

# 2SPA006 Solar Charging Post

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## Instruction Manual



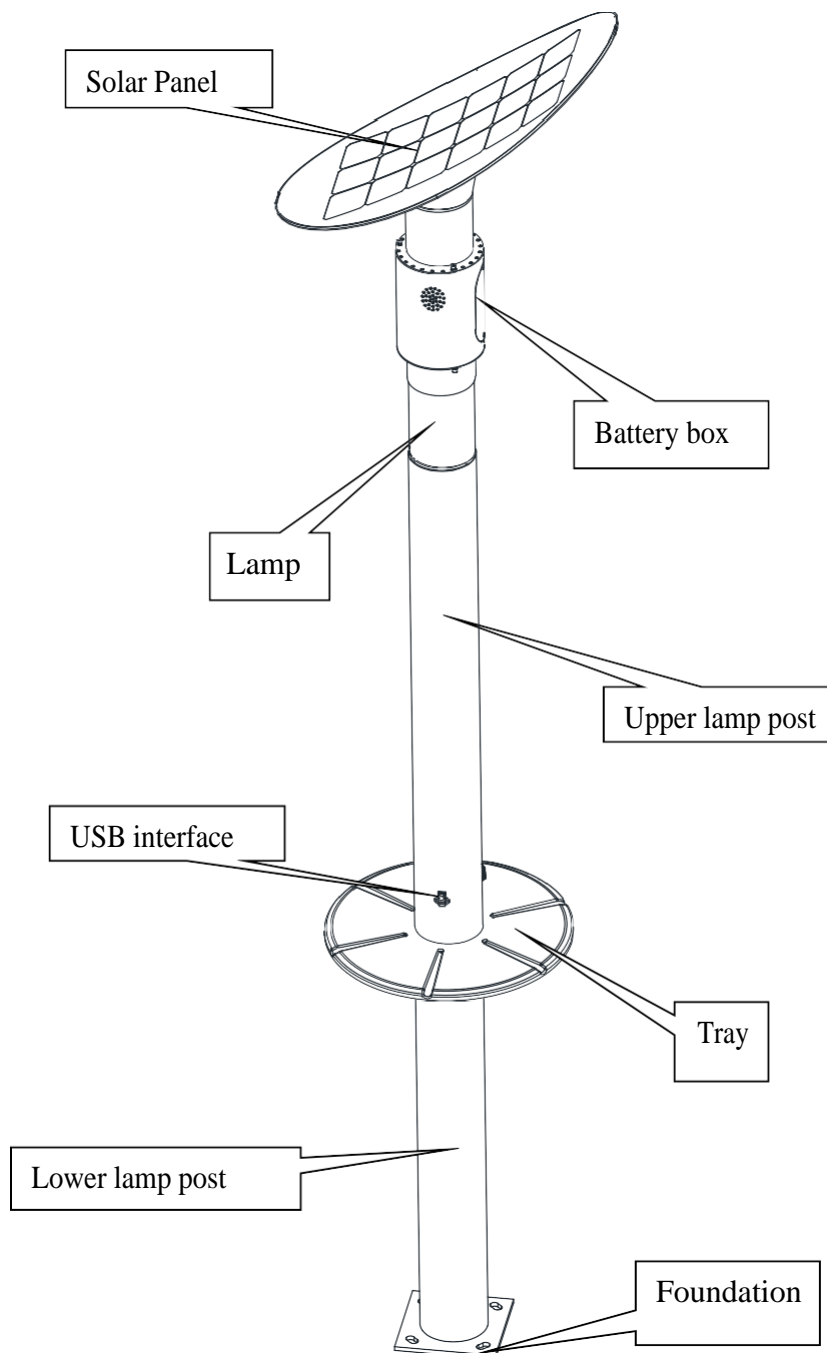
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## 1. Overview

Thank you for choosing our solar charging post, Please read this operation manual carefully before using to ensure successful installation and usage. After installation, please keep it for future use.

## 2. Product



### 3. Product Features

- Uses flexible monocrystalline silicon solar panel which are used for high converting efficiency. The lamp is part of a compact structure
- Has international brand LED light source, high brightness, and a long life
- Intelligent controller makes it turn on/off automatically when dusk /dawn. The street light on/off time and the brightness of the light can be configured freely by customer' s need.
- With the infrared remote control unit, the adjustment of the running street light can be configured by parameter and can facilitate the maintenance of the street light
- The direction that the solar panel faces can be adjusted according to the different installation pots, which is used to use maximum efficiency.
- The pole is made of high-strength aluminum material with anodizing process to work with outdoor application for a long time
- Provides USB interfaces for digital devices charging power.

