

Solar Powerbank

30W SOLAR CHARGING STATION USER MANUAL & PRODUCT SPECIFICATIONS

Model: SDP-Y-30W

Thank you for choosing the Solarland® Solar charging station. Please read this manual carefully before setting up and using the product. Pay close attention to all instructions and keep this user manual for future reference.

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1. Product Introduction

This product is a 30W solar charging station. It transforms natural sunlight into DC electricity, which is then stored in the rechargeable battery. The battery can be used to power the provided LED light bulb, and charge other small DC devices, such as mobile phones.....This product is designed for rural areas where no grid exists and can be adapted to camping, RV and other outdoor activities. This kit is an ideal design for disaster relief organizations!

1.1 Features

- Compact, portable and convenient
- Quick and easy installation
- Simple design; ...adapt the system to meet your requirements
- LCD display clearly shows system status at all times
- Reliable, maintenance free performance
- Power generation and storage for uninterrupted use in places without electricity
- Various applications ranging from everyday to emergency power supply

1.2 Technical Data

Component		Parameters	SDP-Y-30W
Powerbank	DC Controller	Type	SPB-DY-17
		Rate Voltage	12V
		Max. PV Charging Current	10A
		Max. PV Input Voltage	≤25V
		High-Voltage Disconnection	14.4V±0.3V
		Float Voltage	13.8V±0.3V
		Reconnection Voltage	13.3V±0.3V
		Low-Voltage Disconnection	11.0V±0.3V
		Low-Voltage Reconnection	12.0V±0.3V
		Loop Voltage Drop	<5% Of The Rate Voltage
		Self-Consumption	<5% Of The Rate Current
		Temperature Compensation	(-3mV~-7mV)/°C
	DC Output	USB Rate Output Voltage/Current	5.0-5.6V 500mA
		DC Rate Output current/Voltage	1A/12VDC Per Outlet
		DC Cigarette Lighter Socket	10A/12V
	Battery	Battery Tape	Maintenance-free lead-acid batteries
Battery Capacity		18Ah	
Voltage		12V	

Component		Parameters	SDP-Y-30W
Powerbank	Other	Dimension(L×W×H)	220×112×271.5mm (8.7"× 4.4"×10.7")
		Weight (with battery)	7.4KG (17lbs)
		Warranty	1 Year
Solar Panel		Type	SLP030-12 (030011201B)
		Peak Power Pm(W)	30W
		Open Circuit Voltage (Voc)	21.6V
		Max. Power Voltage (Vmp)	17.2V
		Short Circuit Current (Isc)	1.93A
		Max. Power Current (Imp)	1.74A
		Cable	2×1.0mm ² ×5m

1.3 Storage and Working Environment

A. Storage

- Ideal Temperature Range for Safe Storage:
- Environmental temperature:
Powerbank (with battery): -10°C ~ 40°C;
Solar panel: -40°C~ 90°C;
- Avoid humid conditions and moisture, such as condensation.
- Keep away from erosive gases and/or liquids;
- Placed in the ventilation and away from dust and dirt area;
- When storing for long periods it is important to completely charge and discharge the system at least once every 6 months.

B. Working environment

- Powerbank (with battery): -10°C ~ 40°C;
- Solar panel: -40°C~ 90°C;
- Moisture: 0 ~ 90%;
- Elevation: ≤3000m;
- Avoid humid conditions and moisture, such as condensation.

2. Installation Instructions

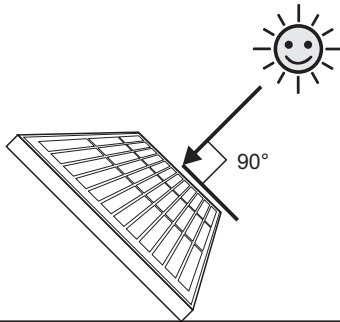
2.1 Kit Components (All Sold Separately)

Component	Description	Qty.
Solar Panel	SLP030-12 (030011201B) (with 5m cable)	1pc
Powerbank	SPB-DY-17 (Maintenance-free lead-acid battery 18Ah/12V)	1pc
LED Bulb	SLL-L2003D (CE) (3W/12V)	1pc
LED Cable	5m Cable With Switch (56000033001)	1pc
Lampshade	SLZ-D01	1pc
Phone Charger	SLS-M06 (DC/DC converter)	3pcs
Phone Charger Set	SLS-P01	3sets
Adapter (*optional)	1: SDP-Y-1 (15V 3A American standard) 2: SDP-Y-2 (15V 3A European standard) 3: SDP-Y-3 (15V 3A GB)	1pc
USB cable (*optional)	SDP-Y-4 (1x10 in 1 USB cable)	1pc
Other	User's Manual	

