

Troubleshooting

No.	Symptoms	Troubleshooting steps	Process
1	No light at night	Check that the lamp can be manually activated.	Refer to "Activation and Installation" section on this user guide and run activation tests.
		Check if the solar panel is blocked from the sunlight by houses, trees and other obstacles.	Clear obstructions or change installation location.
		Check if there is any artificial light source(s) shining on the solar panel during the night.	Remove the artificial light source(s) of interference or change the installation location.
		Examine status of each component based on the repair guide.	Replace the damaged component(s).
2	A serious shortage of working time	Check if the solar panel is blocked from the sunlight by houses, trees and other obstacles.	Clear obstructions or change installation location.
		Check if the surface of the solar panel is dusty or covered.	Clean the surface of solar panels as detailed above.
		Examine if the battery pack is damaged as per the repair guide instructions.	Replace damaged battery.
3	Lighting does not follow the normal operating mode of turning on and off	Check if the working mode setting correct	Contact the dealer/supplier
4	Lights fail to turn on properly when humans approach	Check if the air temperature close to human body temperature.	When the air temperature is close to human temperature, motion detection may slow down. It will return to normal after the air temperature changes.
		Check if the installation height is too high.	It is out of motion detection range when installation height exceeds 8m. It is recommended to reduce the height or use other operating modes.
			Replace damaged motion sensor or controllers.

LEADSUN®

"Bright Ideas For An Even Brighter Future."



AE3C Solar Street Light User Manual

Thank you for choosing LEADSUN's solar street light.

If you have any question, please consult our customer services sales@leadsunglobal.com.

LEADSUN reserves the right to update product appearance, function and construction without notice.

For any discrepancies in illustration or description, please refer to individual/real objects.

LEADSUN assures the accuracy and reliability of this manual, but is not responsible for any loss or damage related to any operation of the products.

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Cautions

Please read the below cautions carefully before using the AE series solar street light to avoid physical injury and product failure caused by improper use.



Attention to the electric shock

- To avoid electric shock, street light with AC adapter must be installed by qualified electricians and constructors.
- The street light with AC adapter is customized product, please confirm the street light AC adapter is in accord with the local electric supply standard.
- Make sure the electric supply power is cut off during the installation and implement waterproof and insulation protection.



Working condition

- Product protection grade IP65
- High tensile structure design can withstand level 3 typhoon (58m/s), beyond this level damage might be caused to the street light.
- Working temperature range from -20°C to 60°C (charging temperature is limited within 0°C to 60°C). The product with heating function can work from -40°C to 60°C.
- All internal parts of AE3C are waterproof and rated IP65. Holes and slits on the luminaires are designed for heat dissipation and drainage. Metal parts are made of anodized rustproof aluminum, which can withstand high temperatures and humid weather. However, it is recommended that you avoid installing the street light in areas with heavy acid mist or salt influx. The strong structural design can withstand wind speeds upto 180km/hr.



Transportation and storage

- The product contains high capacity lithium-ion battery components, please follow the aviation transport law. Please regard the product as the flammable and explosive hazardous substance and store it separately from other goods.
- The solar panel of the product is fragile, tier limitation is two layers. No stacking out of limits and No press with heavy stuff.
- Store the product under the temperature from 0°C to 45°C
- It should be charged every six months if the product is stored for long time. please use the special charger to charge the product (the charger needs additional purchase) in order to avoid battery or device damage.



