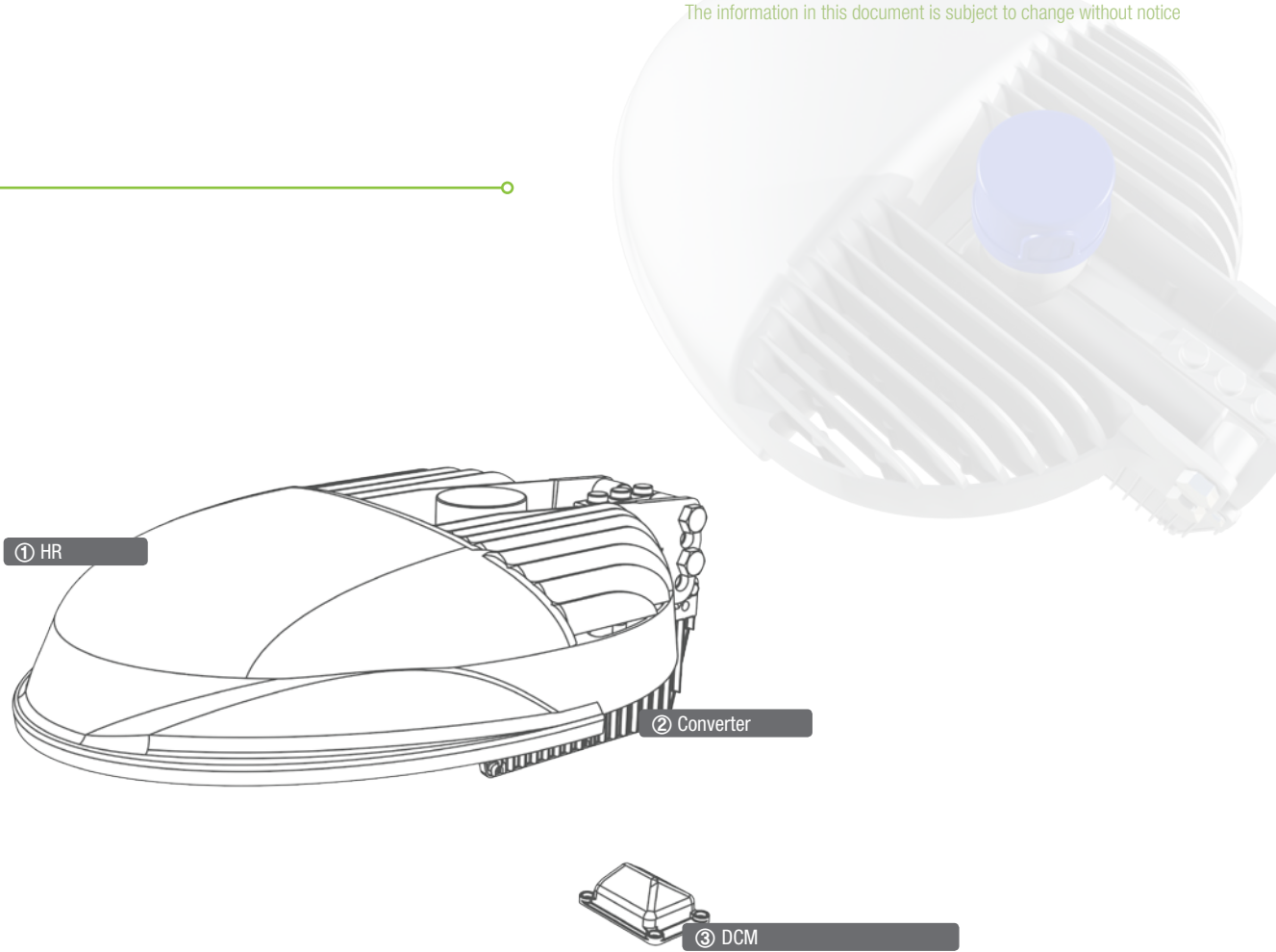
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**Detail Description**

No	Item	Purpose
①	HR	LED Streetlight
②	Converter	Lamp and Brightness Sensor Power Supply Device (SMPS)
③	Illumination Sensor Intensity	Surrounding Brightness Based Automatic Power On/Off Function (Photo Sensor)