## 4. Working Principle

Under sunshine, use the solar panel to convert solar energy into electrical energy which is stored in the battery. It then outputs the energy through the controller when it needs to drive the workload. The detailed principle diagram as showed in Figure 2

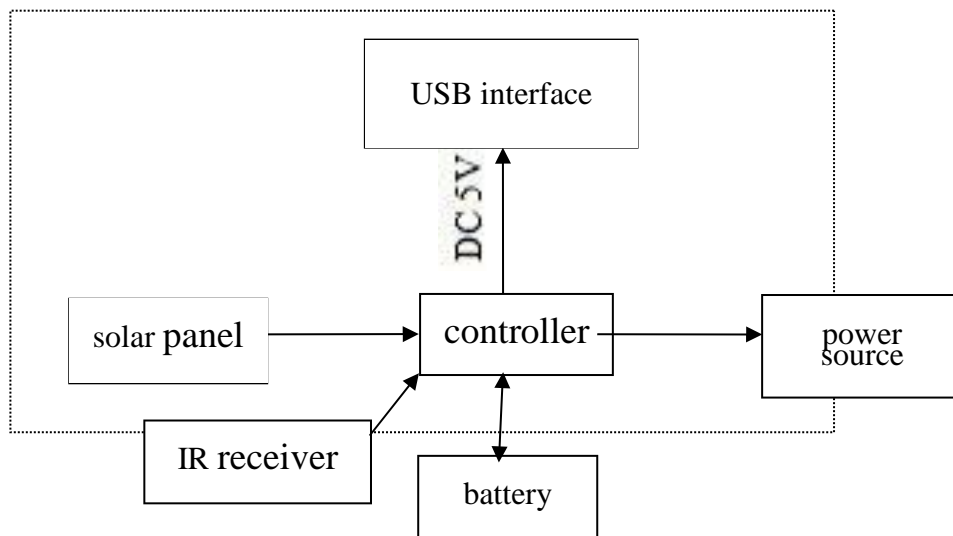


Figure 2

## 5. Technical Specification

Table 1

No.	Item	2SPA006	
1	Power source	power 10W, color temperature 3000K	
2	Battery	Lithium-ion battery, 14.8v/41.6Ah, put in battery box	
3	Solar panel	54W $\pm$ 15% flexible monocrystalline silicon solar panel	
4	Whole lamp post	high-strength aluminum material with anodizing process	
5	Lamp height	12.7F	
6	Working temperature	-4F ~ 122F	
7	Wind-resistance	27m/s (10degree)	
8	Working methods	Light & time control	
	Working time	light-on 4h later, turn to semi-bright, turn off until daybreak	
9	USE interface	DC5V/1A output	
10	Controller main tech parameters	Controller type	2SPC701B
		Max charging & discharging current	6A
		System voltage	14.8V
		Over- load & short-circuit protection	recovery automatically after 10s
		Over-voltage protection (25°C)	$\geq$ 16.8V
		Full charge voltage (25°C)	16.85V

## 6. Product List

Table 2

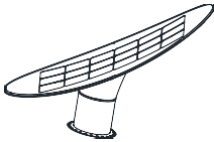



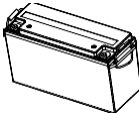

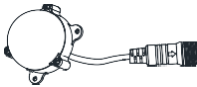
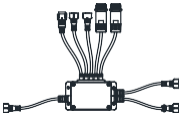
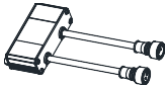
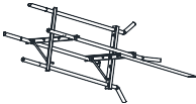






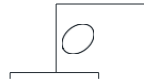

	Item	Photo/Specification	Unit	Qty	Remark
1	Solar battery panel module		pcs	1	
2	Battery box module		pcs	1	
3	Upper lamp post module		pcs	1	
4	Lower lamp post		pcs	1	
5	Battery module		pcs	1	
6	Tray		pcs	1	
7	IR receiver		pcs	1	
8	Controller		pcs	1	
9	USB module		pcs	1	Surface
10	Underground cage		pcs	1	With the position film
11	Accessory package		set	1	See table 3

Table 3(Accessories package)

No.	Item	Qty	photo/specification	Remark
11.1	Screw	6 PCS		M8*20
11.2	Flat washer	12 PCS		For M8
11.3	Spring washer	12 PCS		For M8
11.4	Screw	6 PCS		M8*10
11.5	Screw	3 PCS		M8*20 countersink
11.6	Nut	12 PCS		M18
11.7	Flat washer	4 PCS		For M18
11.8	Spring washer	4 PCS		For M18



