

## SGL2 Solar Garden Light

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Instruction manual



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## 1. Overview

Thank you for choosing our product. Please read this operation manual carefully before using to ensure successful installation and usage. After installation, please keep this manual future use. SGL2 Solar Garden Light is a beautiful structure with a concise design and can be used a park, yard, residential, pathway etc. for both lighting and decoration.

## 2. Product icon

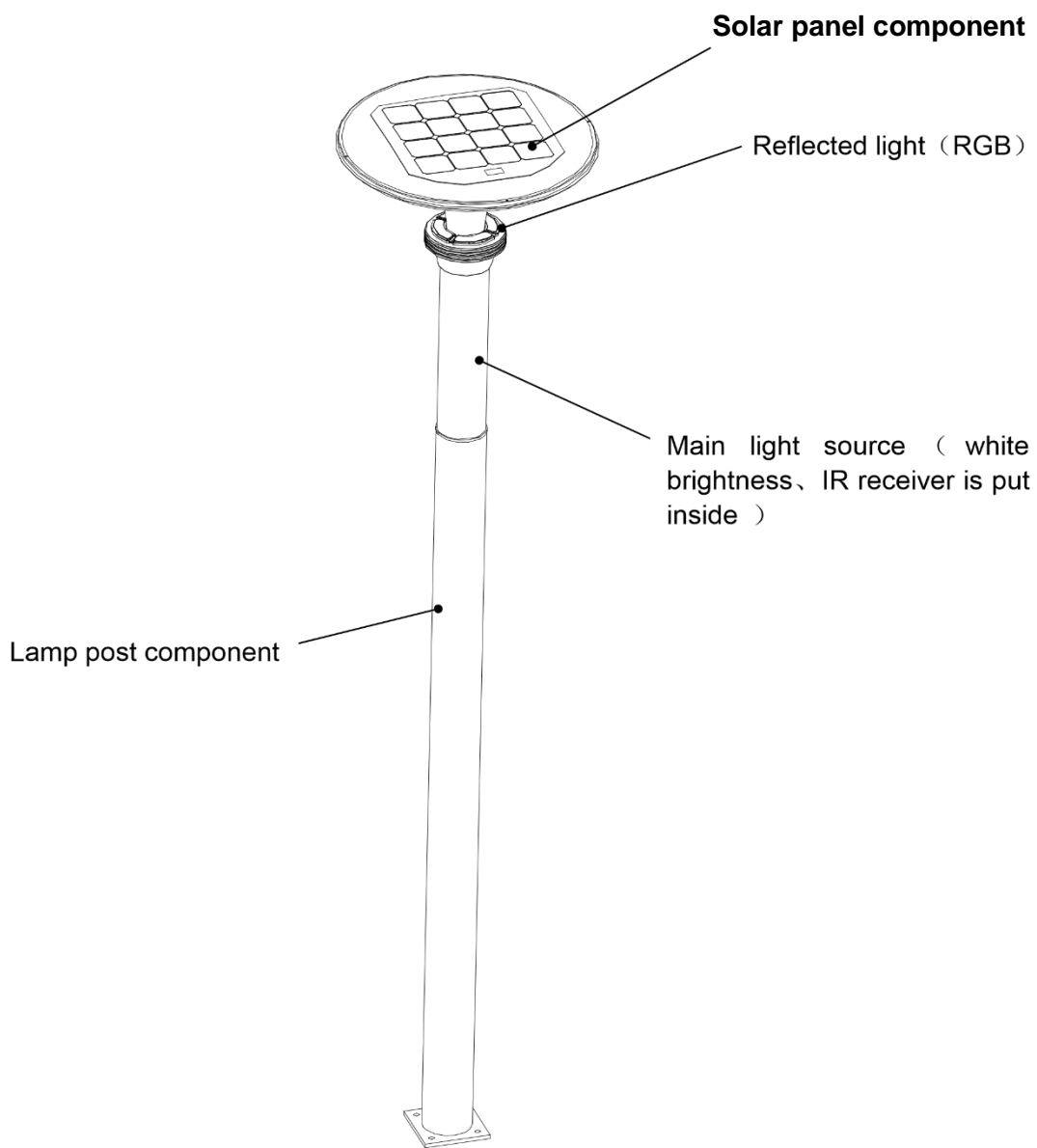


Figure 1

### 3. Product Features

- This product uses flexible monocrystalline silicon solar panel which is durable and compact. It has a long lifetime, has easy installation, free maintenance, and other advantages
- The merit of a flexible solar panel combined with the light source makes the whole lamp have a modern style, concise and pretty.
- It has adopted an international well-known brand light source. It also has high brightness and a long life.
- Intelligent controller makes it turn on/off automatically when dusk /dawn. The light's on/off time and the brightness of light can be configured freely by customer's need.
- With infrared remote-control device, you can adjust the running condition of street light by configuring the parameter and facilitate the maintenance.
- This product has adopted high strength aluminum alloy material with protective spray which is 9 grade wind resistance. This can guarantee a longer outdoor application.

### 4. Working Principle

Transfer solar energy to electricity then store it in battery: supply power for LED light.

Check the theory diagram in figure 2.

