

User Manual

15W Portable Foldable Solar Panel Charger

- Suitable for small fish pumps, small fans, small motors and other small equipment
- Suitable for outdoor watch GPS earphone security camera cell phone
- Suitable for emergency use of all electronic products

Description

Thanks for choosing portable solar charger. We believe it will bring much convenience to your life. The solar charger is light weight and durable. It can convert the solar energy into electric power charge power banks and other electronic devices anywhere and anytime. It can be used together with power bank for power the electronics. This solar charger makes full use of flexible solar cell which is small in size, light, high efficiency. It can immediately produce low cost renewable energy.

Functions

- USB output: Supports other low-current devices, GPS devices, watches, small pumps, security camera, etc. Support mobile phone and other electronic devices.
- Built-in regulator system making the output more stable.
- Low voltage output without safety risks.

Features

Works well with low-light sensitivity Integrated high quality lamination product , long lasting product comparison. Best solar products with light weight, portable and stable performance High efficiency monocrystalline silicon $\geq 20\%$ built-in voltage regulation circuit

Charging status Note

This device does not have an indicator light, charging refers to the indicator light of the charging device.
Note: If the device indicator light is not lit or the charging is slow, it means that the light is not ideal, please adjust the product angle or position.

How to use

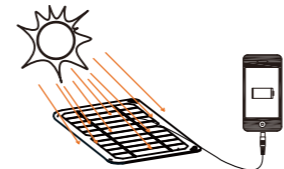


It is not recommended to use solar power in the following environments

- Cloudy, rainy, snowy, smog weather
- Fluorescent lamps
- Inside the aircraft, inside the car
- Indoors (behind window glass).

Charging Electronic Devices

The solar panel under direct sunlight, connect solar charger with the electronic device through power output cable, the charging signal will be shown on your electronic device, or if the sunlight is no sufficient, the solar charger can be connected with power bank for energy storage.



- the Auto-restart function allows consistent charging even when moving in or out of the shadow.
- If the electronic device shows: "charging is temporary unavailable" or no sign for charging. Please pull out the output cable and reconnect, or adjust the angle of the Solar panel to expose more sunlight.

Note

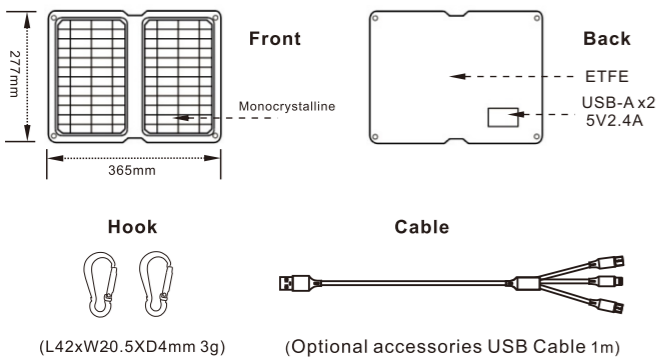
- Solar panels are placed behind the window glass of cars and houses, and the glass transmittance is 85%, which greatly affects the light intensity
- Blocking even a small part of a solar panel, such as a leaf, has the potential to reduce power by a lot
- Different latitudes have different light intensity and different power, you can check the local light intensity online.
- The tilt angle is much higher than the horizontal angle light intensity.
- The temperature of the solar panel is high, which affects the output power.
- Violent use, falling, resulting in invisible damage to solar panels, less power.
- The different color of the solar chip is the unique characteristic of the thin film chip, and the power generation performance is not affected, please refer to the actual product.

Power of solar panels:

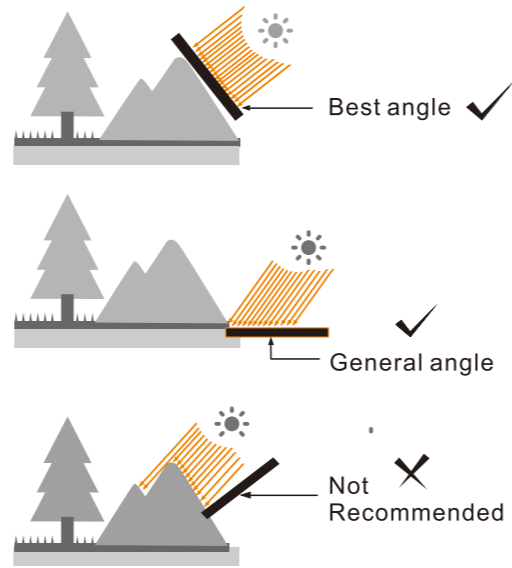
- The nominal power of the solar panel is the maximum value tested according to the standard test conditions. (Standard test condition test (STC): emissivity 1000W/m² AM1.5 times spectrum, component test temperature 25°C) It is difficult to meet the above conditions in actual use.
- When there is strong light, the power of the solar panel can reach about 70% of the rated power, low light can reach about 20% of the rated power.
- During the day, the average power of low light and strong light power is calculated, generally according to about 50% of the maximum value.
- When calculating the output energy, the energy output in a day is generally calculated according to the average of 4.5 hours.
- Use solar panels to charge the device, refer to the described standards for the power above.