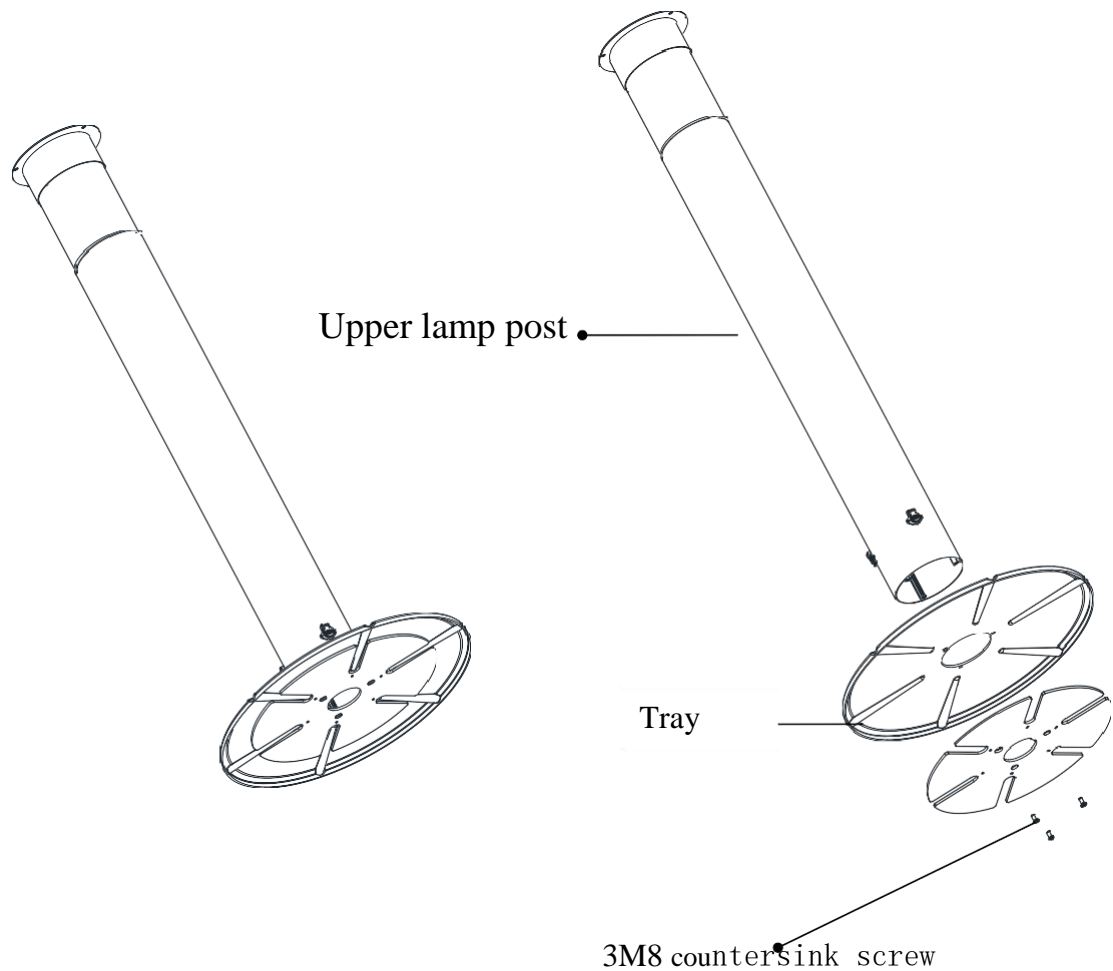
## 7. Installation

(The installation sequences only for reference)

※ Pre-install preparation: tools such as Allen wrench, cross Screwdriver, large monkey wrench etc., and auxiliary material like light post fender

### 7.1 Tray and Upper Lamp Post Lock

① Make sure that the tray hole and the upper lamp post are level, then lock them with 3pcs M8 countersink. See figure 2