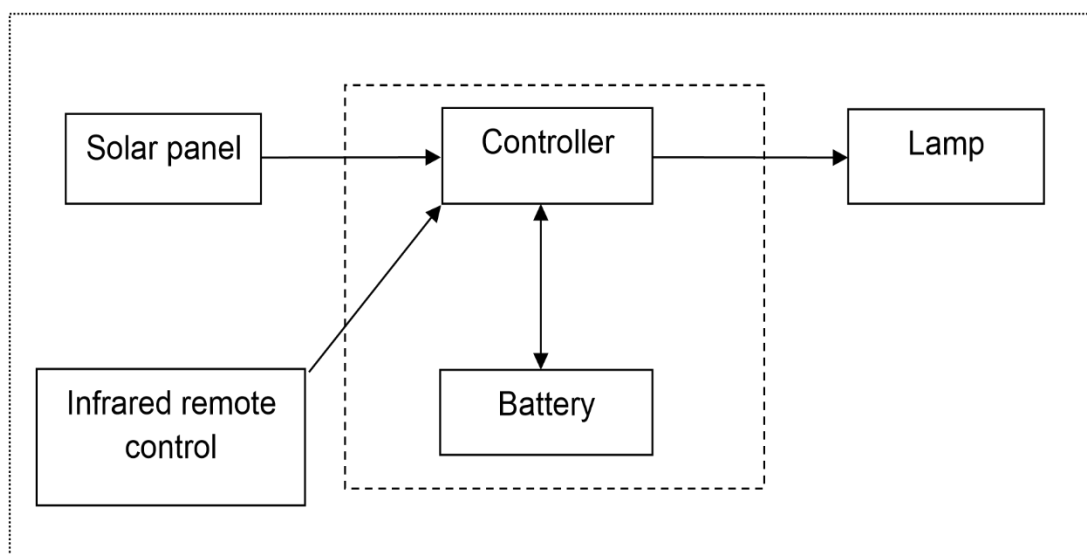


Figure 2

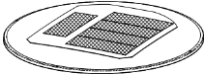

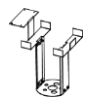

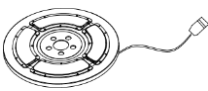

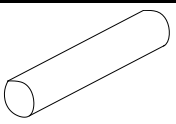
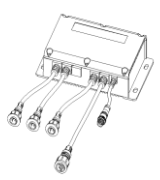
## 5.technical specification

Table 1

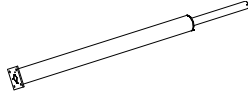
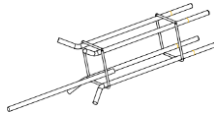


No.	Item	SGL2 Solar Garden Light	
1	light source	Power10W, color temperature5000~6350K	
		Auxiliary light with power of 1W, RGB,change color everyday	
2	Battery	Lead acid battery, 12v/33Ah Working for 5-7days on rainy or cloudy days	
3	Solar panel	50W flexible monocrystalline silicon solar panel, USA SUNPOWER high efficiency solar cells	
4	Whole lamp post	High strength aluminum alloy pole with protective spray	
5	Lamp height	11.5ft	
6	Working temperature	-4F~140F	
7	Wind-resistance	9 degree	
8	Working methods	Light& time control	
	Working time	light-on 4h later, turn to semi-bright ,turn off until daybreak	
9	Controller main tech parameters	Controller type	2FSC805E
		Over -current charging; over-load discharge 、 short circuit	Work when current>2 times rated current, stop output, recovery after 20s
		Battery reverse	When reverse current damage<5mA,doesn't device and load
		Solar panel reverse	When reverse current damage<5mA,doesn't device and load
		Date transfer method	IR
		Battery protection	Over charge, over discharge protection and electrical temperature compensation

## 6.Product List







Table 2





No.	Item	Qty	Icon	Remark
1	Solar panel component	1 PC		
2	reflector	1 PC		
4	bracket	1 PC		
5	Battery component	1 PC		
6	Reflect light component	1 PC		
7	Main light source component	1 PC		
8	Main light source cover	1 PC		
9	controller	1 PC		

**Continue (table2)**

No.	Item	Qty	Icon	Remark
10	Lamp post component	1 PC		
11	Lamp fixed holder	1 PC		
12	Outlet Pipe Components	1 PC		
13	Remote control	/		optional
14	Accessories bag	1 set		Check table3

**Table 3 (accessories bag )**

No.	Item	Qty	Icon	Remark
14.1	Silicone sealed gasket	1 PC		
14.2	Silicone sealed gasket	1 PC		
14.3	bolt	4 PCS		M4*12 cross pan head
14.4	bolt	4 PCS		M5*8 cross pan head
14.5	Flat washer	5 PCS		Match M12
14.6	Flat washer	4 PCS		Match M18

14.7	Spring washer	5 PCS		Match M12
14.8	Spring washer	4 PCS		Match M18
14.9	Nut	12 PCS		M18
14.10	Nut	5 PCS		M12
These configure is standard and it can be adjusted by the practical application				

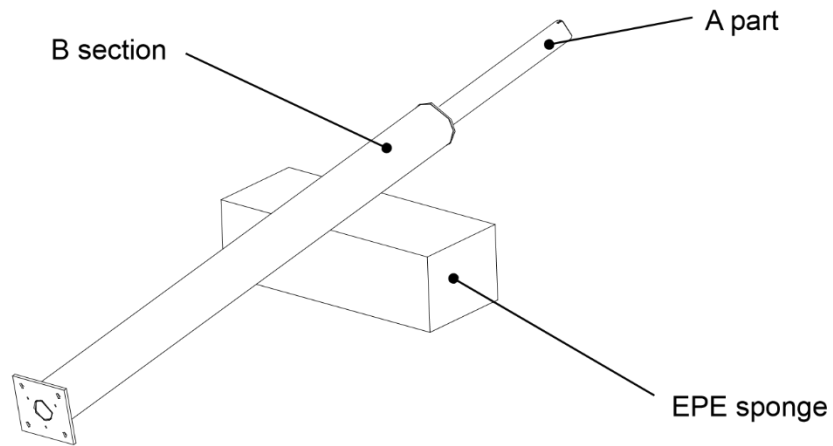
## 7. Installation Construction

- ※ **1.Pre-install preparation: Tools such as 6#, 10# Allen wrench, cross screwdriver Special socket wrench, large monkey wrench etc. auxiliary material like light post fender**
- 2. Please keep the surface of the lamp clean for the whole lamp and accessories have been sprayed. Try to avoid scraping the lamp surface.
- 3. Please try not to heat the solar panel or scrape its surface. This is the important part of the whole lamp.

