

SOLAR LED STREET LIGHT

MANUAL



1. Product Introduction

1.1 Warranty:

The products quality issues caused by non-human error or force majeure natural calamity, our company support following warranty:

The whole set have 1 year warranty and components:

Battery:	3 years	Controller:	2 years
LED Lamp:	3 years	Solar panel:	10 years

Items of Cleaning the Slate

A. Our company should not bear any responsibility towards any damage caused by following reasons: nature disasters, such as earth-quake, flood, thunder, fire and so on; the third party operation, stolen, damage, contretemps or any damage caused by improper operation.

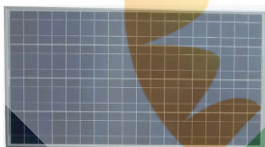
B. Our company should not bear any responsibility toward any damage cause by operation which is not obeying this usage manual.

C. Our company should not bear any responsibility toward any damage because of fault cause by using our products combined with other equipment which has nothing to do with our company.

1.2 Product Structure

1.2.1 Main Components

Solar panel



Solar Controller



LED lamp



Battery



Battery Box



Pole



Arm



Support



Wires



Brackets for solar panel



Holder for bracket and pole



1.2.2 Part List (single unit)

Components	Specification	QTY
Solar Panel	120W/24V Poly-crystalline	1pc
Storage Battery	80AH/12V	2pcs
Controller	10A/24V	1pc
Lamp	40W/24V LED	1pc
Solar panel Bracket	For 1 piece 120W solar panel	1pc
Pole	6m pole with arm	1pc
Arm	Arm for LED lamp	1pc
Holder	For bracket and pole	1pc
Battery Box	Steel battery box	1pc
Support	For battery box use	1pc
Screws	M8*35 screws for solar panel and bracket	8pcs
Other Accessories	Wires	14m

1.2.3 Storage and Working environment

A Storage

- a. Placed in the ventilation and away from dust and dirt area;
- b. Environmental temperature: -30 to 75°C;
- c. Relative moisture less than ninety percent, and without the phenomenon of drip congealed;
- d. Away from erosive gas and liquid;
- e. Long-period of no using, discharge and charge once a month.

B Working environment

- a. Working temperature: -30 to 75°C;

- b. Moisture: should keep it between 0 to 90%;

1.2.4 Technical data

(Please reference the Technical Document)

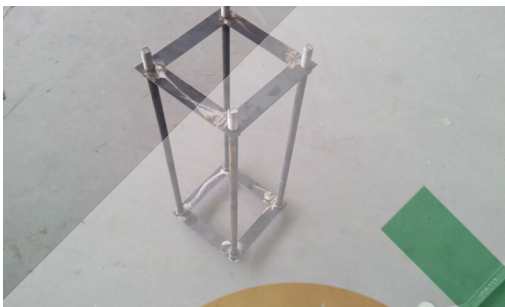
2. Instruction Manual

2.1 Choosing Site

- A. Choosing the best direction of lamp-house in order to receive the most solar energy.
- B. The solar street lamp must be installed in the site with best sunshine and without tree shade or building shade.
- C. It must have wonderful sunshine during 9:30am to 15:30pm.
- D. It should keep distance from hot source, or its life will be shortened.
- E. The solar panel should not be irradiated by other lighting in the evening, or it will not work because of receiving the wrong order.
- F. There should have no other establishment (cable or conduit) underground the solar street lamp.

2.2 Groundwork Manufacture

A. Fixing the base foundation bolts part



B. Digging the Groundwork hole



C. Cleaning and Conservation

- a. Clean the bolt with oil and clean the site.
- b. Solidification process of concrete, it is necessary to regularly watering; after it is fully solidified (about 2 weeks), then install the street lamp.

2.3 Installation of Street Lamp

Check each component before installation: specifications, models, quantity and the appearance of the each component. It should be immediately transferred if there have discrepancy, but do not reluctantly construction.

2.3.1 Fix solar panel on the bracket, fix arm on the pole, fix LED lamp on the arm, then fix solar bracket on the top of the pole, reference below:

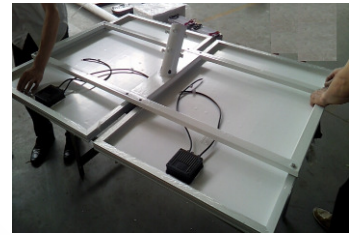
2.3.1.1



2.3.1.2



2.3.1.3



Put the holder on the bracket, fasten it with M8*25 screws, then put solar panel on the frame, use 8 pieces M8*35 screws to fix the solar panel on the bracket, reference 2.3.1.1~2.3.1.4. Then fix the arm in the pole, reference 2.3.1.5 and 2.3.1.6.