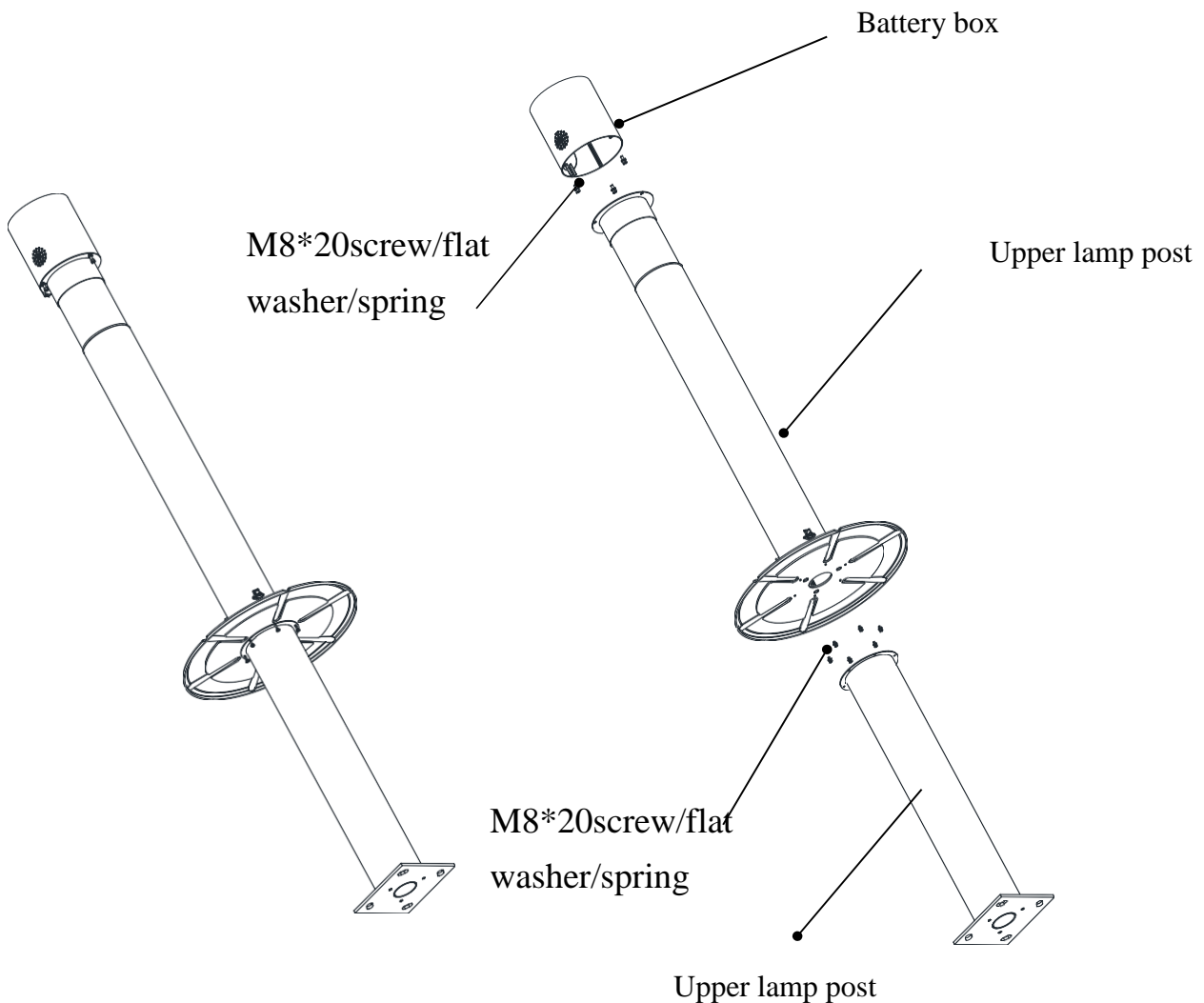


**Figure 2**

## 7.2 Battery Box, Lower Lamp Post and Upper Lamp Post Connection

- ① Level battery box holes with upper lamp post holes, lock them with 3pcs M8\*20 screw/flat washer/spring washer. See Figure 3
- ② Level lower post holes with connection plate on upper lamp post holes, lock them with 6pcs M8\*10 screw/flat washer/spring washer.

Note: Insure the upper lamp post holes direction is the same with the foundation holes when installation.