### 7.1 solar component lay up

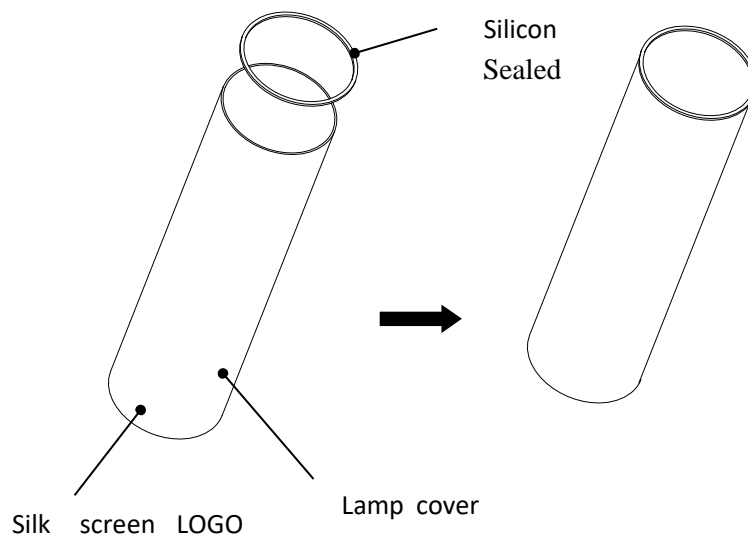
- ① Place the solar panel flat, and put a 15.74 inch height pad (such as EPE sponge) on the lower part of the post (called B section for short), make the upper part of lamp (called A part for short) turn up, as figure 3 shows.





**Figure 3**

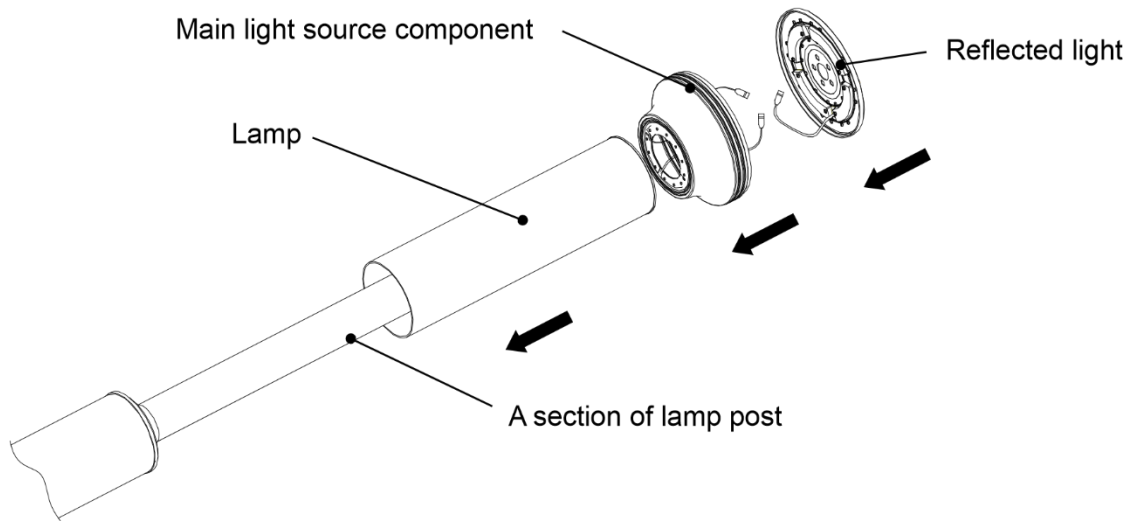
- ① Put the bigger silicone sealed gasket on the upper of lamp cover (the lower has print) , as figure 4 shows.



**Figure 4**

### 7.3 lamp cover, light source component lay out

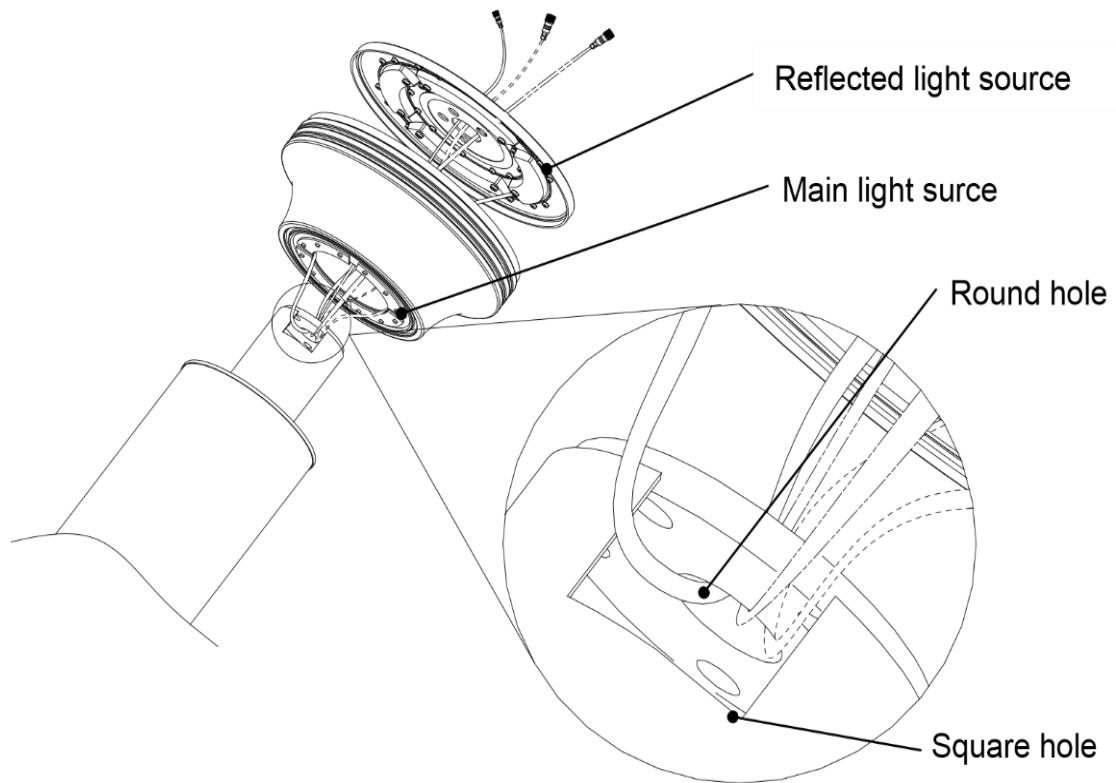
- ① Put the lamp cover, main light source component, reflected light component on a section of the lamp post by sequence, as figure 5 shows.



