

GGXingEnergy®



### 60WattSolar Charger for 12V Battery

As one of the China solar charger for 12v battery suppliers, GGXing Energy always focus on providing the high quality solar products and ensured service to customers. We can provide the bulk and wholesale solar charger for 12v battery, follow the OEM and ODM requests, or arrange the drop shipping orders. Welcome to buy discount solar charger for 12v battery or just send us your price inquiry.

### 60WattSolar Charger for 12V Battery

Here is an easy-maintainable GGXing Energy® 60watt solar charger for 12v battery, designed to be foldable and portable, improved with ETFE craft, matched with a solar controller suitable for both 12v lead-acid and lithium batteries, equipped with DC and USB outputs, it is great for your camping trip.

### 60Watt Solar Charger for 12V Battery Parameter

#### Solar Panel

Solar Panel Max Power	60 Watt (2 x 30 watt)
Solar Cell Type	A-grade monocrystalline
Solar Cell Efficiency	>22%
Optimum Operating Voltage (Vmp)	18V
Optimum Operating Current (Imp)	3.3A
Open-Circuit Voltage (Voc)	21.6V
Short-Circuit Current (Isc)	3.6A
Output	DC port: 18V3A (max) USB Port: 5V/2.1A (max) QC3.0 Port: 5V9V12V 24W (max) TYPE-C Port: 5V-15V 18W (max)
Test Condition	STC Irradiance 1000W/m <sup>2</sup> , TC=25°C, AM=1.5
Operating Temperature	14°F – 149°F (-10°C – +65°C)
Material	ETFE + EVA layer + Solar Cell + PCB backer sheet + Canvascloth cover
Extended Size	32*21.2* 0.4 inches
Folded Size	21.2* 14.2 * 1.2 inches
Weight	2.5 kg (5.5lb)
Color	Black / Camouflage
Certification	CE / RoHS / FCC
Warranty	1 year

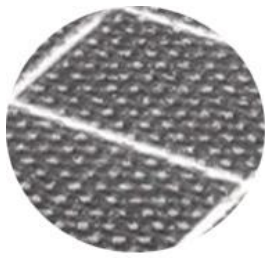
#### Solar Controller

Battery Voltage	12V 24V Auto (Here matching the 60w solar panel, please only use for 12V battery.)
Battery Type	12V lead-acid battery, 12V ternary lithium battery, 12V LFP battery
Working Mode	PWM
Charging Current	10A
Discharging Current	10A
Max Solar Input	23V(for 12V battery)
Equalization	Lead-acid: 14.4V, nonadjustable Ternary lithium: 12.6V, nonadjustable LFP: 14.6V, nonadjustable
Float Charge	Lead-acid: 13.7V, adjustable 13V-15V Ternary lithium: 12.0V, adjustable 11.5V-12.5V LFP: 13.8V, adjustable 13V-14.5V
Discharge Stop	Lead-acid: 10.7V, adjustable 9.5V-11.5V Ternary lithium: 9.0V, adjustable 8.5V-9.5V LFP: 10.0V, adjustable 9.5V-10.5V
Discharge Reconnect	Lead-acid: 12.6V, adjustable 11.5V-13V Ternary lithium: 10.5V, adjustable 10V-11V LFP: 12V, adjustable 11.5V-12.5V
USB Port	2 x USB, 5V2A (max)
Self-consume	<10mA
Operating Temperature	-35°C~+60°C
Size	133*70*35mm
Weight	140g
Certification	CE, RoHS

### 60Watt Solar Charger for 12V Battery Feature

ETFE lamination with better quality and longer service life

This GGXingEnergy® 60watt solar charger for 12v battery is updated with ETFE lamination, which is a much higher quality level than PET one. It is with 95% light penetration and honeycomb structure to absorb more sunlight to improve the charging efficiency. Also the better resistance for heat and corrosion can extend the life-span of the 60watt solar charger for 12v battery.



Scratch-Proof

Higher Light  
Transmittance

Durable

Temperature  
Resistant

## ETFE Lamination



Humanization design good for outdoors

The soft handle can let you feel comfortable and easy to carry the 60watt solar charger for 12v battery. There are only two solar panels and to be folded, easy to be set up and taken in when use. Also such a light weight and small solar charger for 12v battery is super portable. You can fix it at the top of your camper, or put it at the windshield of your car, or hang it on a tree, no restriction of use place. The output cable of the 60watt solar charger for 12v battery is 2m to be convenient for long distance connection with the battery.

The product body is waterproof (except the junction box and cable output lead) and durable enough to endure the outdoor terrible condition. The 600D PVC fabric is good for rugged ground. The ETFE coat is better for scratch proof and easier for cleaning.