Product maintenance

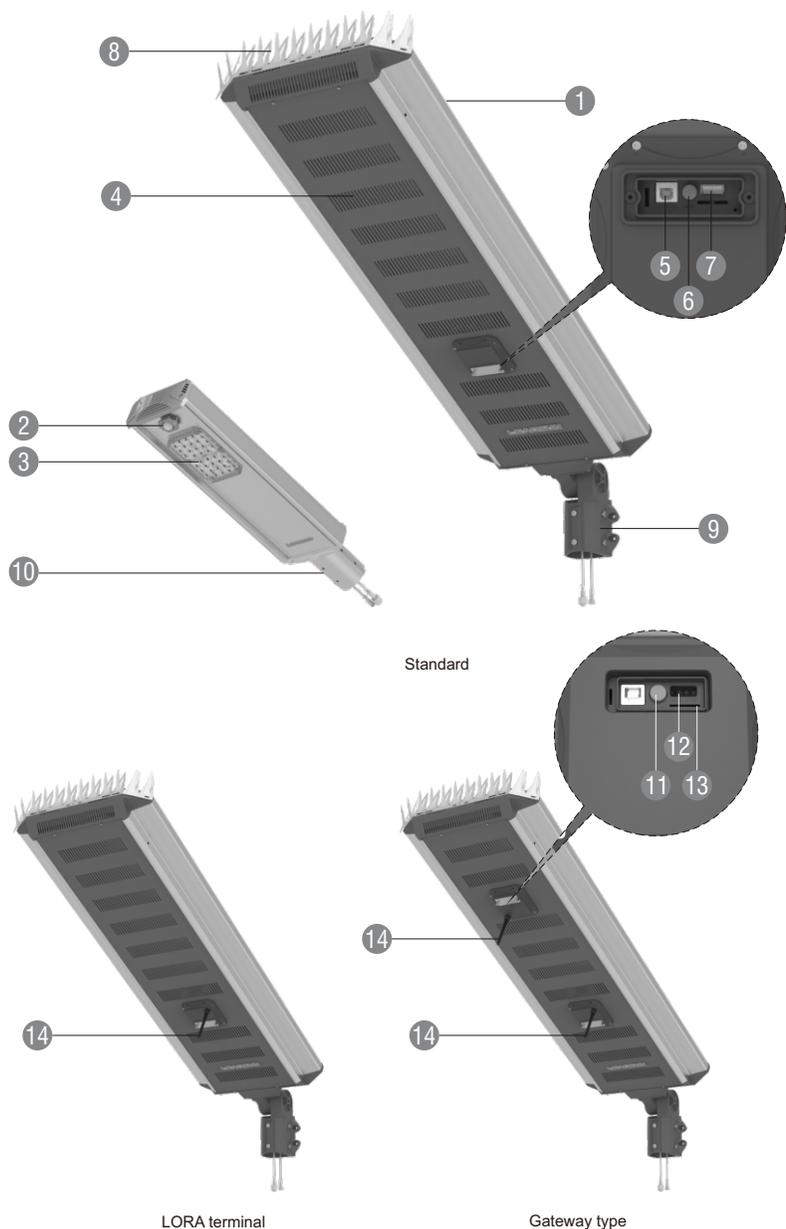
- In order to assure that the solar panel receive the light efficiently, please use clear water to clean the dirt mark on the surface of the panel regularly and prohibit the use of chemical or abradant which includes chlorobenzene.
- Only manufacturer, service agent or qualified personnel can replace the light source or other circuit components of the lighting device. Without authorization, using the third party component to replace is prohibited or it would cause serious damage to the product. if the user disassembles the product without authorization, warranty becomes void.
- If you need to replace the components /accessories, please go to www.leadsunglobal.com, or contact the local distributor.



Product recycling

- The product is made of recyclable high-performance materials and components, please don't dispose with other household garbage.
- Please understand the local rules about the separate collection of electronics and electrical products, dispose the waste products in the right way that avoids potential negative effects to environment and human health.

