



**Sunny Tech**  
**太阳能科技**

**ST-9001 Versatile Solar Charger**  
**User Manual**

**ST-9001 太阳能多功能充电器**  
**使用说明书**

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## Company Profile

Shenzhen Sunny Technology Co., Ltd is a green high-tech enterprise which integrates research and development, manufacture and sales in solar energy, telecommunications and game consumption electronic products. The company takes new high-technology innovation as key factor, implements the service policy integrating technology development, manufacturing, brand promotion and consultation service, and takes technology as leader, market as guide, energy saving through technology as tenet and saving energy for all the humankind as its mission to realize a comfortable and healthy environment!

Sunny Technology Co., Ltd owns a powerful and experienced development team including senior engineers with many years overseas working experience. With its powerful Research and Development force, the company keeps on developing and manufacturing new high-quality products and providing best service to meet the market demands. It has already cooperated with several well-known enterprises abroad (the United States, Japan) to develop new products and all obtain substantial and satisfying fruits.

At present, the company provides the products including:

- } Solar charging and lighting series (solar charger, LED information display screen, solar lawn light, solar street light, solar courtyard light, solar warning light etc.)
- } DTV (Digital Television) transmission series (European DVB-T, DVB-S, DVB-C, American ATSC, Japanese ISDB-T, Chinese DMB, etc.)
- } Telecommunications series products
- } RF wireless transmission series (from 27M to 2.4G)
- } Game products
- } Small electronic application series products (electromagnetic oven, hand operated floodlight, charged flashlight, LED light etc)
- } Doby earphone / audio, and Bluetooth products.

Sticking to the “science and technology prospering the cause, people first and brand promotion” management strategy, the company carries forward “independent innovation” enterprise spirit, and takes “technical innovation, super excellent quality” as its quality policy in order to continuously exceed your expectation and serve you better with our reputation, passion and technology! Save energy for you! Save energy for the world! Sunny Tech, Create Energy!

# ST-9001 Versatile Solar Charger

## User Manual

### Product overview

ST-9001 series solar charger, owning the patent of the technology of intelligent voltage adjusting, can output voltage and current on different levels. It can charge up most brands mobile phones or USB interface digital products under sunshine directly and also can charge up the devices mentioned above without sunshine through releasing electric energy stored in it. It is convenient for you to take with when you are out on business, on travel, on a long-distance bus or ship, in the fieldwork, etc. It is a portable, environmental-friendly, lightweight, flexible, durable and versatile charging product.

USB interface digital products refer to the digital products that are equipped with built-in chargeable battery and can be charged via USB interface

### Technical Parameters:

Peak power supplied by photocell: 1.54W  
Operating voltage: 5.5V (max)  
Charging current: 280mA (max)/3.8V  
Battery capacity: 2500mAh  
Output voltage: 4.5V-9V (adjustable)  
Output current: 1A (max)  
Output power: 4W (max)  
Charging time: 8-10 hours (illuminating scope: 100mW /Cm<sup>2</sup>)  
3-4 hours (indoor power: 5V /800mA)  
Dimensions: 137\*79\*24 mm  
Weight: 240g

### Specifications:

Input interface: DC interface  
Output interface: USB interface  
Material: Fireproof plastic (ABS)  
Intelligent LED display: 3 colored indicators (red, orange, green) for status of remaining power while charging and discharging.  
Flash light: LED light (For Lighting)  
Control switch: ON/OFF/LED  
Output voltage switch: 4.5V/5 V/6.3V/9V

### Application Scope:

It is suitable for most brands cell phone and electronic digital mobile equipment whose charging voltage ranges from 4.5V to 9V.

For instance,

4.5V: most cell phones, and digital camera of 3~4.5V;  
5V: PDA, palm game player, electronic dictionary, learning machine, MP3, MP4,  
MD, CD, Personal stereo, shaver, digital camera of 4.7~5.3V and etc.;  
6.3V: digital camera;  
9V: portable DVD, DV, digital camera of 7.5~9V and etc.

Note: The above voltage value is just for reference. As for the detailed voltage, it depends on charging voltage of each product. 5V is better for NOKIA cell phone.