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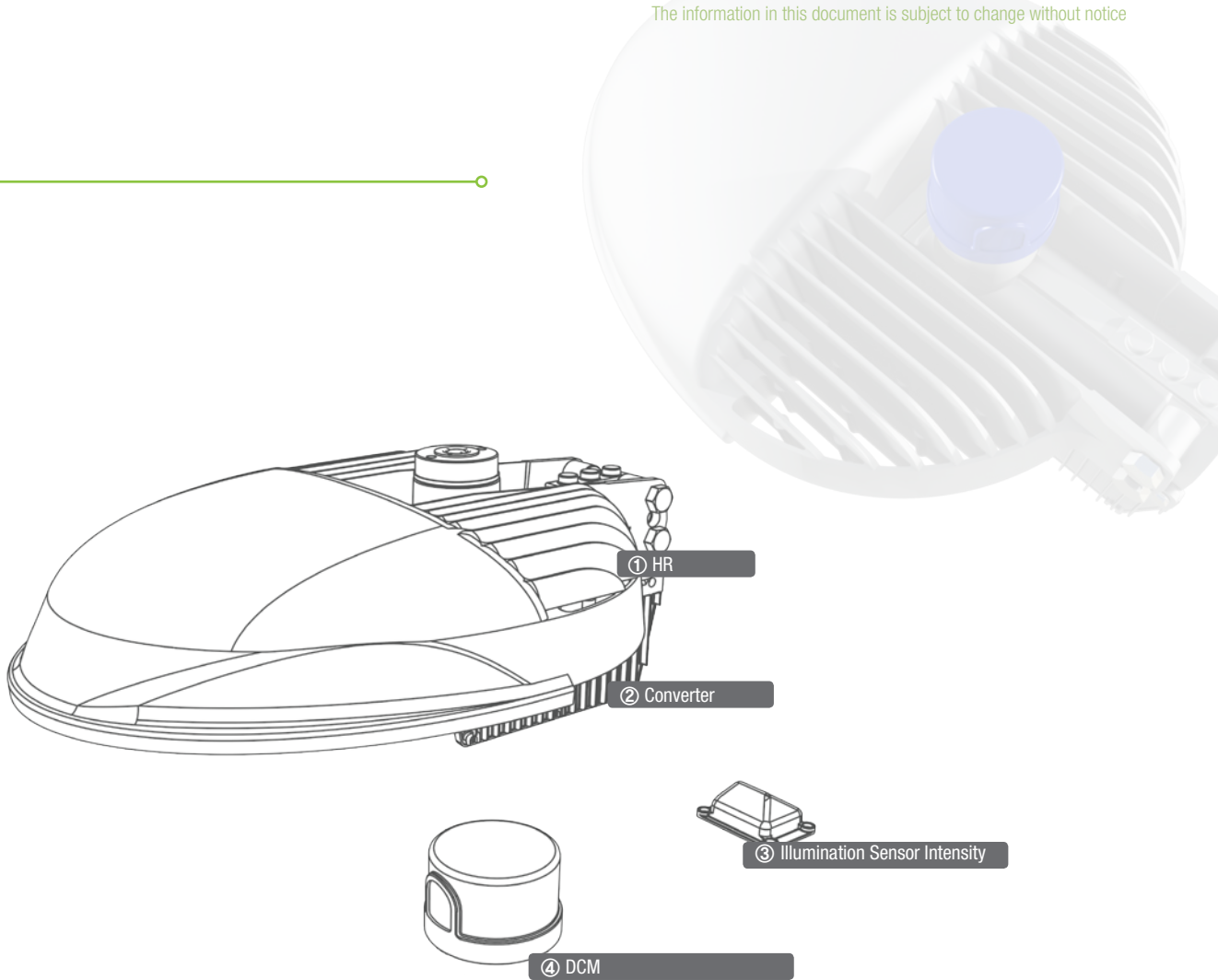
### Detail Description

No	Item	Purpose
①	HR	LED Streetlight
②	Converter	Lamp and Brightness Sensor Power Supply Device (SMPS)
③	DCM	Data Control Module (*LCS Controller is not included.)

### Dimming Control

Once installed, the DCM module will be synchronized with the LCS system (for illumination control) to enable the dimming control from Zigbee.

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### Detail Description

No	Item	Purpose
①	HR	LED Streetlight
②	Converter	LED Streetlight
③	DCM	LED Streetlight
④	Illumination Sensor Intensity	LED Streetlight

### Dimming Control

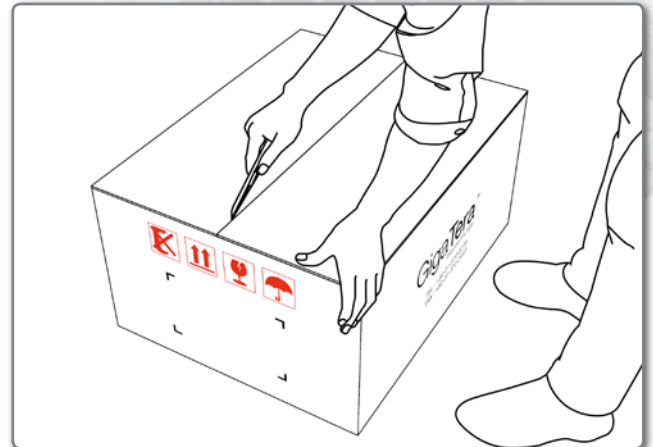
Once installed, the DCM module will be synchronized with the LCS system (for illumination control) to enable the dimming control from Zigbee.



**STEP. 01**

Put the product box on an even and flat surface and cut the box along the suture line with a cutter.

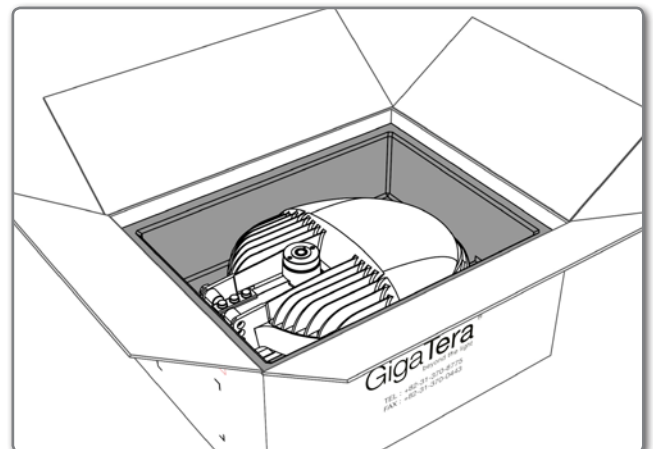
Please make sure the cutter blade doesn't enter deep enough to scratch the product surface. Also, be careful not to hurt yourself.



**STEP. 02**

Once the box is open, you will see a package fully covering the product.