Part Description



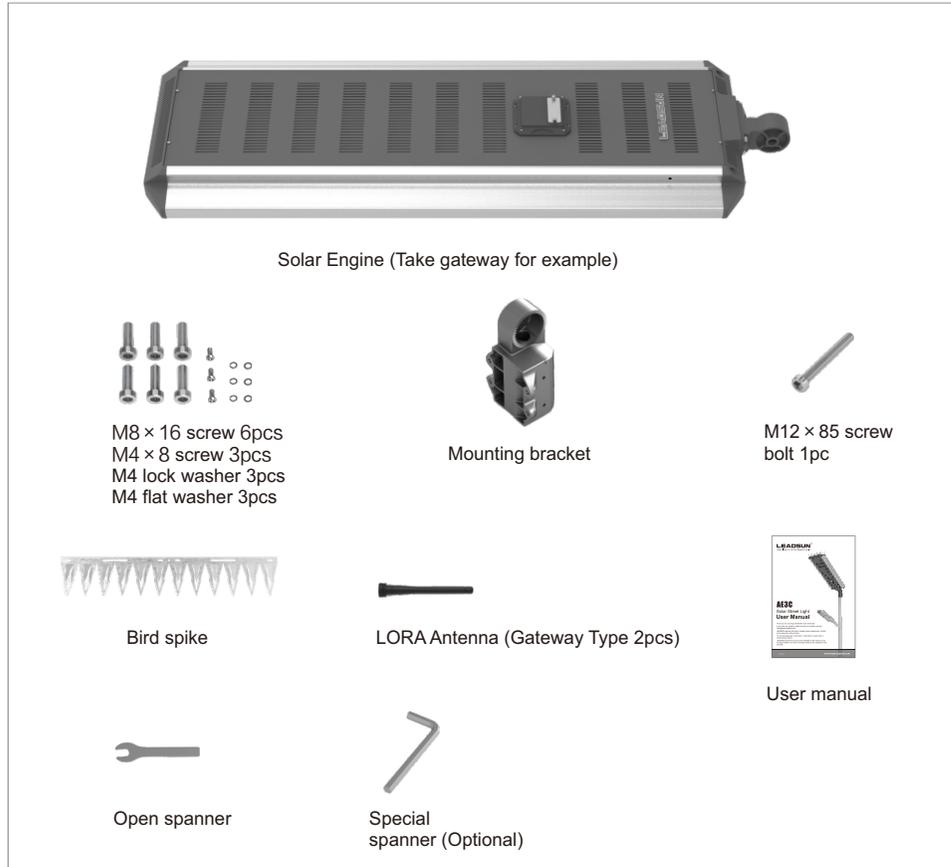
The Part list is the whole product series functions instruction. The user can look up the corresponding function according to the purchased product.

No.	Name	Brief Function
1	Solar module	To absorb solar energy and convert into electricity
2	PIR sensor	Motion detection
3	LED module	Illumination
4	Heat-sink hole	Heat dissipation
5	Type B USB connector female	For program input
6	Switch button	ON/OFF or Turn ON/OFF the light
7	Type A USB connector female	For battery charging via 14VDC 1.5A power supply
8	Bird spike	Prevents solar panel contamination from bird droppings
9	Mounting bracket	Fix AE3C unit
10	Street light bracket	Use to fasten the LED street light
11	Reset button	Restart the gateway
12	SIM card slot	Insert 2G/4G card
13	Gateway indicator light	Red: gateway working, indicator keeps on; Green: 4G working, indicator keeps on; Blue: 4G data transfers, lamp flashing; Yellow: 4G connect success, indicator keeps on.
14	LORA Antenna	Network group communication

Part List

 Check if you have all the components listed below before installation, the components and quantity of each set as follows:

Solar Engine:



Lighting:



Product Activation

- * Daytime: While connect the LED street light to solar engine, it lights 20 seconds and then Off. It means the AE3C has been activated automatically.
- * At Night : Press the button for 5s , the light is on. Short press the button, the light will be switched between ON and OFF.

*** Tips:

ON mode: the system will work normally, charging in the daytime and discharging at night.

Transport (idle) mode: the system will power off in an hour and goes to the OFF mode, for transport packing or maintenance status.

