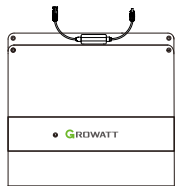


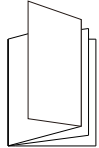
In the Box



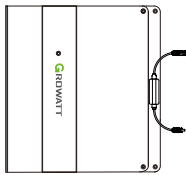
Protective Case



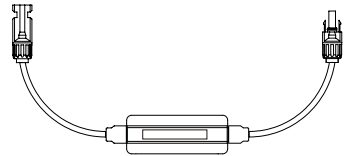
Solar Panel



User Manual and Warranty Card



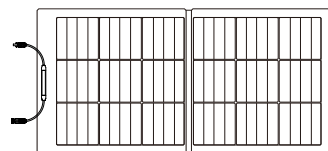
100W Solar Panel



MC4 Output

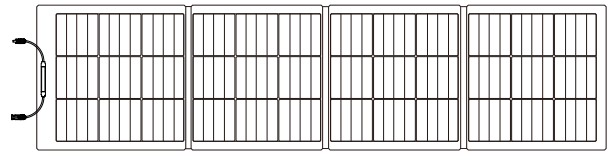
How it Works

When using this product, make sure that the front of the panel is facing the sun.



Front

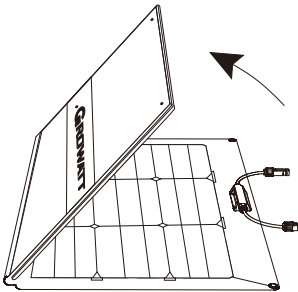
200W Solar Panel



Front

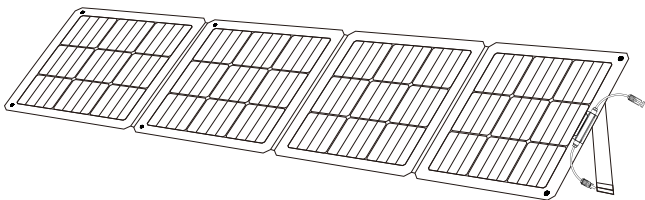
Step 1

Unfold and flatten the solar panel.



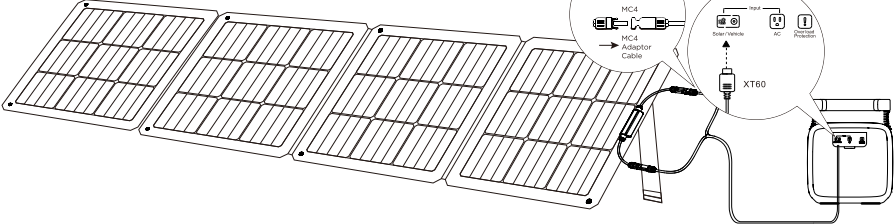
Step 2

Pull out the stand from the back of the panel and place it on the ground. Adjust the panel to make sure the front of the panel can receive sunlight directly.



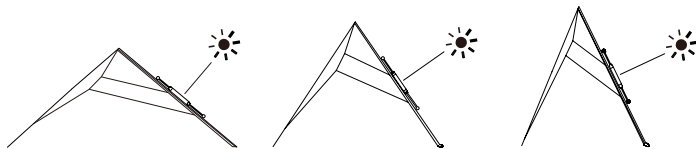
Step 3

Connect the solar panel to the portable power station with an MC4 to XT60 cable to recharge.

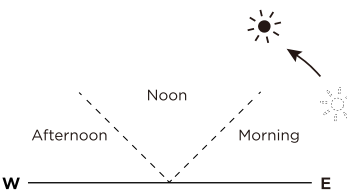


How it works

Your solar harvest is strongly correlated to the light intensity and it is maximized when sunlight and your panels form a right angle. By adjusting the opening angle of the stand, you can maximize your solar harvest and improve your solar charging efficiency. While charging your devices, avoid shadows on the panel which may result in efficiency reduction.



• The angle between the panel and the ground is adjustable from 45° to 80°.