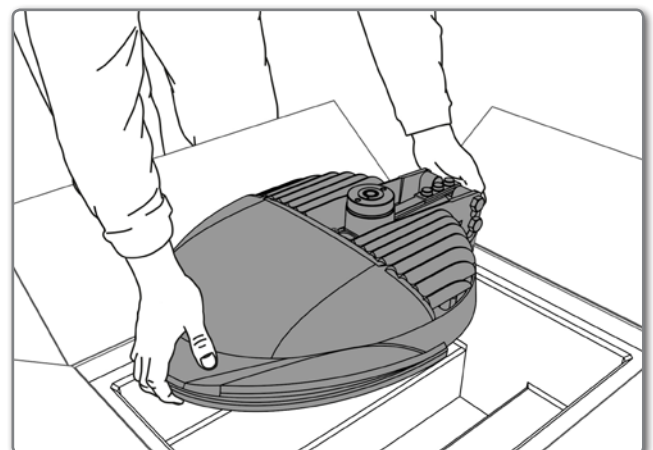
Open the top of the box wide in four directions and remove the product package and you will see the top surface of the product.



**STEP. 03**

This product is somewhat bit heavy, weighing 10 Kg.

It is recommended to use both of your hands to put the product out of the box. Hold it with your palms for safety.

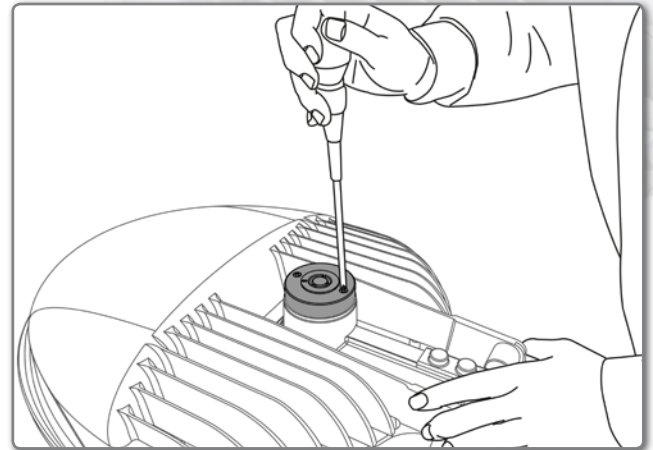


**STEP. 04**

As the sun rises from the east and sets to the west, you must direct the Brightness Sensor Receptacle to the north for normal operation of the product.

To begin with, use a driver to loosen both bolts like the following figure:

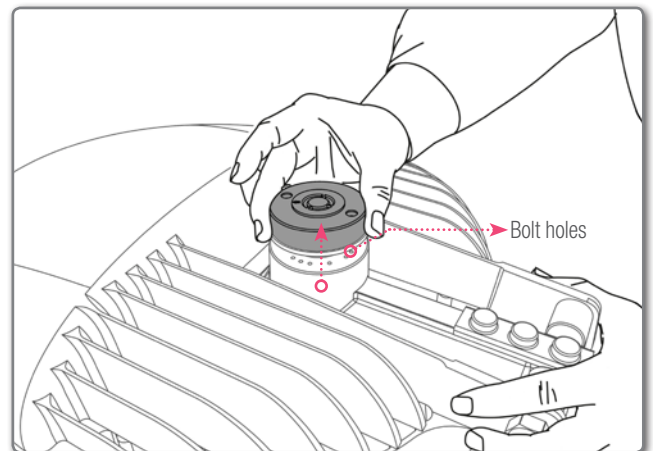
If you don't use the Electronic Auto Switch, skip the above step and jump to Step 10.



**STEP. 05**

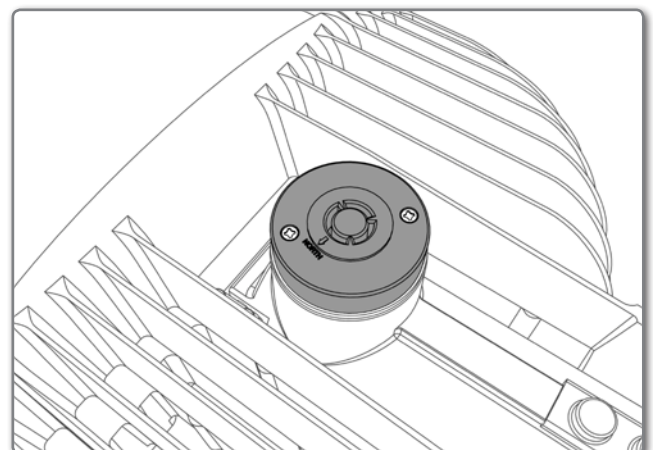
Swing the receptacle horizontally and set it as close as to the north on the basis of the arrow (north) marked on top. Be sure to align the receptacle bolt holes with those of the apparatus to bond them with fixing bolts.

There are several bolt fixing holes at the bottom of the receptacle.



**STEP. 06**

Direct the receptacle to the north and tighten two bolts in the reverse order of the disassembly until the connector is fixed to the apparatus.

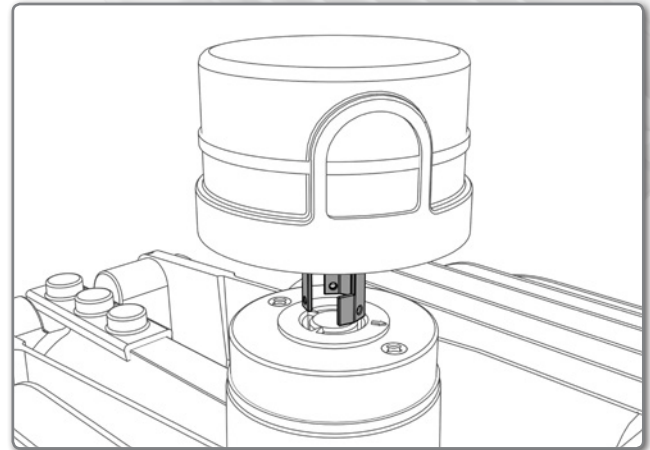


**STEP. 07**

The brightness sensor has a directional nature as seen in the following figure:

Among the three connection parts, one is designed to be long and wide and the others short and narrow. Please remember that forced installation against the direction nature may damage the lamp connection part.