2.2 Solar Panel Installation

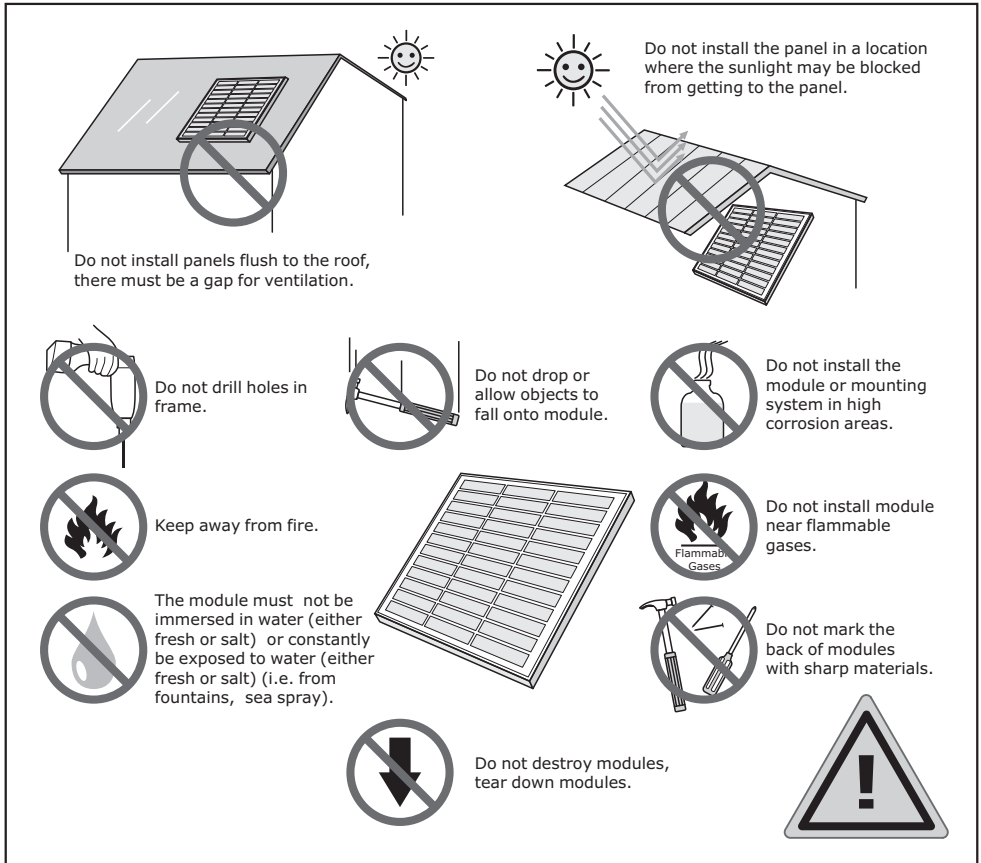
Orientation & Tilt

The solar panels perform best when set up at 90° to the direct sunlight.



NOTICE

- Panels should be installed in a well ventilated location. High temperatures will reduce the performance of module, lowering power output.
- The solar panels are water resistant but not waterproof. **DO NOT** submerge in water or expose the panel to a continual flow of water.



2.3 Powerbank Installation

It is most important you follow these instructions properly otherwise damage and/or injury can occur.



NOTICE

- Place and operate the unit on a stable and level floor.
- Do not spray or splash water directly onto the unit.
- Keep the unit away from direct sunlight.
- Keep away from open flame and high temperatures (Keep well ventilated).
- Avoid placing near corrosive gases and/or liquids.
- Place in a well ventilated, cooler location.
- Do not insert objects and/or liquids into the unit.
- It is advised that only a qualified professional open the box and perform maintenance.

2.4 Connecting and using the solar charging station.

A. Connecting the system

- Solar panel to Powerbank (Ensure the Powerbank is switched to the OFF position)
- Turn on System power switch

B. Using the system

• **Power switch:**

Controls both the charging and discharging functions.

Do not switch it off during charge and/or discharge.

Switch it off when not using it for long time, or the unit is in storage.

• **Charging Function:**

Connect the solar panel.

Switch on the power switch, the LCD will show the status of solar powerbank

The LCD displays "Charging" when the battery is being charging;

The LCD displays "Charged" when the battery is fully charged;

The LCD displays "No-Charge" when the battery is not being charged;

• **Discharging Function:**

The LCD displays "DC ON" when the DC output can be used.