2.3.1.4



2.3.1.5



2.3.1.6

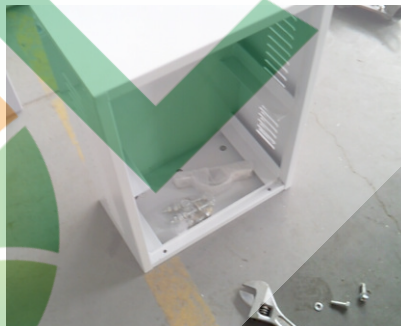


Put the battery box support on the top of the pole, reference the 2.3.1.7, then open the battery box door, get the battery box components, reference 2.3.1.8

2.3.1.7



2.3.1.8



2.3.1.9



Put 2 screws and 1 piece white steel panel inside the battery box reference 2.3.1.8. Then fasten this screws, reference 2.3.1.10 and 2.3.1.11.

2.3.1.10



2.3.1.11



Then fix battery box on the pole, lock the bottom of the battery box with the support(reference 2.3.1.12) and fasten the holder with the pole, reference 2.3.1.13

2.3.1.12



2.3.1.13

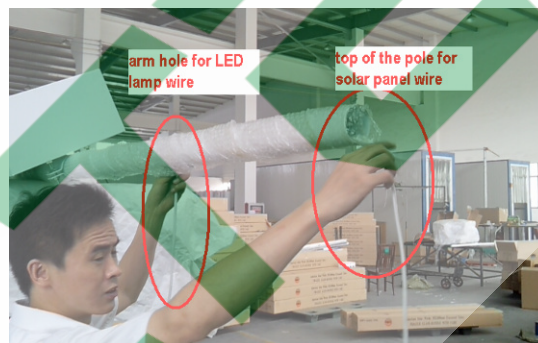


Then put 2 pieces 4m wires, get through the hole of the support, reference below 2.3.1.14, one piece from hole of support to arm, the other one from hole of support to the top of the pole, reference below 2.3.1.15 and 2.3.1.16

2.3.1.14



2.3.1.15

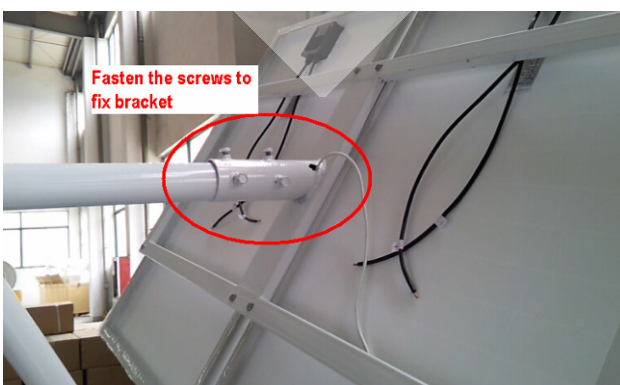


2.3.1.16



2.3.2 Put the solar bracket on the top of the pole and put LED lamp on the arm head.

2.3.2.1



2.3.2.2



Notice: Wires connecting please reference below wiring connecting sketch map.

After above actions, we have finished the primary preparing, notice here: keep two wires inside the battery box, because we need finish wiring connect inside the box, reference below 2.3.2.3

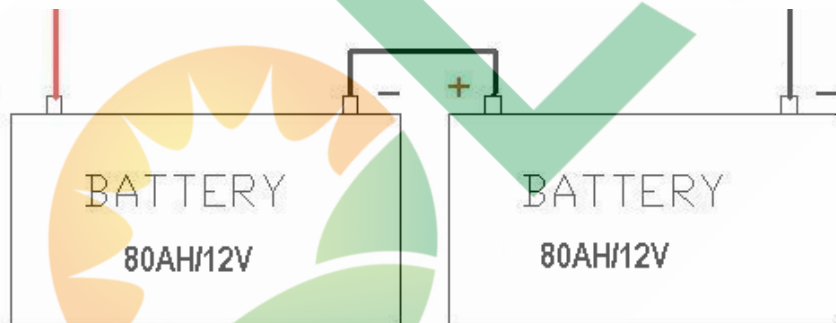
2.3.2.3



The Below picture teach you how to connect the two pieces batteries.

For two pieces batteries, two pieces 80AH/12V in series into 80AH/24V.

(Because this battery box is on the top of the pole, so you only can install the pole firstly, and then use machine truck to lift the operator at the height of the battery box on, then put battery into the battery box, and connect all the wires.)