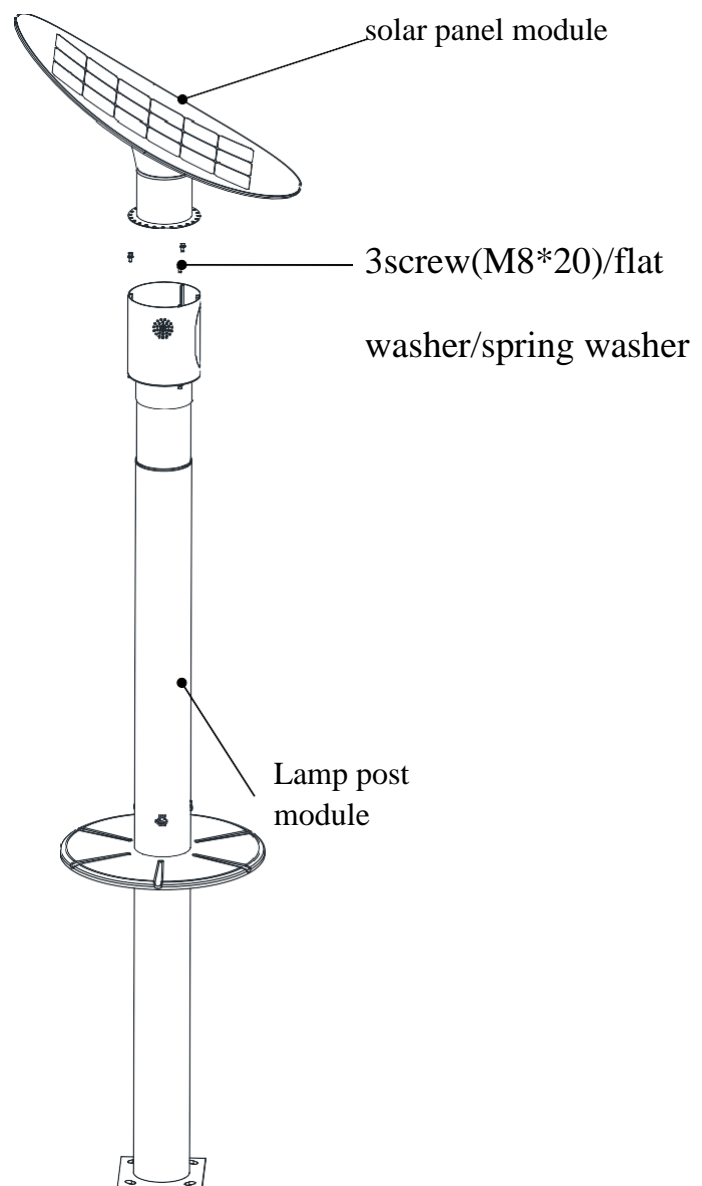
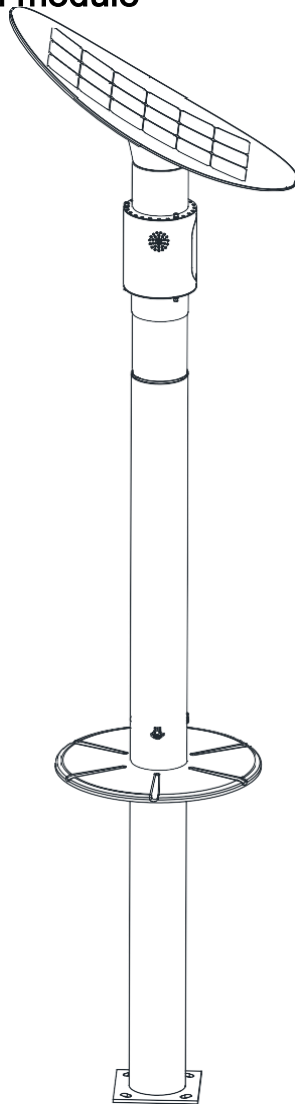


### 7.3 Solar Panel Module and Lamp Post Installation

①Level the solar panel module with battery box holes. Use 3 screws(M8\*20) /flat washer/spring washer to lock solar panel module on post after adjusting the solar panel direction. .

★ Attention: Remove the protection film on solar panel after installing

solar panel module



## 7.4 Foundation Construction

※ Pre-install preparation: tools like transparent tape, ho, lever, shovel etc.

- ① Please dig a pit as: 19.6in(L)\*21.6in(W)\*39.3in(H)
- ② Measure underground cage's position and height before putting it into the pit before ensuring the concrete pouring height, the side of underground cage must line up with the road. See figure 5.
- ③ Pour concrete into the pit, reserve 100mm screw stud outside, see figure 5.
- ④ Tear off the transparent tape on underground cage, lock a nut on the four screw studs, and then put a horizontal plate.
- ⑤ Use a level to line up the horizontal plate with the ground. See figure 6
- ⑥ Remove horizontal plate and level ruler after adjusting.