Adjustable kickstands to enhance sunshine raying

A right angle for the solar panel facing sunlight can convert out more power. As sun position is changed during the day, adjust the kickstands at the back of the 60watt solar charger for 12v battery can realize a better angle. This can get 25%-30% more sunlight than lying flat.

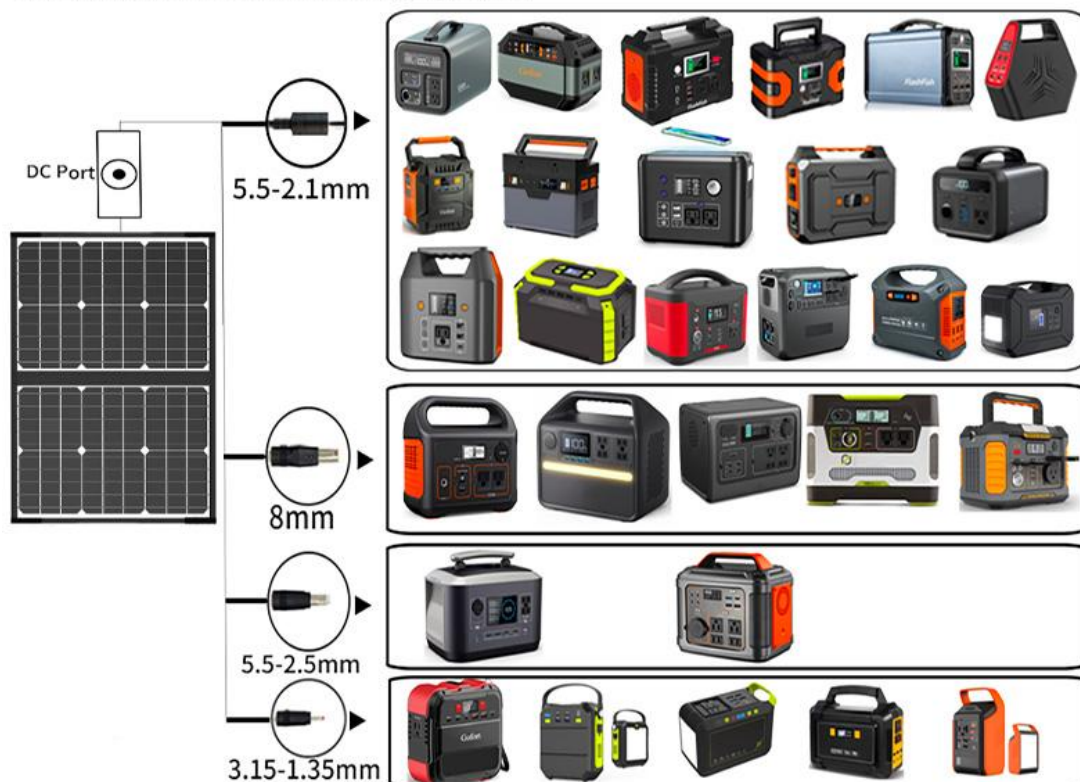
4.jpg

Wide compatibility

Compatible for most solar generators and portable power stations

Via the DC port (18V3.3A max) of this 60watt solar charger for 12v battery, you can get your portable power station be charged via sunshine directly, solving the trouble as lacking of wall outlet. 4 DC connectors are already in the package (8.0mm, 5.5x2.1mm, 5.5x2.2mm, 3.5x1.35mm). Other ones can be also added as per request.