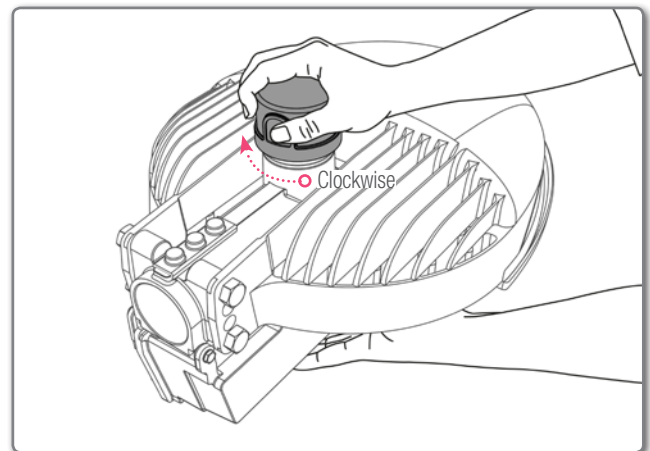
The brightness sensor is optional and it may look different from what it looks like in the figure if it is bought by the user.



**STEP. 08**

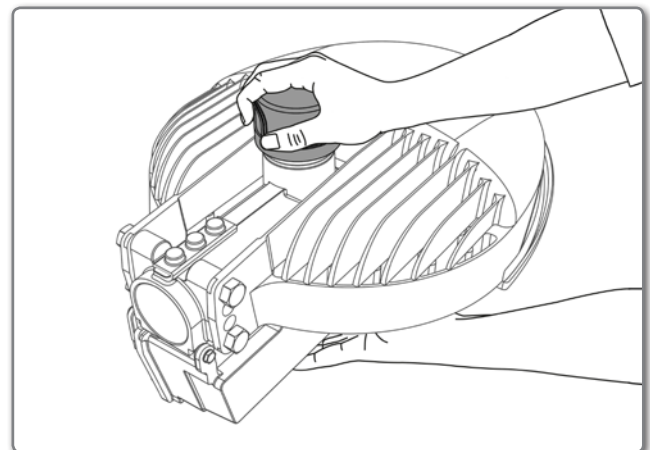
Align the brightness sensor with the lamp for connection and impose little force downward until they are tightly bonded.

Turn the brightness sensor clockwise while pushing it inside.



**STEP. 09**

If you complete the above procedure without fail, the Electronic Auto Switch will keep rotating until it is fixed to the lamp connection part like the following figure:

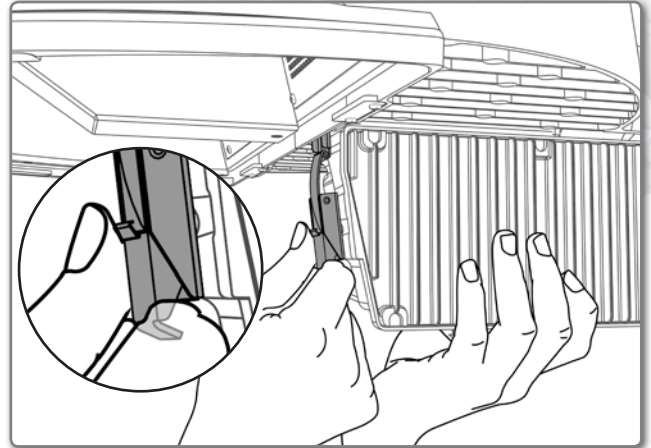


**STEP. 10**

Open the SMPS part from the main body for AC power cable wiring.

To begin with, use your thumb to push the latch locker upward and pull the lower part like the following figure:

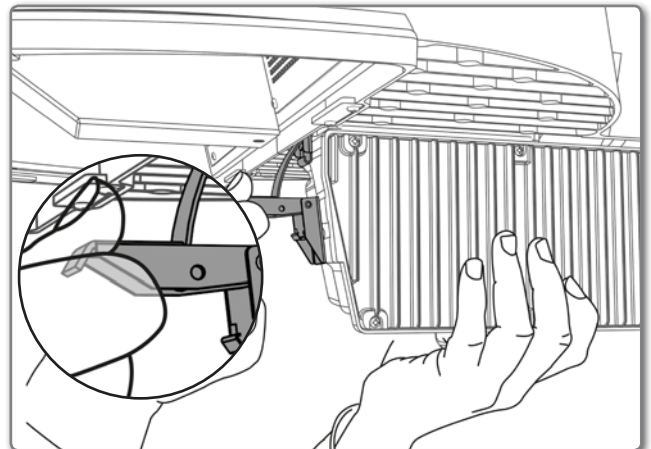
When you zoom in the image, the part that was hidden for easier description purpose will appear