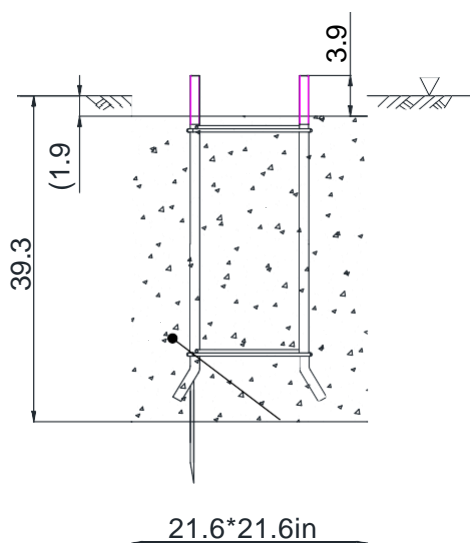


Figure 5

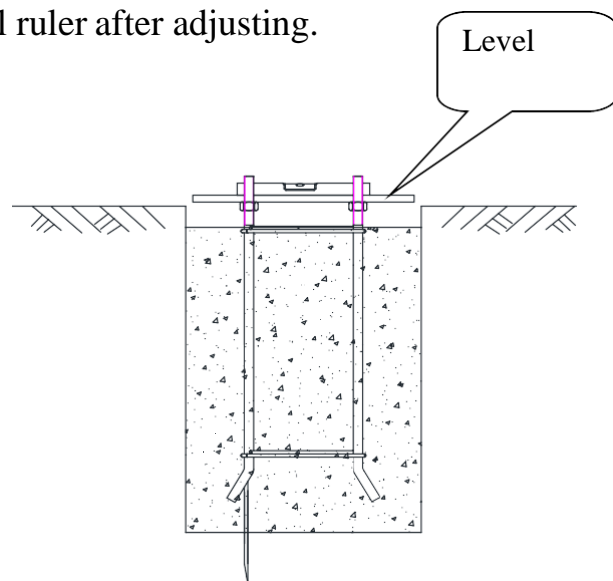


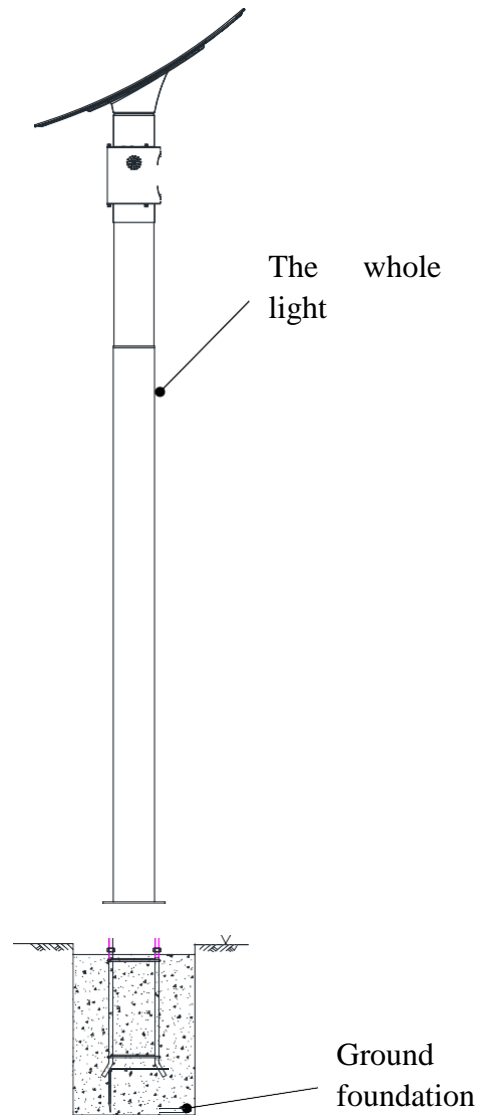
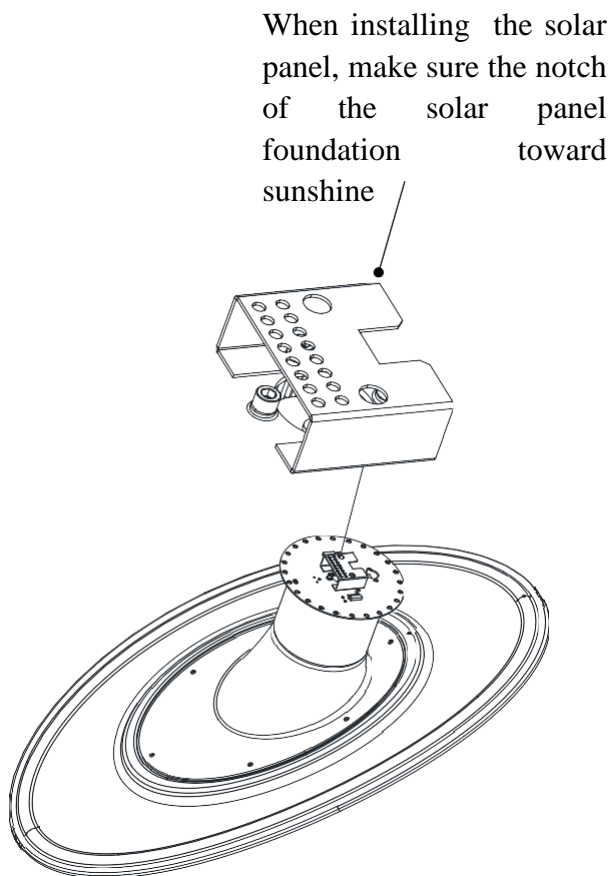
Figure 6