**Figure 5**

#### 7.4 light component threading

- ① Lead the light source connect wire through the hole on A section, as figure 5 shows, notice the following:
  - Light source connect wire should lead out from the square hole and then lead out through flange plate of reflected and main light source component hole by sequence.
  - Lead the bigger waterproof plug first, and then lead the smaller waterproof plug;
  - Lead the three wires out from the center hole of reflected light component, as figure 6 shows;

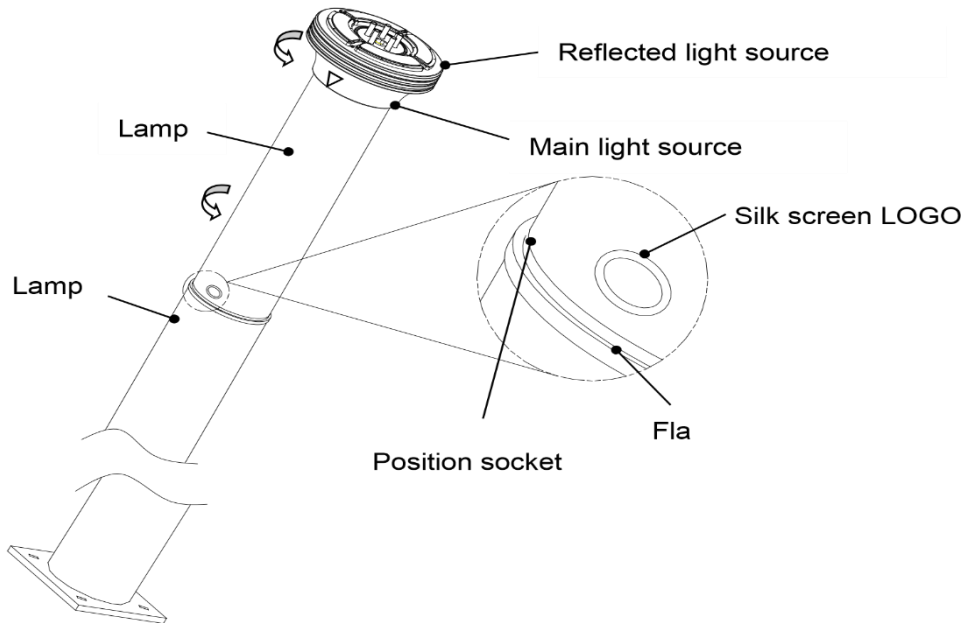


**Figure 6**

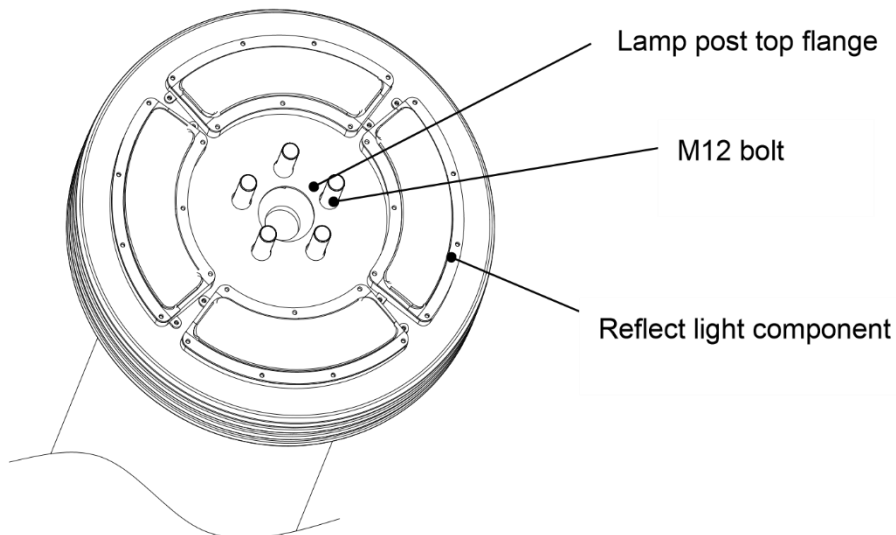
7.5 light cover, light source component position



- 1 After threading wires, put the lamp cover, main light source component, reflected light component well, and ensure the lower of lamp cover insert in the flange position slot as shown in figure 7; 2. Put the reflected light component on the M12 bolt of post top flange as figure 8 shows; 3. Adjust the position of lamp cover, make the silk screen LOGO parallel the lamp post base.