Solar Charger & Accessories

Cell type: Monocrystalline
Rated Peak Power (Pmax [W]): 15W(Standard test conditions)
Nominal power: 15W
Actual maximum power: 13W(87%)
Open Circuit Voltage (Voc [V]): 7.4V
Short Circuit Current (Isc [A]): 2.5A
Module Efficiency (%): 20%
Dimensions (LxWxD):
7.2x 10.9x 0.4 inch (182x 277x 10 mm) - folded
14.4x 10.9x 0.1 inch (365x 277x 2.7 mm) - unfolded.
Output ports: USB 2.0x2 (5V/2.4A Max)



Lighting angle



Warnings

- Please avoid excessive light exposure for long time storage.
- Avoid placing in the high temperature(>70°C), humidity and corrosive environments.
- Do not reverse charging to the solar charger to avoid damage to the internal circuit.
- When charging ,do not block any part of the solar panel.
- The charging performance of this product depends on many factors, including solar exposure angle, weather conditions, ambient temperature, etc.
- It is recommended to use this product outdoors, and it is necessary to avoid blocking the solar panels when using, otherwise it will greatly reduce the power generation and affect the charging experience.
- When the lighting conditions are not good, such as indoors, in the car, in the balcony, cloudy, rainy, cloudy, smog, etc., the output current of this product is small or can not work, can not charge the battery product.
- Do not wipe or soak with water, chemicals and corrosive liquids. Immediately wipe the product dry with a dry cloth when wet.
- Do not open, alter, reassemble, drop, shake or bang the solar connector.
- Do not connect USB out (+) and input(-) ends to short the circuit.
- Do not discard the product in water or fire to avoid damage to charger circuit.
- This product provides USB (Type A) output interface, please choose the appropriate cable, or choose the corresponding accessories of this product.

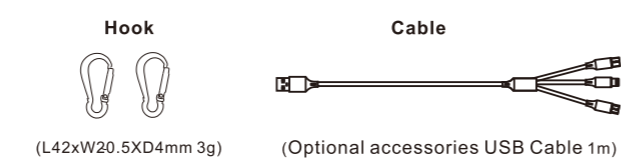
Q&A

- Is it harmful to use solar panel to charge mobile phone directly?
- No, Built-in regulator system making the output more stable.
- Is this solar panel waterproof?
- Yes, this solar panel is waterproof.
- Is the solar panel limit to the security inspection of subway and plane?
- No, it can be taken to the subway and plane.
- Can 2 solar panels be used in series, in the case of small current for one solar panel?
- Yes, the solar panel is equipped with a USB port, which can be connected with cable.

User Manual

20W Portable Foldable Solar Panel Charge

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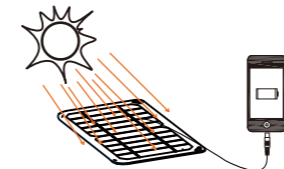


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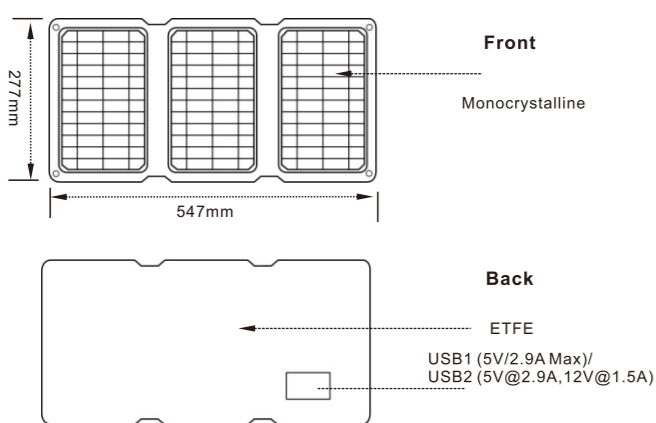
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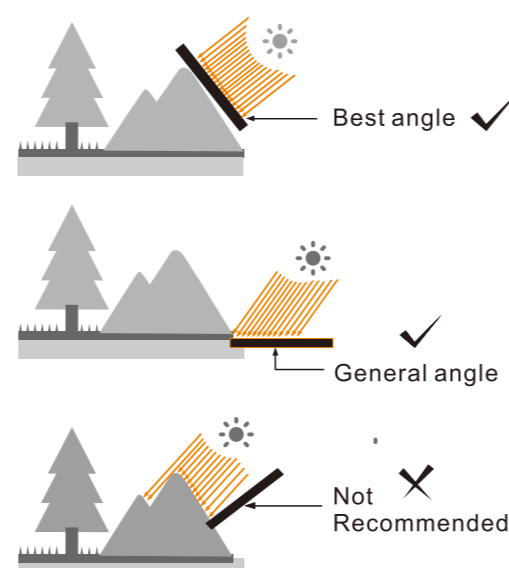
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Solar Charger & Accessories

Cell type: Monocrystalline
Rated Peak Power (Pmax [W]): 23W
(Standard test conditions, Irradiance 1000W/m², battery temperature 25°C, AM=1.5)
Nominal power: 20W
Actual maximum power: 20W(87%)
Open Circuit Voltage (Voc [V]): 13.5V, Short Circuit Current (Isc [A]): 1.6A
Module Efficiency (%): 21.5%
Dimensions (LxWxD):
21.5x 10.9x 0.52 inch (547x 277x 13 mm) - unfolded
7.2x 10.9x 0.1 inch (183x 277 x 2.7 mm) - folded
Output ports: USB1 (5V/2.9A Max)/USB2 (5V@2.9A, 12V@1.5A)



Lighting angle



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