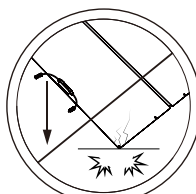


The sun's rays should be kept perpendicular to the panel surface for the best performance. A $\pm 10^\circ$ difference from this 90° right angle will only marginally affect your harvest, but will still yield an optimal amount of solar energy.

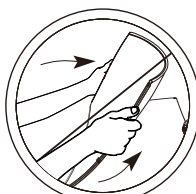
Things to Remember When Using Your Solar Panel

1. As the efficiency of solar panels depends upon light intensity and the tilt angle used, the charging power of the panel may be affected by a number of factors such as weather conditions, seasonal changes and locations. The installation and connection of this product should be carried out strictly in accordance with the instructions found in the User Manual.
2. Only the main body of this product is waterproof. The junction box and connectors should not be immersed in water.
3. This product must not come into contact with highly corrosive substances, or be immersed in corrosive liquids.
4. To avoid damaging the product, do not use sharp objects on the surface of the panel, and do not knock or hit the product.
5. Do not apply pressure to the panel or allow the panel to be dropped on any of its corners, sides or faces. Such actions may result in damage to the solar panel.
6. The panel must not be knocked, exposed to heavy pressure, or bent during transport or in use. We recommend that the panel is kept in a vertical position when being moved or stored.
7. When storing the panel, always ensure that the connectors of the junction box are not exposed to sunlight.
8. To avoid injury, this product and its junction box must only be opened or disassembled by qualified personnel.
9. Unwanted solar panels must be disposed of in accordance with the local regulations and requirements.

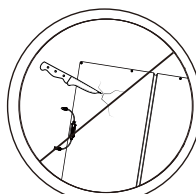
What Not to Do



Drop on the ground



Bend the solar panel



Strike with sharp or heavy objects

This Solar Panel contains glass inside. Behaviors above that damage the solar panel will cause the glass inside the solar panel to crack and reduce its efficiency, or even become unusable. The free warranty period does not cover damage resulting from improper use of the product.

Tech Specifications

100W Solar Panel	200W Solar Panel
Rated Power: 100W (+/-5W)	Rated Power: 200W (+/-10W)
Open Circuit Voltage: 24V (Vmp 22.8V)	Open Circuit Voltage: 24V (Vmp 22.8V)
Short Circuit Current: 5.2A (Imp 4.97A)	Short Circuit Current: 10.46A (Imp 9.93A)
Output Circuit Voltage: 21.16V (Vmp 19.15V)	Output Circuit Voltage: 21.16V (Vmp 19.15V)
Output Circuit Current: 4.96A (Imp 4.71A)	Output Circuit Current: 9.92A (Imp 4.42A)
Cell Type: Monocrystalline Silicon	Cell Type: Monocrystalline Silicon
Interface Type: MC4	Interface Type: MC4
General	
Total Weight: Approx. 3.6kg (7.93lbs)	Total Weight: Approx. 7.0kg (15.4lbs)
Unfolded Dimensions: 1170*540*25 ± 5mm (46*21.2*1.0 ± 0.2in)	Unfolded Dimensions: 2270*540*25 ± 5mm (92*21.2*1.0 ± 0.2in)
Folded Dimensions: 603*540*25 ± 5mm (23.7*21.2*1.0 ± 0.2in)	Folded Dimensions: 603*540*25 ± 5mm (23.7*21.2*1.0 ± 0.2in)
Warranty Period: 12 Months	Warranty Period: 12 Months

Testing and Certification



*Standard Test Conditions: 1000W/m² (92.9W/ft²), AM1.5, 25°C (77°F)

Q&A

Does the 100W/200W Solar Panel generate a full 100W/200W of power?