**STEP. 11**

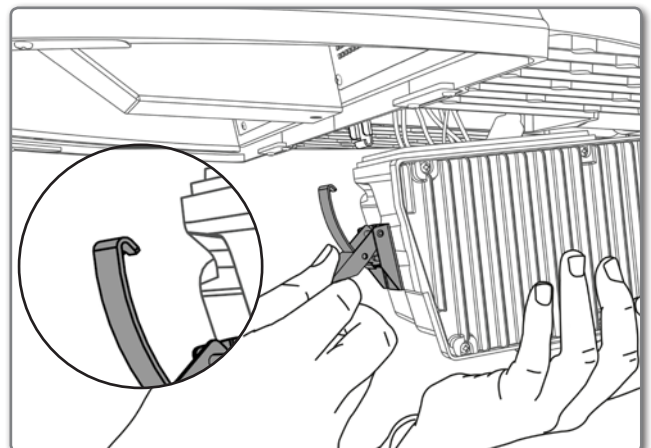
Bend up latched part like the following figure:

When you zoom in the image, the part that was hidden for easier description purpose will appear



**STEP. 12**

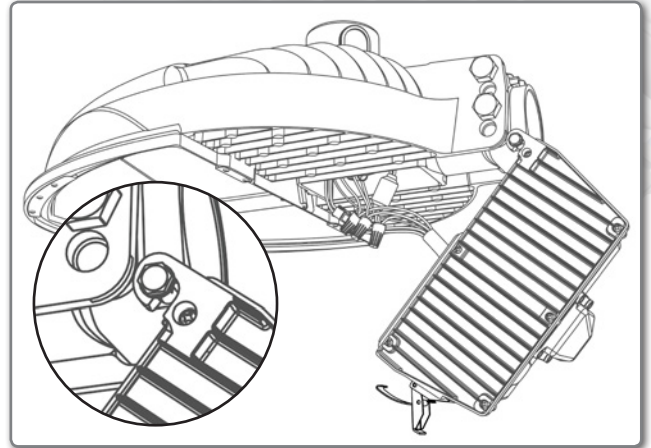
Unlock the latched part and open the SMPS main body.



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**STEP. 13**

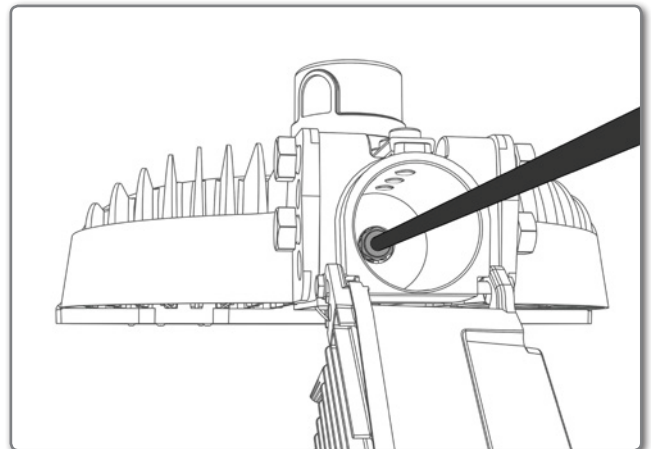
Open the SMPS part and hang it on the hook before you start wiring.



**STEP. 14**

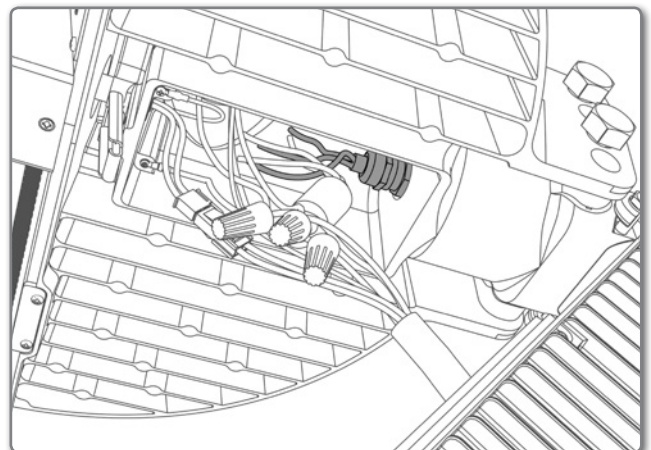
Insert the AC power cable behind the arm like the following figure:

HR Model basically does not supply the AC power cable. If necessary, it shall be purchased by the user.



**STEP. 15**

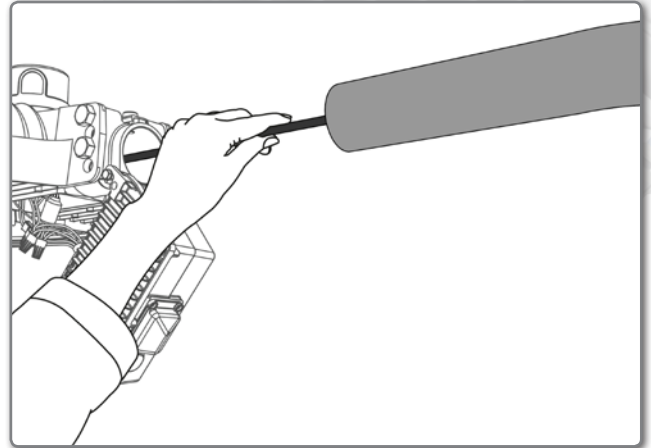
Once the AC power cable moved inside the lamp, tension it with a margin for later connection with the twister.