The LCD displays "DC OFF" when the DC output can not be used.

The system features a Low Voltage Protection; ...when the battery is at low voltage the LCD will display an "L".

When low voltage occurs disconnect all loads and recharge the battery.

• **Connections; ...this device features the following output connections**

4 x DC Outlets: 1A/12V DC per Outlet

1 x Cigarette Lighter Socket: 10A/12V DC

4 x USB Outlets: MAX current 600mA/5V DC



NOTICE

- This Solar Charging Station is designed for indoor use only.
- Charge the system for 2 full days before use. The battery has a self discharge function and will likely have discharged during storage and transportation.
- If any other DC device is applied, please check specification of device first. Don't overload the controller.
- When replacing the battery, please take care to ensure the battery cables are connected correctly. Red Cable is positive. Black cable is negative.

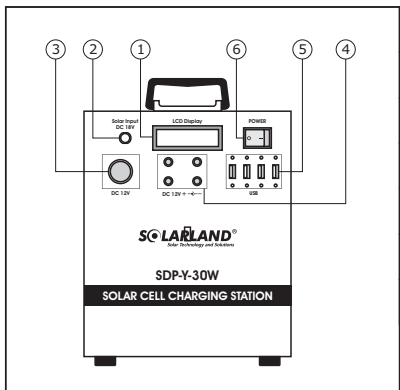
3. Operation

3.1 Performance

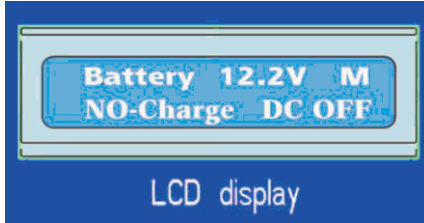
- Lighting function: ...the solar panel will charge the battery during the daylight hours and the battery supply power in the night.
- USB port is designed to charge digital products such as a cell phone, digital camera, MP3, MP4 etc.
- The system features the following protections:
- Overcharge Protection; ...The system switches off automatically to protect against battery overcharge, avoiding battery damage.
- Over Discharge Protection: The system switches off automatically to protect against battery over discharge, avoiding battery damage.
- Overload Protection: The system LCD display will show a "D_L" when overload occurs and the system will automatically switch off.
- Short Circuit Protection: The system features short circuit protection.

3.2 Powerbank Layout Explanation

Item	Description
1	LCD display
2	Solar panel and adapter charging port
3	Cigarette lighter plug
4	DC 12V Output (4 Outlets)
5	USB Output (4 Outlets)
6	System power switch



3.3 LCD Display Description



- Battery 12.2V: Indicates battery voltage.
- Battery Capacity: The letters H, M or L will appear in the top right corner of the display indicating either High, Medium or Low capacity battery is in use.
- NO-Charge: Indicates battery is not being charged.
- Charging: Indicates the battery is being charged.
- Charged: Indicates the battery is fully charged.
- DC ON: Indicates load can use.
- DC OFF: Indicates load can't use.

4. Operation

Problem	Possible Reason	Corrective Action
LCD display not working	Power Switch may be damaged	Replace Switch
	Loose Battery Connections	Check Connections
	Damaged Battery	Check Battery Voltage and Replace
DC output not working	DC Damaged	Replace DC
Solar panel connected, but no charging status on the LCD	Solar panel is not correctly positioned	Ensure the panel are paced in full sunlight with no shadows or other obstructions
	Insufficient sunlight	In cloudy and rainy conditions the solar panel will generate a small charging current. This is normal
LCD displayed D_L	Over load or short circuit has occurred	Reconnect the circuit after trouble shooting

5. Warranty

The Solarland DC Powerbank has a warranty of 1 year from date of invoice.

- Please read these instructions very carefully. The manufacturer shall not be liable for damages to the system, including the battery, caused by misuse and/or the user failing to follow the instructions as set out in this manual.
- The manufacturer shall not be liable for damages caused by service or repair by an unauthorized person, incorrect set-up & installation or bad system design.
- The warranty is immediately void if batch numbers, serial numbers or identification-marks are manipulated or are unidentifiable.
- The warranty covers parts and components only.
- The warranty does neither cover the cost of transportation for the return of the system or components, nor for the additional shipment of replacement components.
- The warranty does not cover the cost for installation or reinstallation of the system.

Note:

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General Disclaimer

In no event shall the manufacturer liable for may damage or personal injury caused by non-compliance to the operating instructions and safety suggestions in this brochure.

The manufacturer will not bear any responsibility for misuse, damage, injury, incorrect installation and/or system design as such.