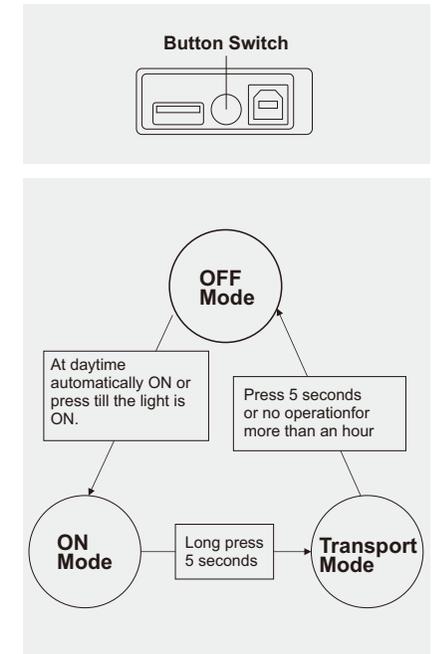
OFF mode: The system will not work, charge or discharge.

Turn ON the light:

- Connect the street light to solar engine in daytime, it will be activated automatically (lights 20s and then OFF).
- Long press 5s to turn on the light when it is OFF.

Turn OFF the light:

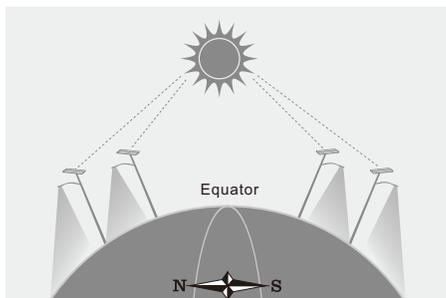
Press the button 5s when it is On, the light comes into TRANSPORT MODE. Second press the button 5s or no operation in one hour, the light turns off.



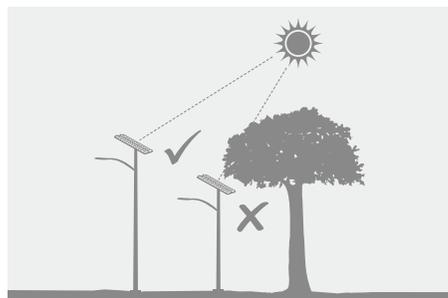
Before Installation

1. Installation Direction of Solar Panel

- 1 Please choose the appropriate model depending on the sunlight intensity of the place and required working time.
If the installation site is on the northern hemisphere, the solar panel should face to the south as far as possible and if it is on the southern hemisphere, the panel should face to the north as much as possible. (See Picture 1)
- 2 Make sure the sunlight is not blocked by any construction or trees during the installation or it will affect the charging and discharging efficiency of the solar power system and the operation of the street light. (See Picture 2)



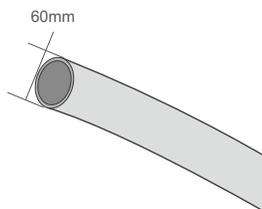
Picture 1



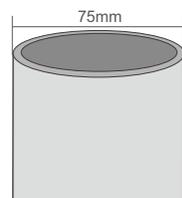
Picture 2

2. How to choose the right lamp pole?

It is suggested to choose the cantilever light pole for the LED street light and the cantilever should be no wider than 60mm diameter. The diameter of the light pole top which is used to install the solar power supply system should no more than 75mm.



Cantilever



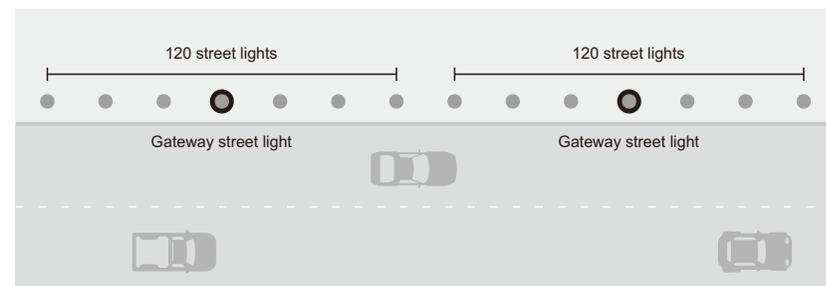
Top of the light pole

3. How to place the Gateway ?

Each Gateway covers a range from 800m to 3000m, depends if there are barriers to block signal transmission. One Gateway can control 120 slave units.