## 7.5 Lamp Mounting

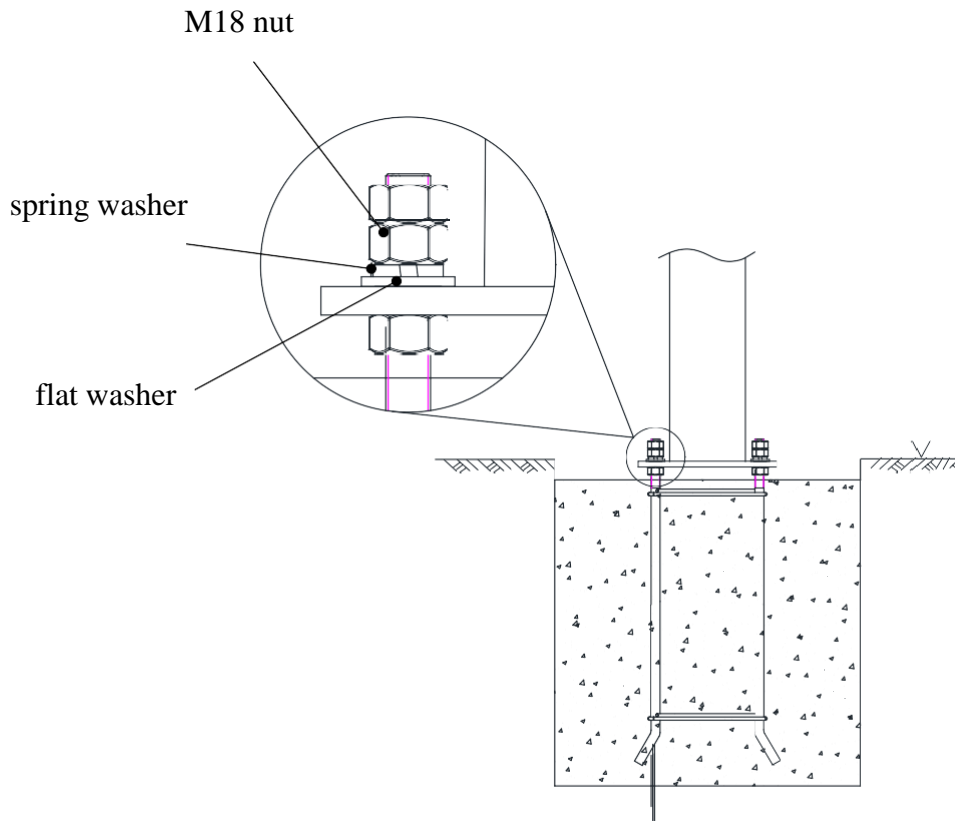
✘ Please prepare spanner before installation

① Please confirm whole lamp post orientation, install position and orientation of solar panel before putting the whole lamp into the ground holder. (solar panel facing sunshine direction. Facing south in northern hemisphere, whereas facing north in southern hemisphere) See figure 7

② Level four holes as Figure 8 and mount whole lamp to the ground foundation

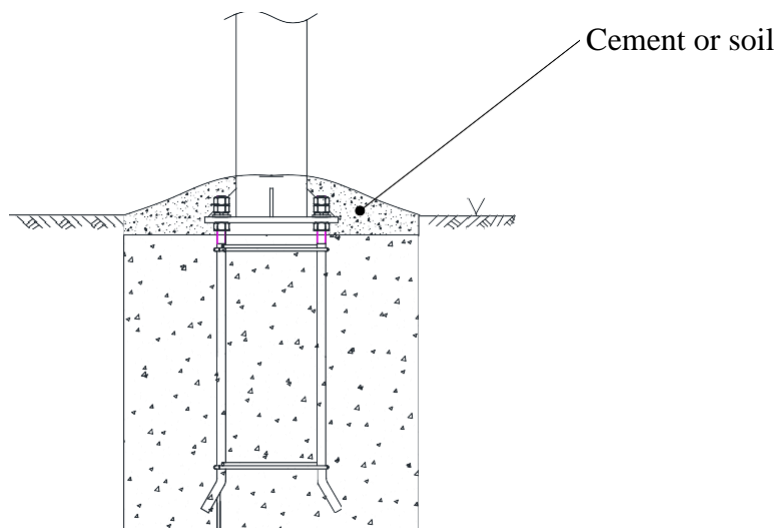


③ Put the spring washer and flat washer through the screw stud and then put them on the map base and lock with nuts. See Figure 9.