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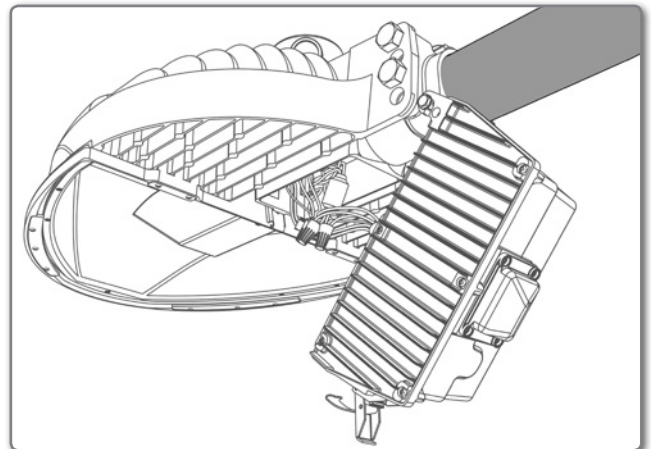
**STEP. 16**

Keep the lamp and the light pole so arranged that the AC power cable is not stuck between them before you bond them together.



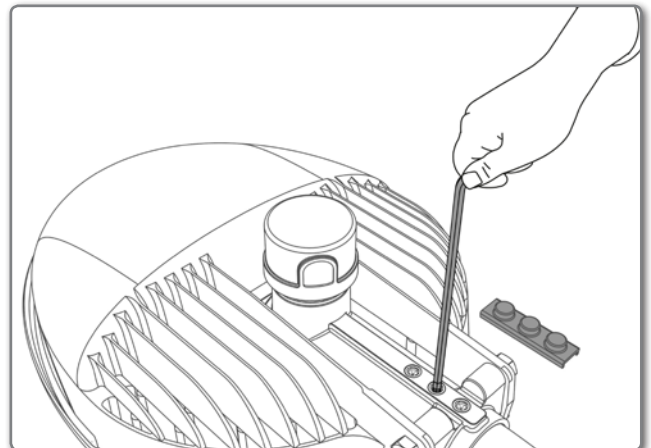
**STEP. 17**

Attach the lamp to the light pole like the following figure:



**STEP. 18**

Once the lamp is installed, use fixing bolts to fix it to the light pole.  
When you remove the cap on top of the lamp as illustrated in the figure, you will see three lamp fixing nuts called M10 Set Screw (Mood Bolt) inside.  
Use a hexagonal wrench to tighten the fixing bolts until the lamp is tightly bonded with the light pole.  
Once the fixing bolts are in their positions, recover the top with the cap.

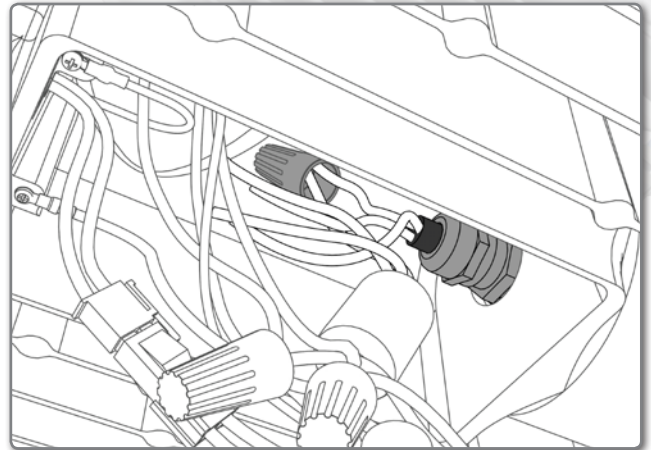


**STEP. 19**

Be sure to bond the AC power cable with the SMPS cable. At first, use the twister to connect the two cores of the white cable (N) with each other.

Each cable comes from the core after it is connected to the AC power cable and the lamp body.

Be sure to use only the cable in the same color for power cable connection. Wrong wiring may give a critical damage to the product at the time of power supply.

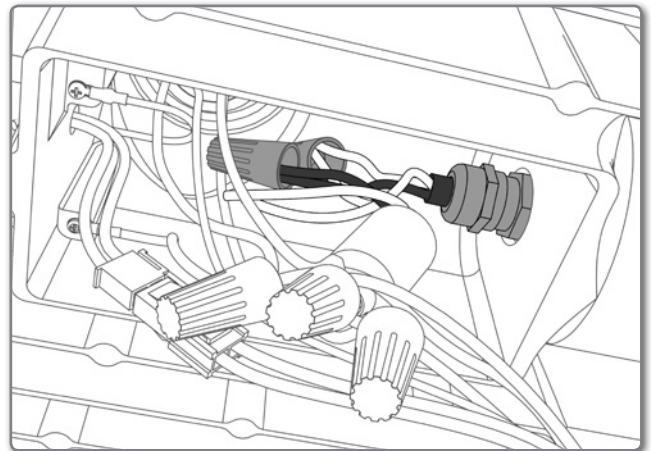


**STEP. 20**

Use the twister to connect the two cores of the black cable (N) with each other like the following figure:

Each cable comes from the core after it is connected to the AC power cable and the lamp body.

Be sure to use only the cable in the same color for power cable connection. Wrong wiring may give a critical damage to the product at the time of power supply.

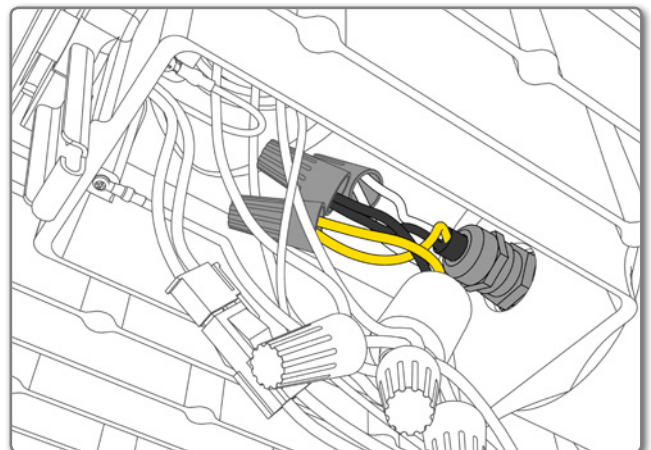


**STEP. 21**

Use the twister to connect two cores of a yellowish green and yellow mixture cable (FG) with each other.