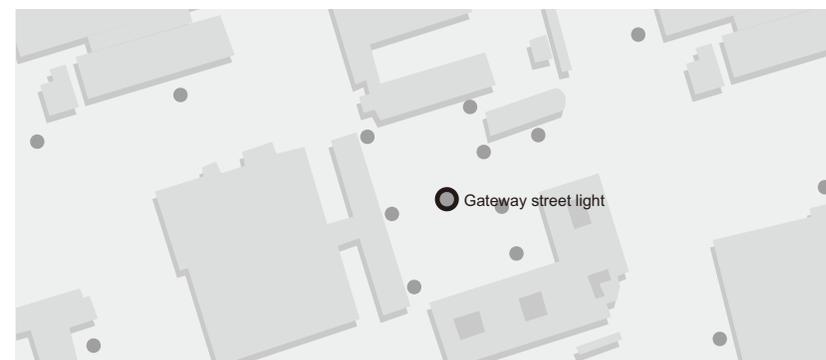
1 Road installation

Build wireless solar street light along the road, lamps have to divided into one or several groups. Each group contains a Gateway and max 120 slave units. The Gateway should be on the middle of each group.



2 Village/Factory/Park installation:

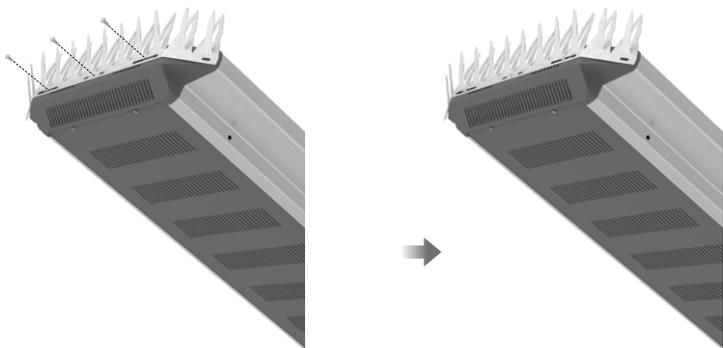
For installation at village/factory/park location, the Gateway is recommended placement on the center of the area.



Product Installation

1. Install the bird spike

Use 2 sets M4×8 screws, lock washers and flat washers to fix the bird spike along the rim of the top of the light. (See Picture 3)

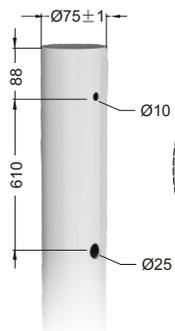


Picture 3

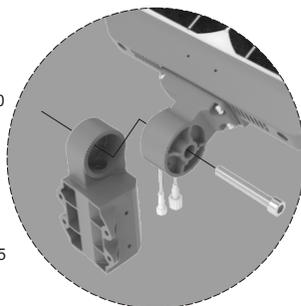
2. Drill holes on the pole and Install the bracket

Drill holes on the pole. Firstly, determine and mark the AE3C split and LED street light position according to the optimum sun radiation and road condition. Then drill a $\Phi 10$ mm hole at the position which is 88mm away from the top of pole for fixing bracket. Drill the other $\Phi 25$ hole on the pole where the light is to be installed for threading waterproof cables. (See Picture 4)

Joint the bracket to the AE3C unit. Thread cables from the hole of bracket and set a proper angle that solar panel can obtain maximum energy from the sun (each scale on the bracket is 6 degree). Fix the bracket by fastening a M12×85 bolt. (See Picture 5)