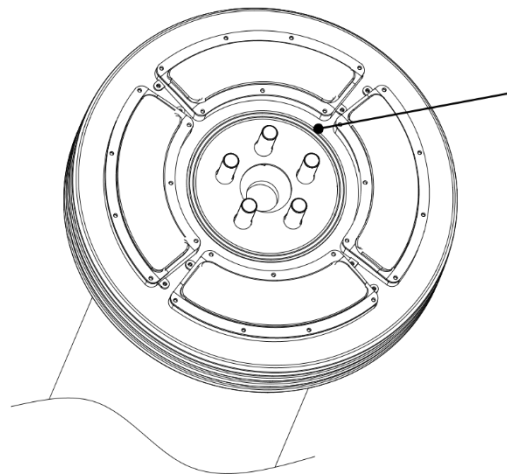


**Figure 7**



**Figure 8**

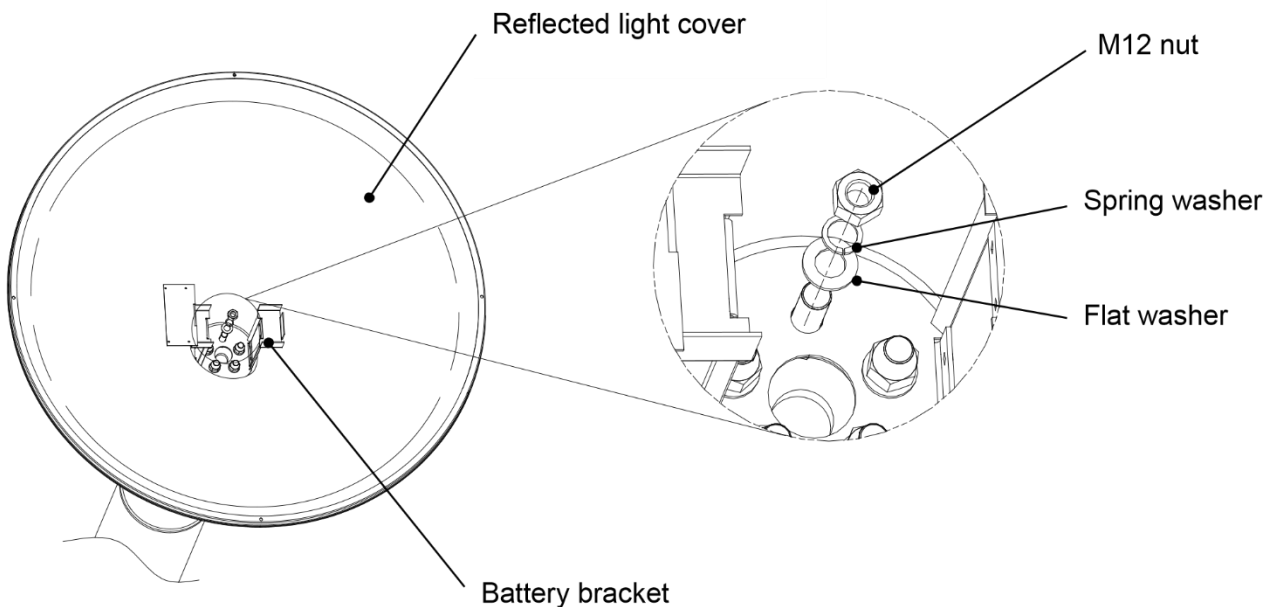
- ① Put the silicone sealed gasket on reflected light component, as figure 8 shows, ensure the center of the hole line up the component hole, as figure 9 shows.



Silicone sealed gasket

**Figure 9**

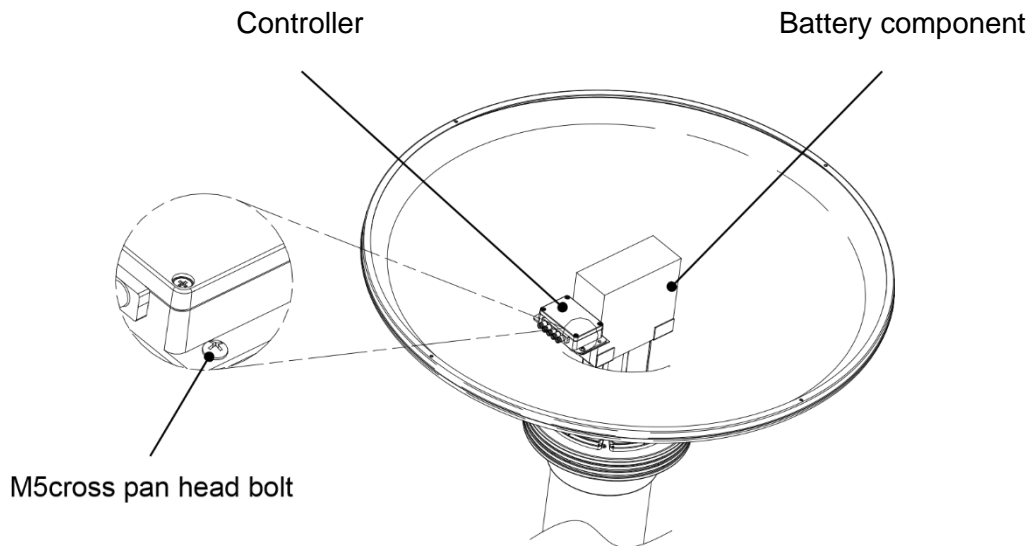
- ② Put the reflected light cover, battery bracket on the bolt, and then put flat washer, spring washer, and nut by sequence, fix by special socket wrench, as figure 10 shows.



**Figure 10**



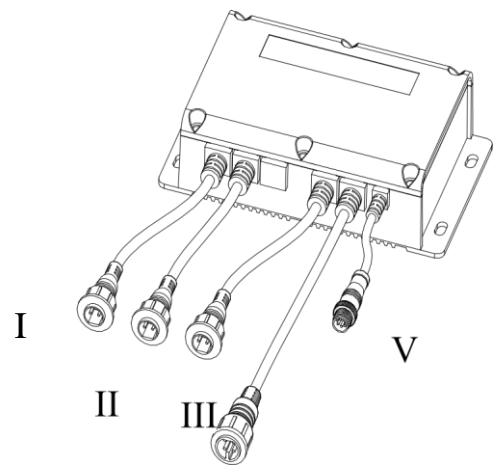
- ① Put the battery and the controller on the right position of battery bracket, as figure 11 shown, and then fix the controller by 2pcs M5 cross pan head bolt, bound the battery with battery bracket by ribbon to make sure the battery will not drop when stand the whole lamp.