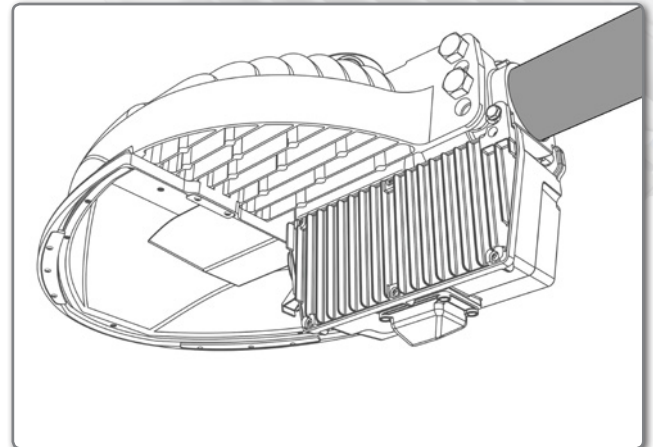
Each cable comes from the core after it is connected to the AC power cable and the lamp body.

Be sure to use only the cable in the same color for power cable connection. Wrong wiring may give a critical damage to the product at the time of power supply.



**STEP. 22**

Once the AC power cable is connected, arrange the internal wiring well and close the SMPS cover like the following figure:

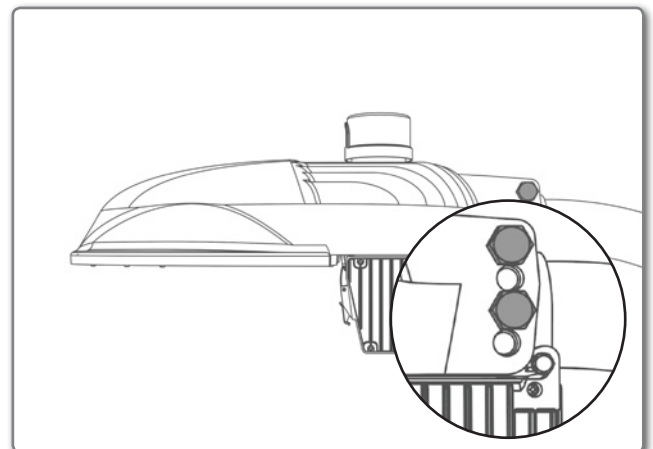


**STEP. 23**

This product is structured to control the lighting surface by 5° in vertical direction.

Please remember the default of the product is set to 0° when it is shipped out from the factory.

Do not disassemble the fixing bolt for angle setting. The lamp may rotate downward to damage the product.

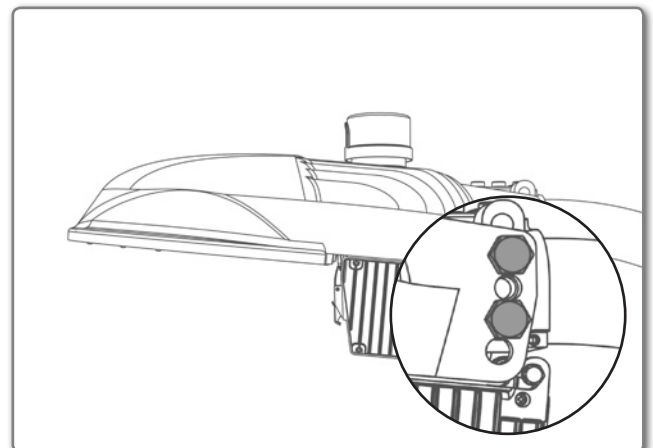


**STEP. 24**

Remove the fixing bolts in front to raise the lamp by 5°.

Push the lamp upward while aligning its second and fourth bolt holes with the corresponding light pole holes and bolt parts together for fixing like the following figure:

Put the bolts through the points where both holes are aligned and tighten them firmly.



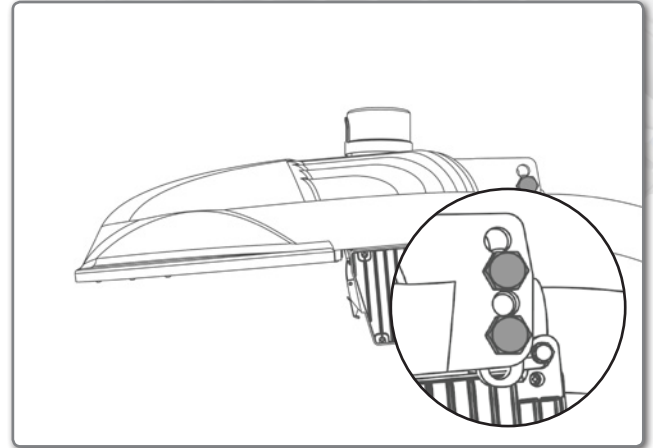


**STEP. 25**

Remove the fixing bolts in front to lower the lamp by 5°.