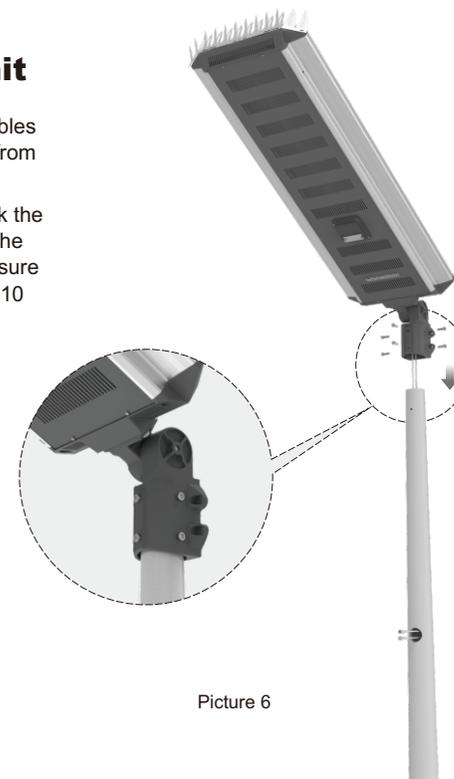
Picture 4



Picture 5

3. Mount the AE3C unit

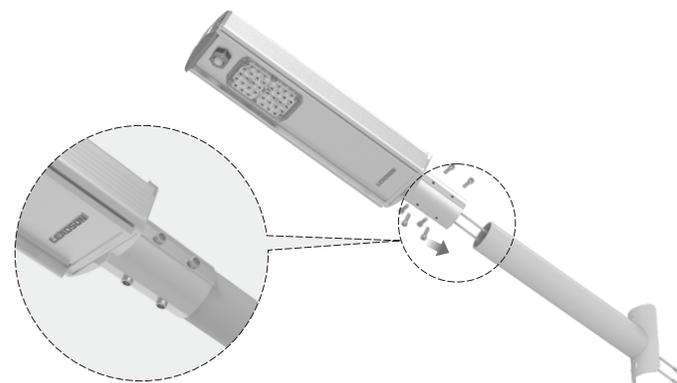
- 1 Thread two pieces of waterproof cables through the light pole and then out from $\Phi 25$ hole on the pole.
- 2 Connect all cables together and lock the terminals. Mount the AE3C unit on the pole by 6pcs M8×16 screws. Make sure one of screws is screwed into the $\Phi 10$ hole. (See Picture 6)



Picture 6

4. Mount the LED street light

- 1 Thread two pieces of LED light waterproof cables through the cantilever. Mount the LED street light on the pole by 6pcs M8×16 screws. The maximum torque for those M8 bolts is 14Nm. Do not surpass this torque specification. (See Picture 7)



Picture 7

Product Installation

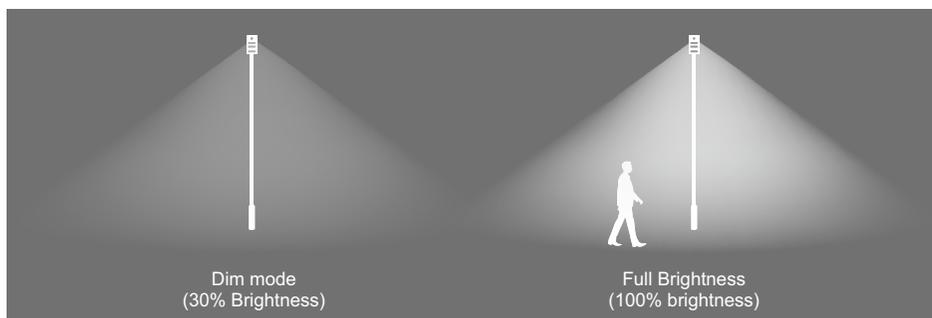
- 2 Connect the LED light with corresponding cables. Mount the LED street light on the pole. (See Picture 8)



Picture 8

Working Mode Description

At factory setting, AE3C units turn on at dusk and off at dawn automatically (light photosensitivity is around 30lx). In the evening, AE3C units operate at dim mode when no one is not around, and increase light output immediately when motion is detected, to conserve battery power. It ensures that the light can work normally through days with limited sunlight.