**Different sizes of DC connectors for most solar generators**

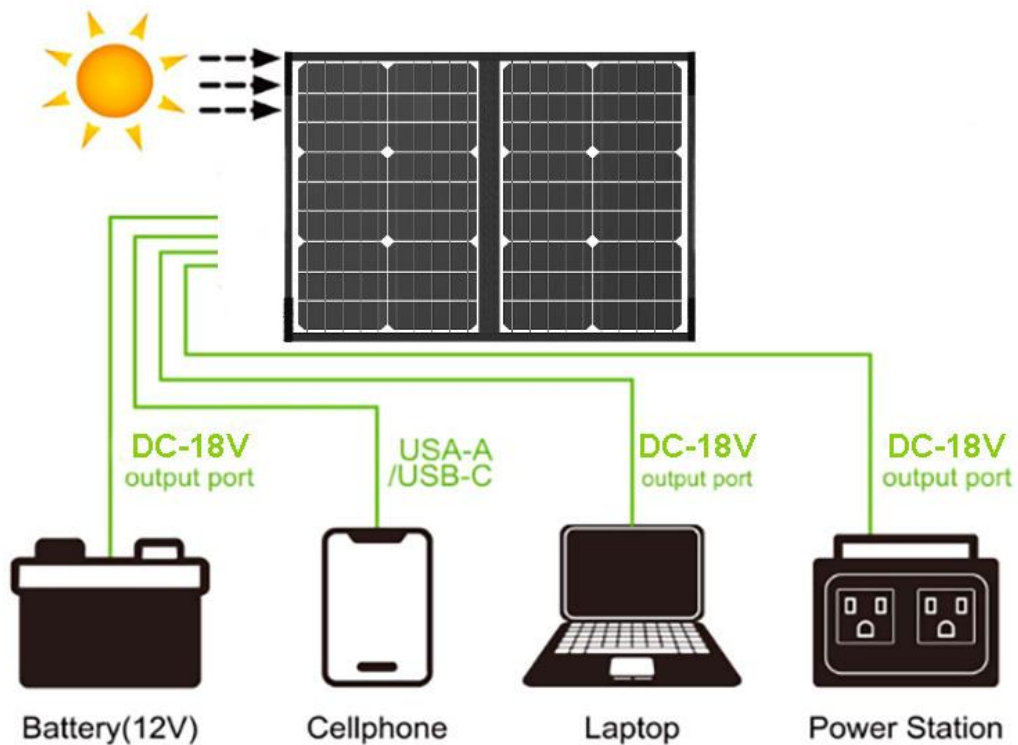


Suitable for laptop / notebook

A laptop or notebook can be also charged via this 60watt solar charger for 12v battery. That will be plug in and play. Find the right connector for your laptop, then realize the connection with the 60watt solar charger for 12v battery under outside direct sunshine will be ok. (If there is no charging or discontinuous charging, please try it again under brighter sunlight or use a larger solar panel.) There are 10 DC adapters for most brands of laptops on market (Above mentioned 4 ones are from here).

Additionally functional with USB / QC3.0 / TYPE-CPort

Like phone, smart phone, iPhone, iPad, Apple watch, tablet, power bank, PSP, switch, bluetooth, earphone, GPS, music player, and other 5V USB supported small devices, or QC3.0 & PD protocol electronic devices can be also charged by the 60watt solar charger for 12v battery. No needing a battery or mains supply at all.



Matching with solar controller fitting for both lead-acid and lithium battery

A 10A PWM solar controller (installed with 0.5m connection cable for solar panel and 0.5m cable with battery clamps) will be in the package together with this 60watt solar charger for 12v battery. This solar controller can be used for 12V lead-acid battery, 12V ternary lithium battery, and 12V LFP battery. And it can provide short-circuit, open-circuit, reverse and over-load protection for your 12V RV / camper / motorhome / car / boat batteries.

### 10A PWM Solar Charge Controller








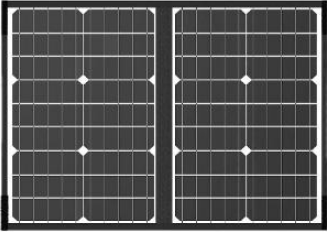

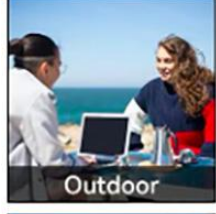





12V Lead-acid Battery



12V Ternary Lithium Battery



12V LFP Battery

 <p>Tablet</p>	 <p>Drone</p>	 <p>Camera</p>	 <p>Phone</p>
 <p>Laptop</p>			 <p>Camping</p>
 <p>Outdoor</p>			 <p>Climbing</p>
 <p>Travel</p>	 <p>Trek</p>	 <p>Hiking</p>	 <p>Portable power station</p>

Packing & Transport



## Exhibition

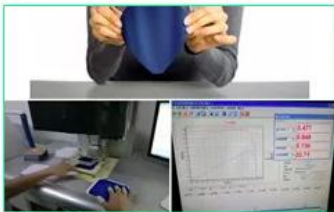




## Certification



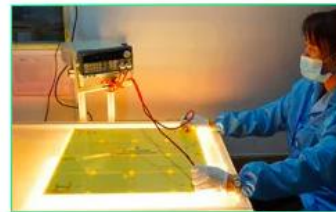
## Production Process



Power output testing for solar cell



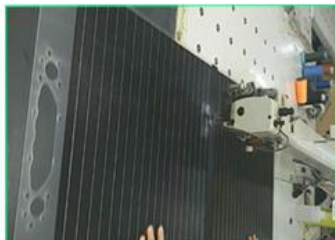
Solar panel lamination



Power output testing for solar panel



Pre-production preparation



Sewing on the solar panels



EL testing for foldable solar panel



Power output testing for finished product



Finished products waiting for clean



Finished products waiting for packing