The nominal power output figures are laboratory results under test conditions. In most cases, it is normal for a solar panel not to deliver its full nominal power. Some of the reasons why this happens, as well as suggestions for getting closer to the nominal power figure, are given below:

1. **Light Intensity.** The amount of light shining on the panel will result in fluctuations in the power output. You are more likely to achieve the nominal power output figures when using the product on a clear day during the midday sun than when using the product in the morning or later in the afternoon. Weather conditions will also affect the amount of sunlight that shines on the panel, which means that you are much less likely to achieve the nominal power figures in hazy, cloudy, or rainy conditions.
2. **Surface Temperature.** The temperature of the solar panel surface will also affect the amount of power generated. The lower the surface temperature of the panel, the more power will be produced. For example, solar panels generate more power when used during the winter than during the summer. Solar panels generally reach temperatures close to 60° C (140° F) during summer. This reduces nominal power by 13%, despite the higher levels of light shining on the panel.
3. **Sunlight Angle.** In optimal light conditions, the sun's rays should remain perpendicular to the surface of the panel for best performance. Power output is only marginally impacted by sunlight hitting the panel within 10° on either side of this 90° angle.
4. **Panel Shading.** The surface of the solar panel should not be shaded during use. Shading caused by shadows, foreign objects and glass can all greatly reduce power output.
5. **Performance Issues Caused by Malfunctioning Panels.** If the panel still isn't generating power or its output remains far below expected nominal power figures after addressing the issues above, there may be an issue with the panel itself. Please contact Growatt Customer Support for assistance.

How much power can the 100W/200W Solar Panel generate under normal conditions?

This depends first and foremost on weather conditions. Generally speaking, on a clear day with no clouds in the sky, sunlight hitting the panel at a 90° angle usually generates 80%-90% of power in the 100W/200W panel. (Current light conditions are normally 800W-900W/m² (74.3W-83.6W/ft²) with a panel temperature of 50°C (122°F) under test conditions. Nominal power ratings are based on 1000W/m² (92.9W/ft²) in AM1.5 conditions with a panel temperature of 25°C (77°F) under test conditions. Power output figures close nominal values were normally observed in the midday sun during the winter.)

What should I know about the operating temperature, storage and use of the 100W/200W Solar Panel ?

The operating temperature of the Solar Panel is -20°C-85°C (-4°F-185°F). The panel should be folded and stored in its protective case. To extend the lifespan of the panel, ensure that the product is not exposed to external forces/impacts when not in use. The solar panel itself is made of glass and must not be dropped, pierced, bent, or sat on. These actions may break the glass and render the panel unusable. Any such damage will not be covered by the free warranty.

Can I use non-Growatt branded power stations with the 100W/200W Solar Panel ?

Yes, but only certain types. The power station used must be compatible with MC4 standards in order to work properly. In addition, other brands of power station may not offer the same levels of compatibility as Growatt's portable power stations, may have lower nominal power ratings, and may not offer the same levels of performance.

Can I connect both 100W and 200W Solar Panel Panels together in series?

Yes, but this is not recommended. While the voltages of the two panels are identical, the current ratings are not. This means that when the panels are connected in series, the current will be limited to that of the 100 panel and the full performance potential of the 200W panel cannot be released, resulting in a 1+1 < 2 scenario. Please purchase panels of the same size if you intend to connect multiple panels in series.

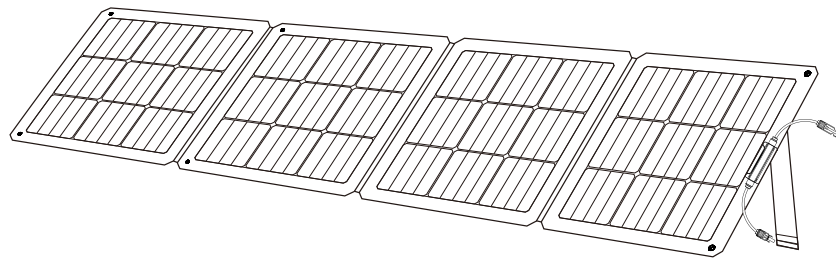
Can I connect Solar Panel in parallel?

We can connect 100W photovoltaic panels in parallel (only two) to make the current reach a maximum of 12A, but the effect of 200W photovoltaic panels in parallel is limited, because the maximum charging current of the infinity 1500 solar energy is 12A, which will lead to 1+1 = 1 scenario where the connected device limits the current to 12A. We do not recommend paralleling 200W PV panels unless you are using a different brand of power station with an input current of 20A or more.

GROWATT

SOLAR PANEL
100W / 200W

User Manual



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