**Figure 11**

**7.8 controller wire connection**

- 1.Controller lead wires defined as follow:
  - I : SOLAR PANEL ( 2 core wire )
  - II : BATTERY ( 2core wire )
  - III: MAIN LIGHT ( 2core wire )
  - IV : SECONDARY LIGHT ( 4 core wire )
  - V : CONTROLER ( 5core wire )

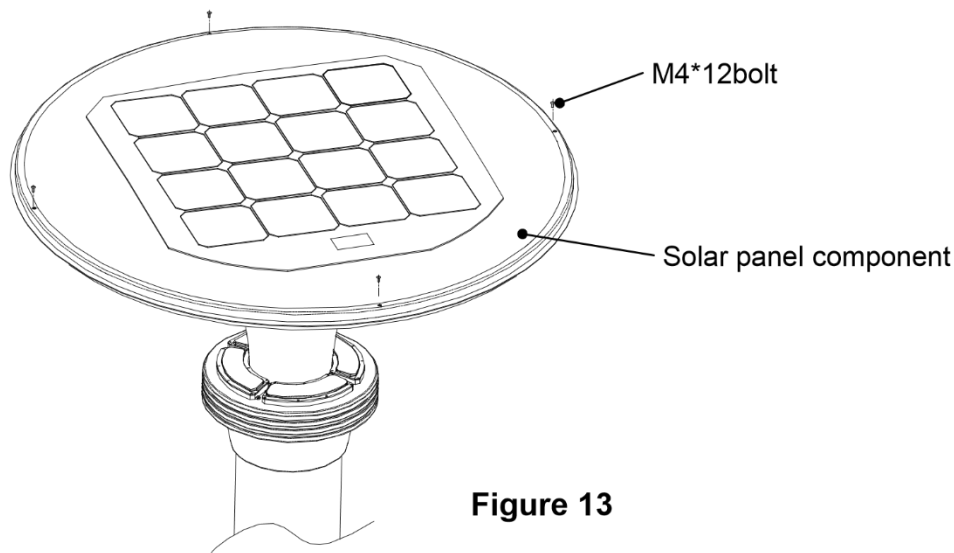


**Figure 12**

- 1. Connect the controller waterproof plug with solar panel, auxiliary light, battery, main light, remote controller wire joint by sequence.
- ※ **Notice: ensure the wire joints connect right according the label of wire.**

### 7.9 solar panel component installation

- ① Connect the solar panel connect wire and controller connect wire;
- ② Put the solar panel on the reflected light cover well, avoid to leave gap, adjust the lock hole and then locked by 12 pcs M4 cross pan bolt, as figure 13 shown.



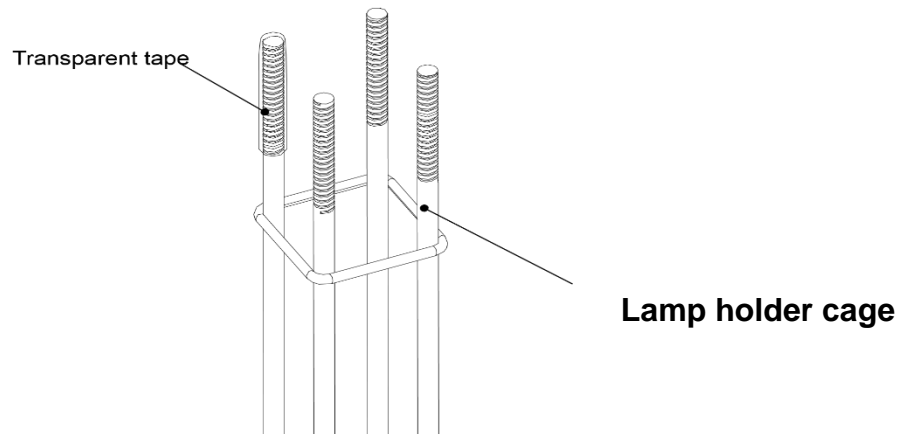
**Figure 13**

**Remark: Please rip out the practical film of solar panel in case of decrease the generation of solar panel;**

- ① The lamp structure part assembly has complete, check if the lamp can work normally before standing it. The following steps should be completed 5 days before installation.

## 7.10 foundation construction

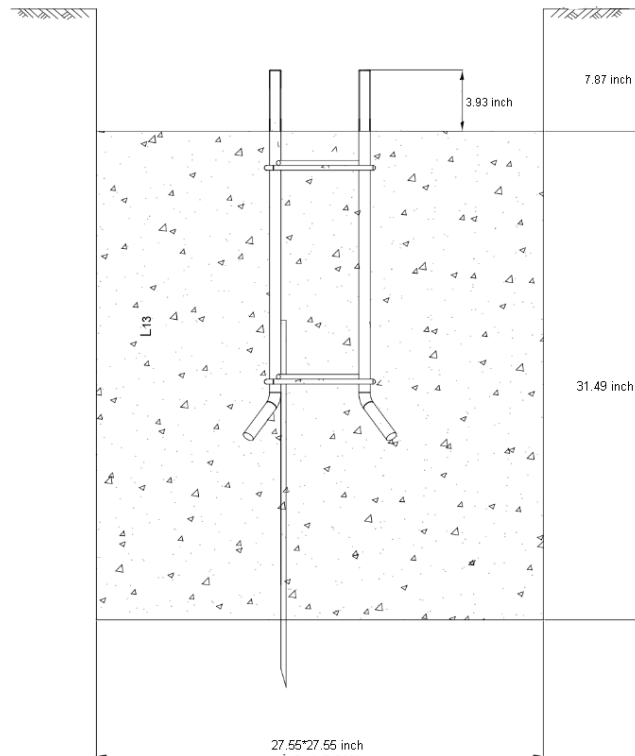
※ **Pre-install preparation: tools like transparent tape, hoe, level ruler, shove etc.**