### **Working principle:**

Under sunlight, the product transforms the light energy absorbed by solar panel into electric energy and then through the control circuit to store electric energy in the built-in battery, or directly charge cell phone or other digital products with the electric energy. In the absence of sunlight, the product can be charged with a DC adapter, and it also can charge other devices at the same time.

### **Operation instruction:**

#### **1. Charge under the sunlight:**

This is the process to charge the built-in battery. Firstly, open the cover, then keep the solar panels facing the upright sunlight, and the Tri-colored indicator will become "red", which means the lithium battery is being charged and the voltage is under 3.8V; if the light becomes "orange", the volume of electric capacity is larger, the volt is between 3.8-4.1V. If the light becomes "green", the built-in battery is full. When you close the cover, the tri-colored indicator is off and the solar panel stop working.

#### **2. Charge with the adapter:**

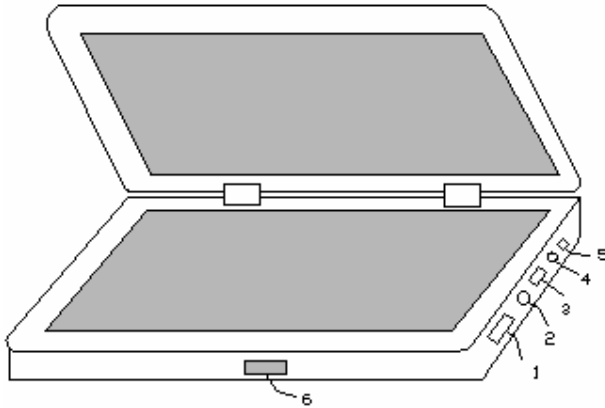
This is also the process to charge the inside battery. Connect the DC adapter with the solar charge by plugging cable of the adapter into the DC port. Then connect the adapter to the AC power, and the tri-colored indicator will become "red"; around 3 hours later, the tri-colored indicator will become "green" which indicates that the battery is fully charged, please disconnect the adapter.

#### **3. Charge the portable digital device:**

This is the process to charge digital device. For instance, firstly plug the cable into the USB interface of the charger and switch voltage option switch to the right volt according to your mobile phone's charging voltage. Then select the right connector according to your mobile phone and connect the cable with you cell phone and switch the Control switch to "On". And the Tri-colored indicator will become red. When the charging indicator of your cell phone is on, that means the charger is at work. When your cell phone is fully charged, please switch the Control switch to "Off" and pull out the cable from the charger. In addition, you also can open the cover in the sun to charge the Li-ion battery and cell phone at the same time.

Note: In order to activate the built battery, please charge the product for more than 12

hours by DC for the first three times. When charge your equipments, you should always switch the control switch to “ON”. If you only want to charge the built-in battery of the solar charger, you should switch the control switch to “OFF”.



- 1—USB interface
- 2—LED light (For lighting)
- 3—Control switch (ON/OFF/LED)
- 4—Tri-colored light (show status of remaining power while charging and discharging)
- 5—DC interface
- 6—Output voltage switch (4.5V, 5 V, 6.3V, 9V)

**Notice:**

- a) Before using the product, please charge up the storage battery by direct current or sunlight.
- b) Don't charge the equipment beyond the voltage range; otherwise it may cause damage to the charger or components.
- c) Don't keep it in a hot (over 60 degree centigrade), humid and caustic environment. Keep it away from fire.
- d) Please wipe wet surface with the towel, don't toast it on fire.
- e) Keep away from water and smear, and don't fiddle with the button and input/output port with sharp tools.
- f) Don't litter the product into fire, to avoid causes explodes.
- g) Tearing down the product privately is strictly forbidden.
- h) If the indicator light doesn't work when set the switch on the LED/ON end, it is probably caused by the lower voltage of the built-in storage battery. Because of the protection of the built-in battery's protecting circuit, it would stop working for self-protection. And it will not work until the built-in storage battery is charged up.
- i) In order to activate the built-in battery, the first three charges should continue 12 hours.

**Package of the Product:**

One ST9001 solar charger;  
Accessories: 100-240V DC adapter  
USB cable  
User Manual  
7 connecting adaptors for 6 brands cell phones

**Terms of service:**

1. 1 year Warranty
2. You are welcome to visit our website: <http://www.stdvb.com> for technology support.

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