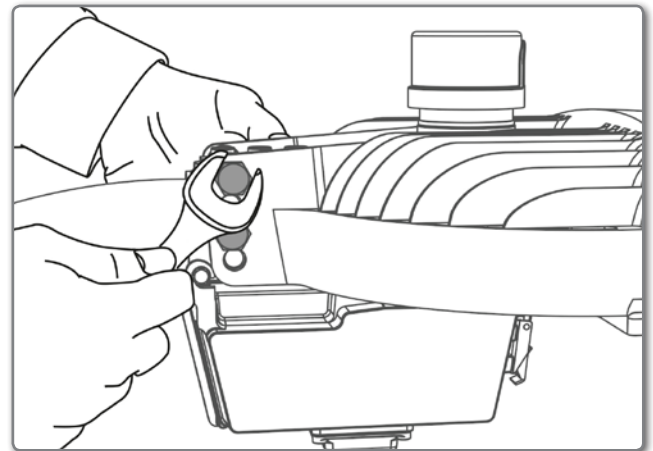
Push the lamp downward while aligning its first and third bolt holes with the corresponding light pole holes and bolt parts together for fixing like the following figure:

Put the bolts through the points where both holes are aligned and tighten them firmly.



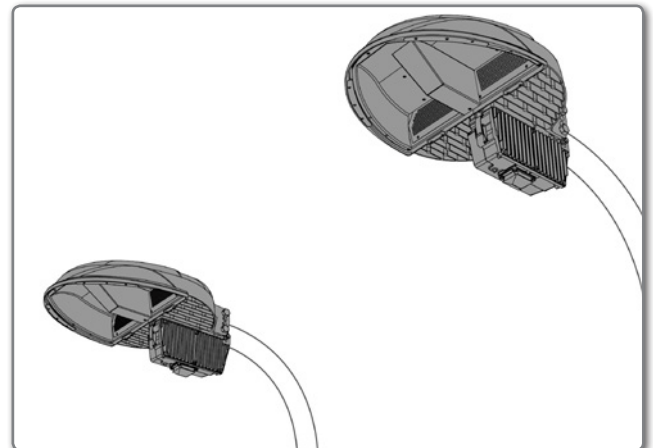
**STEP. 26**

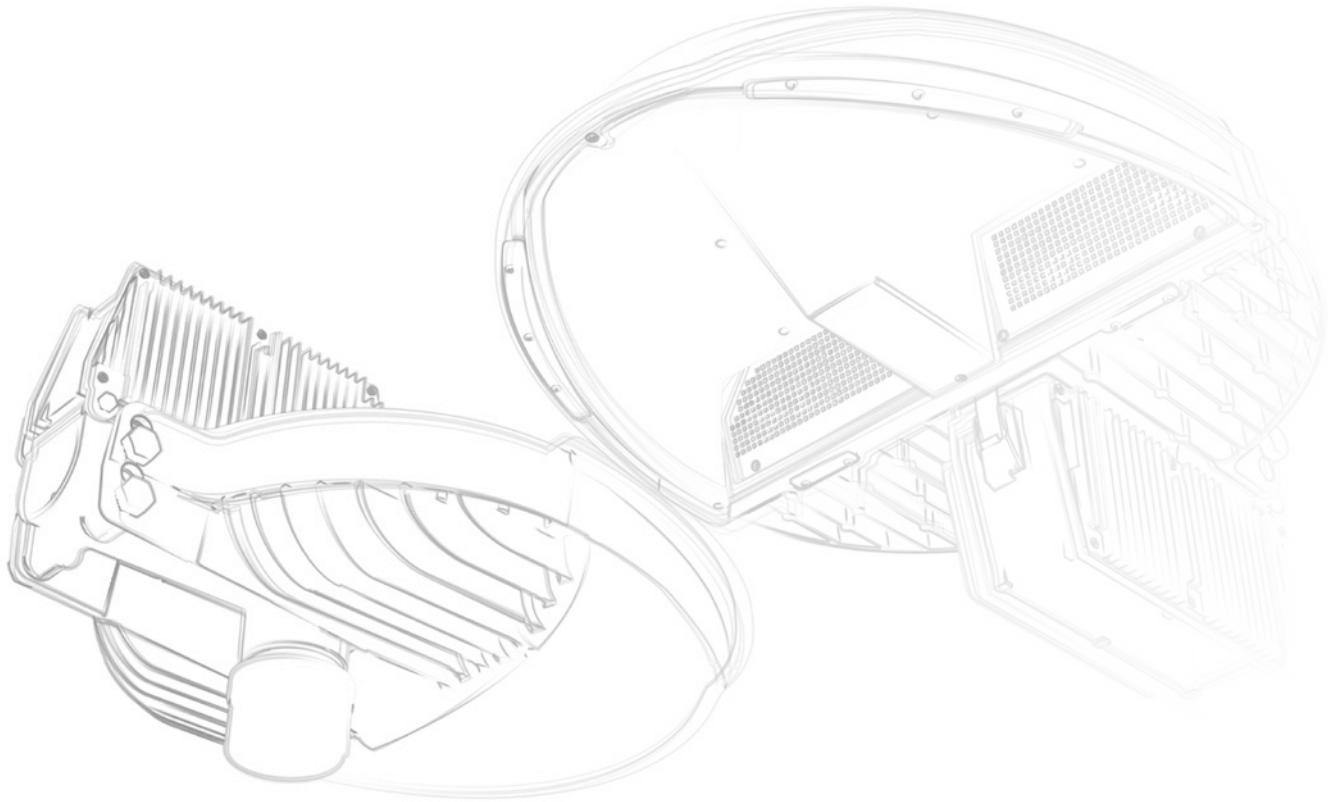
Use a 17 mm spanner to tighten the fixing bolts on the lamp side. In this case, both sides shall be tightened.



**STEP. 27**

Now, HR Product installation is completed. Turn the main power switch on to check if the product is working properly.





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