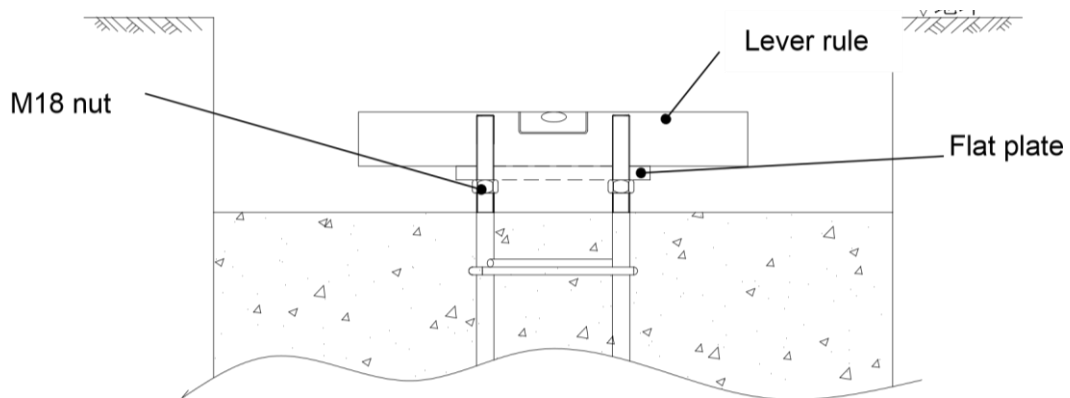
**Figure 14**

- ① Swap the upper of four screw stands to avoid staining concrete as figure 14 shows.
- ② Drill a 2.75in\*2.75in\*3.93in pit in the place where lamp goes.
- ③ As shown in Figure 15 , put lamp fixed holder in the hole center, measure the position and height to ensure the height of concrete pouring, the side edge is parallel to the road.
- ④ Pour concrete on the pit, reserve 3.93 in space, as figure 15 shows.





**Figure 15**

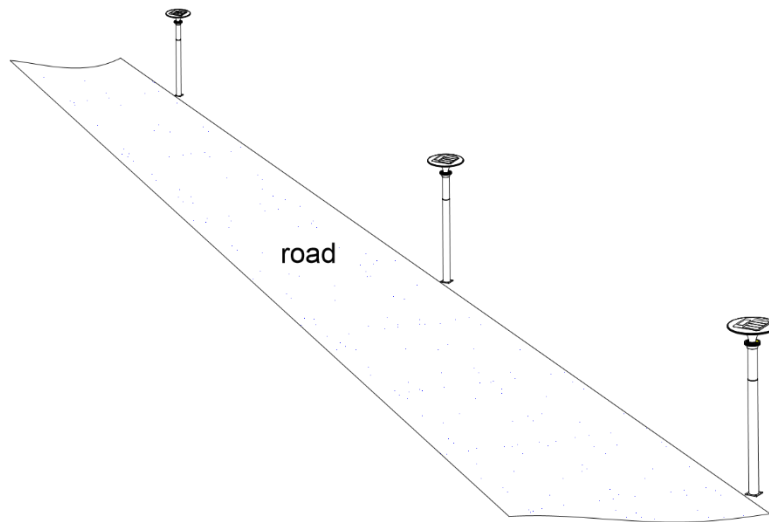


**Figure 16**

- ⑤ Tear off the transparent type on lamp fixed holder.
- ⑥ Put a nut on four screw studs and then put on the horizontal plate.
- ⑦ Measure the levelness with the level bar, by adjusting the nut height, make the under side of the horizontal plate parallel to the floor surface, as shown in figure16.
- ⑧ Remove horizontal plate, level bar and other tools when adjust well.

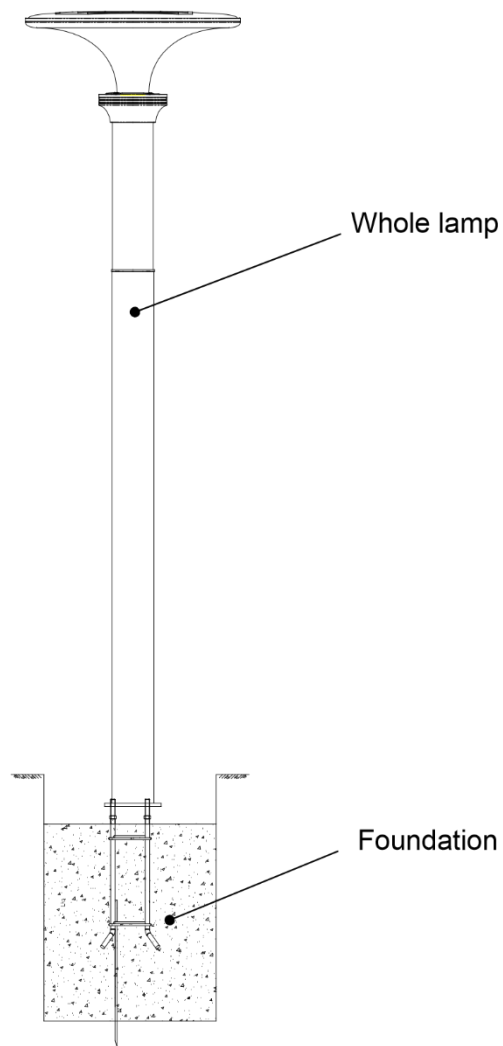
**7.11 whole lamp fixed**

- ※ **Prepare wrench before installation.**
- ※ **Ensure passengers safety when standing the lamp.**
- ※ **Confirm the direction of lamp before installation.**