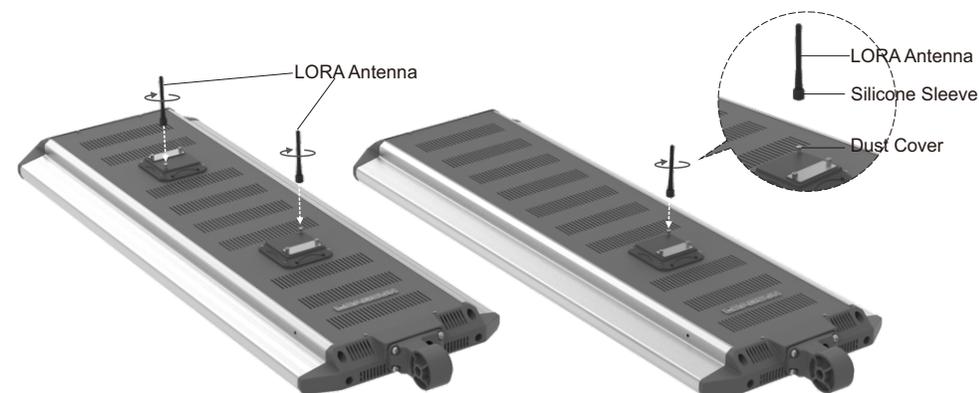
5. Wireless system installation (Suitable for wireless type)

⚠ Cautions:

1. Please confirm if the 2G/4G module in the gateway supports the data network covered by the local carrier before installation.
2. When using the inbuilt 2G/4G module gateway, you need to insert a SIM card which has the data service. The data service will cause the service fee, and you need to pay the relevant service fee to the local carrier.

1 Antenna installation

Connect the antenna to the corresponding positions according to the picture below.

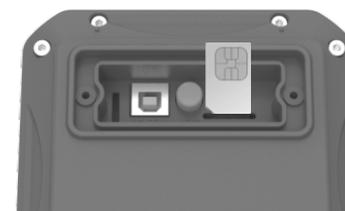


Gateway antenna installation

LORA Terminal antenna installation

2 Insert SIM Card

Insert the 2G/4G SIM card into the slot according to the picture. Press the button next to it to restart the gateway and then cover with the waterproof plug.



Cautions: Ensure the SIM card cutting edge is face down and the magnetic stripe is away from the indicator light.

Software operation instruction

Please use LEADSUN EDGE APP to remotely control and configure the street light, visit www.leadsglobal.com and follow the steps to Download the LEADSUN EDGE.

- A. For APPLE users please go to the APP STORE and install the APP 'LEADSUN EDGE' .
- B. Android cellphone please visit www.leadsglobal.com or go to the software platforms like Google Play to download and install 'LEADSUN EDGE'.
- C. PC App please visit <http://47.52.88.104:8083/Home/Login>

With LEADSUN EDGE, you can do the following operation:

1. Register to become a member
2. lighting control
3. History data query
4. Working mode configuration
5. Real-time view.

For detail instructions, please see the "APP User Guide" under "More Functions" in the software.

Transportation and Storage

- This product contains lithium batteries. Please follow air transport regulations when shipping. It should be regarded as potentially flammable and explosive, and be isolated from other goods when stored, so as to avoid any damage.
- The solar panels of this product should be considered as fragile. There should never be more than 4 layers of boxes when stacked. To avoid damage to the panels, make sure no heavy pressure is applied to the boxes.
- Please store the product in temperature between 0°C to 45°C.
- If stored for a long period, the product should be recharged every 6 months. Please only use the special charger (purchased from manufacturer) to avoid damage to the battery or device.
- When repackaging the product after inspection or charging, set the light into sleep mode by holding the On/Off button for 5 sec. The light will flash three times, to signal that it has properly entered sleep mode. You may now repackage the product into its box. To exit sleep mode, either press the On/Off button one more time, or wait an hour for the street light to reboot automatically when exposed to sunlight.

Clean

To clean, apply mild detergent with a damp cloth and gently wipe the surface of the solar panel.

Replacement of Parts / Spare Parts:

Please contact LEADSUN or your local distributor/dealer.