**Figure 9**

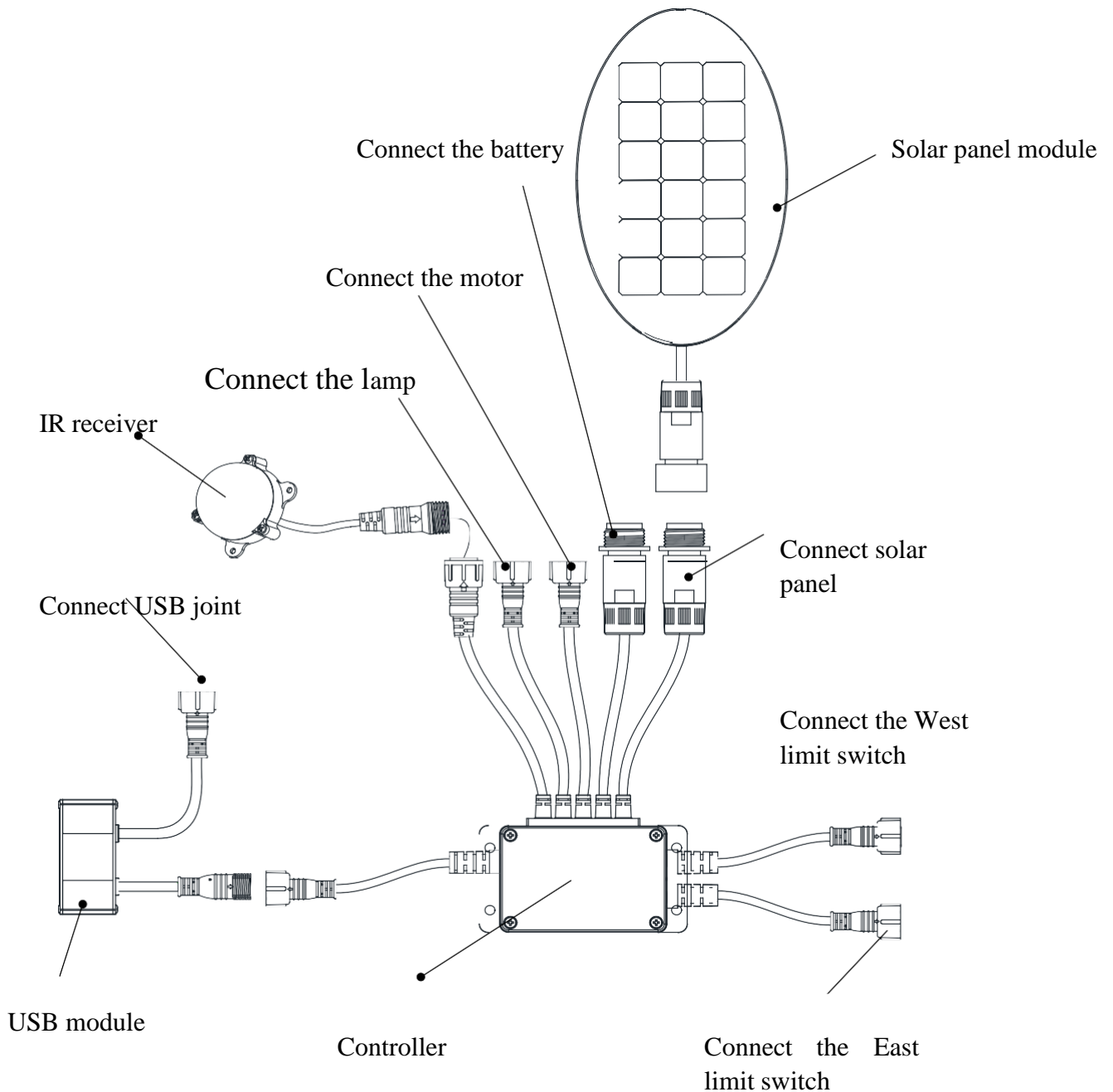
④ Fill concrete or clay to the height of floor. See Figure 10.



**Figure 10**

## 7.6 Controller Wiring

Open the battery box door, put in battery, controller, and IR receiver, then connect the controller, solar panel and battery followed figure 11



**Figure 11**

⊗ Check the identification on device joints to make sure connect them correctly.

## 8. Notice

- As solar LED street light is powered by sunshine, it's better to be installed in places with sufficient sunshine. If there is shade or if a building blocks the sunshine, it's recommended to reduce the light power accordingly in case light automatically is turned off because of the lack of solar which will bring a 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 because it might cause damage.
- Source power is fragile. No hitting or touching with sharp objects
- Don't remove or replace controller by yourself. If any problems, please contact manufacturer for confirmation and replacement.

## 9. Light Source Power and Adjustment Methods

The longitude and latitude differences are in different installation areas, seasonal and climatic differences are installed in the same area with light direction in different mounting points. Specific environmental differences might cause difference in solar power generation capacity for the lamp. To ensure every lamp can work properly and steadily while prolonging its service life, certain solar power (includes light-on time as well if necessary) should be able to make corresponding adjustments after installation



The detailed adjusting principle as follows:

- 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)
- 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.**