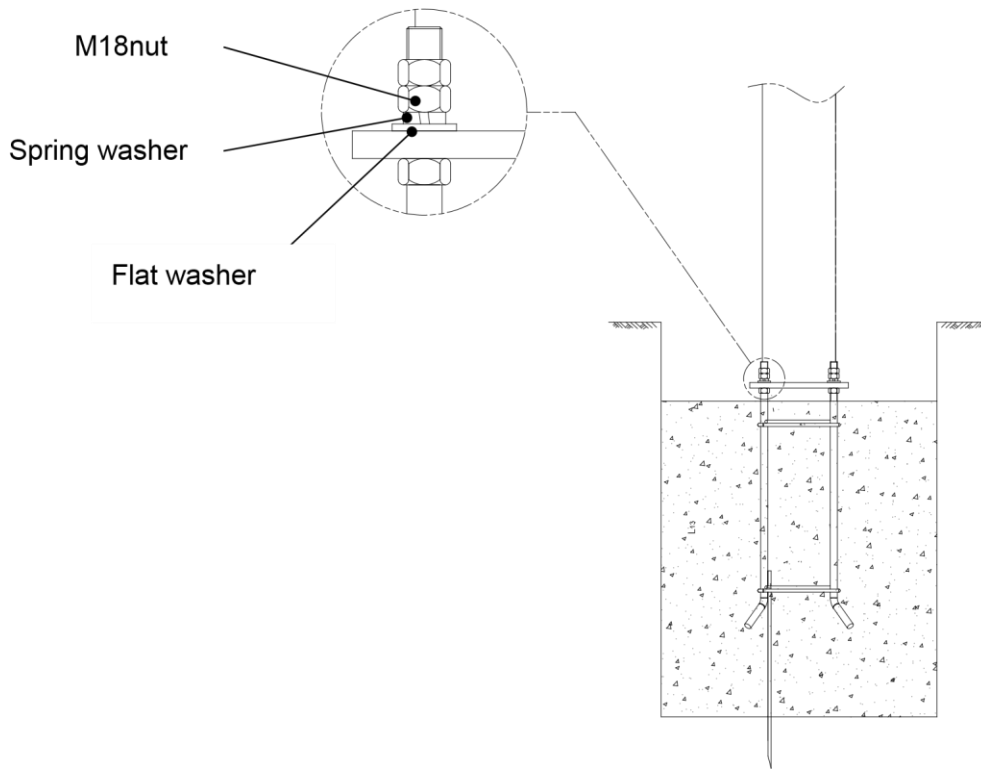
**Figure 17**

- ① Line up four holes, install the lamp on lamp fixed holder as figure 18 shows.



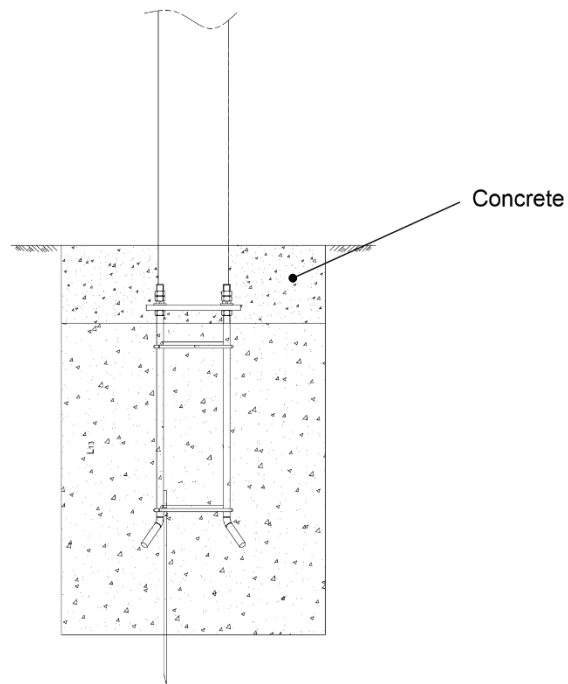
**Figure 18**

- ② Lead spring washer, flat washer through screw stand, put them on the lamp base and lock with M18. See Figure 19.



**Figure 19**

- ③ Fill the concrete to the height of ground, as figure 20 shows.



**Figure 20**

## Notice

- As solar LED garden light is powered by sunshine, it's better to be installed in places with sufficient sunshine. If tree shade or buildings blocks the sunshine, it's recommended to reduce the light power accordingly in case light automatically turned off because of lacking in solar which will bring negative effect to light service life in the long run.
- Be careful when installing the whole lamp. Avoid hitting solar panel by accident during installation and cause damages.
- Source power is fragile. No hitting or touching with sharp objects
- Don't remove or replace controller by yourself. Any problem, please contact manufacturer for confirmation and replacement.

## Light Source Power and Adjustment Methods

The longitude and latitude differences in different installation areas, seasonal and climatic differences in the same area, light direction in different mounting point and specific environmental differences might cause difference in actual solar power generation capacity for the lamp. To ensure every lamp can work properly and steadily meanwhile prolong its service life, certain solar power (include light-on time as well if necessary) should be make corresponding adjustments after installation the detailed adjusting principle as follows:

- It is better to take higher value in the following situations: low latitude, summer, mostly sunny day, open-sided, mounting orientation: facing south in northern hemisphere (facing north in southern hemisphere)
- It is better to take lower value in the following situations: high latitude, winter, mostly cloudy/rainy day, sheltered environment, mounting orientation: facing north in northern hemisphere (facing north in southern hemisphere) or east-west facing.

**★The adjustment above should be on a range which is based on the factory settings of 60% brightness.**