2.3.2 Hoisting



This is concrete base foundation

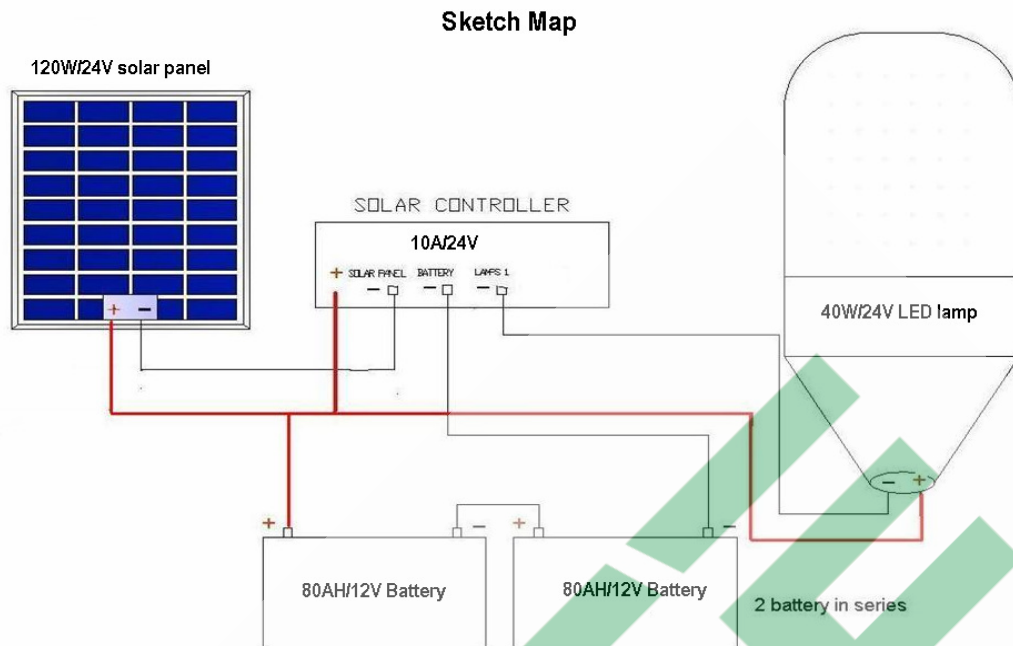


Lifting the pole with crane and put it on the underground work.



Screw down two nuts on each bolt.

2.3.3 Mounting the controller



And then connect the wires like the picture above, and then put the controller inside the battery box and on the top of the battery surface.

(About the connect sequence, usually connect all the red wires(“+”) together firstly, and then connect the LED lamp’s black wire(“-”) to the controller secondly, then connect the battery’s black wire to the controller thirdly, after this step, you can wait for 10~30 seconds, to check the LED lamp is light or not. In normally, in this time, the light will light, if not, then something wrong.) Last step, connect the solar panel’s black wire to the controller, in this time, the light will turn off.)



Finish the connecting, close the battery box door and lock it, then everything is OK.



Remark

- ✧ The installation and maintenance must be carried out by corresponding qualified technical staff
- ✧ Please do not use other components to do maintenance but without the proposal of its original manufacture. Or the system might be damaged or in danger.
- ✧ all components of solar street lamp should not be damaged in the installation process;
- ✧ battery should not be inverted or placed in the humid or under sunlight directly in the transport and installation process;
- ✧ not short-circuit the wiring connections (the cathode touch the anode)
- ✧ Connecting order: LED Lamp—Storage battery—Solar panel;
- ✧ cutting order: solar panel—LED Lamp —storage battery;
- ✧ Solar panel must faces to direct north, it is better to use compass to assure the direction.
- ✧ All bolts and connect terminal must be tighten but not loosen, connection must be reliable; please notice each components, storage battery, controller, drive and so on, must not be connected anti-electrode;
- ✧ Please notice the wire should not clip in the conjunction of the pole while pulling the wire. The wire conjunction must link firm and tie up with PVC tape;
- ✧ The surround of storage battery box must be filled with thin sand around to promise the storage battery has a good operate temperature in winter;
- ✧ Strictly forbid to smoke cigarette or light fire while opening the access door to do maintenance, because the storage battery will exhaust hydrogen during working time, it will cause explosion when hydrogen meets fire;
- ✧ Because each lighting system is a independence work unit, it is normal with little difference in performance when switch on and off;
- ✧ Please clean the dust on solar module every half year, but, do not use water to flush it from top to bottom.

3. Fault and Treatments

Fault Phenomena	Possible Reason	Treatment
Light source not light-up	environmental light is brighter	the light source will light-up when the brightness of environmental light below a certain illumination
	light source is dead	Replace the same model light source
	output circuit is open circuit, short circuit or earth connection	Check the output circuit connection is correct or not
	the storage battery is open circuit	Check the connection of the battery is correct or not
	fuse is burnt out	Replace the same model new fuse
	The voltage of the storage battery is below 11.1V	<ol style="list-style-type: none"> 1. The days of overcast and raining day is longer than the design time, it can recover automatically in sunny day. 2. the battery is short of voltage caused by the open circuit or short circuit of the solar panel 3. voltage shortage or damage cause by short circuit of the battery
	Something wrong with controller	Maintain or replace the same model new controller
Light-up inaptly	Something covered the solar panel	Clean the solar panel