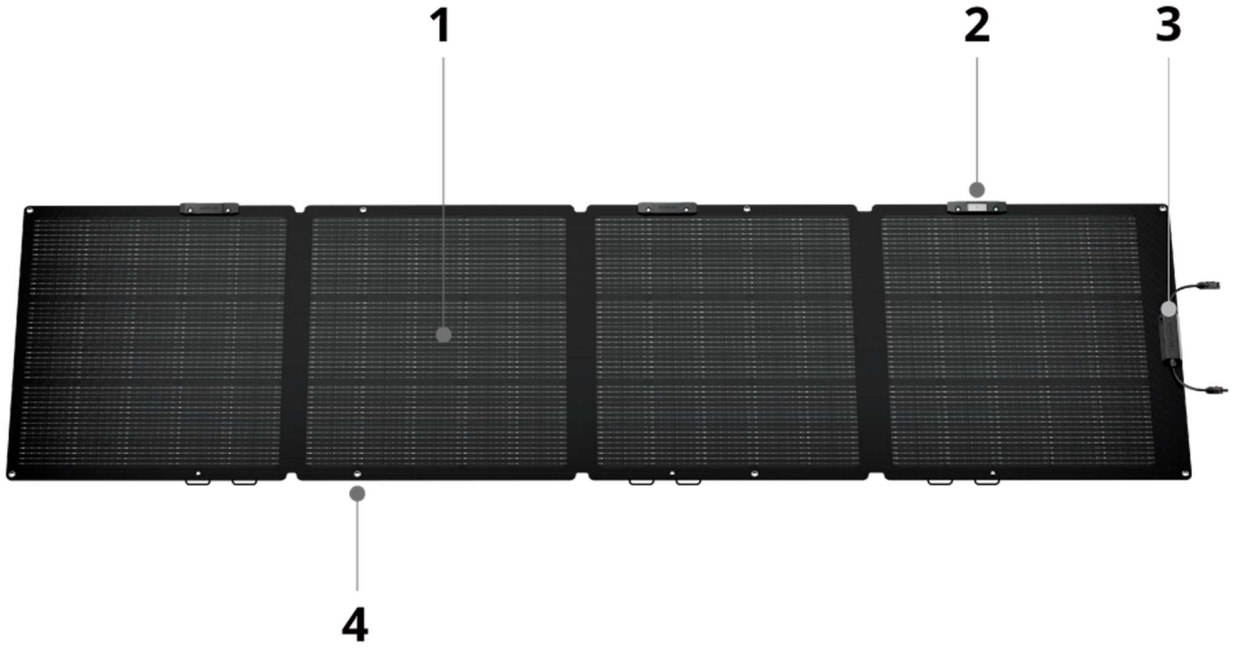
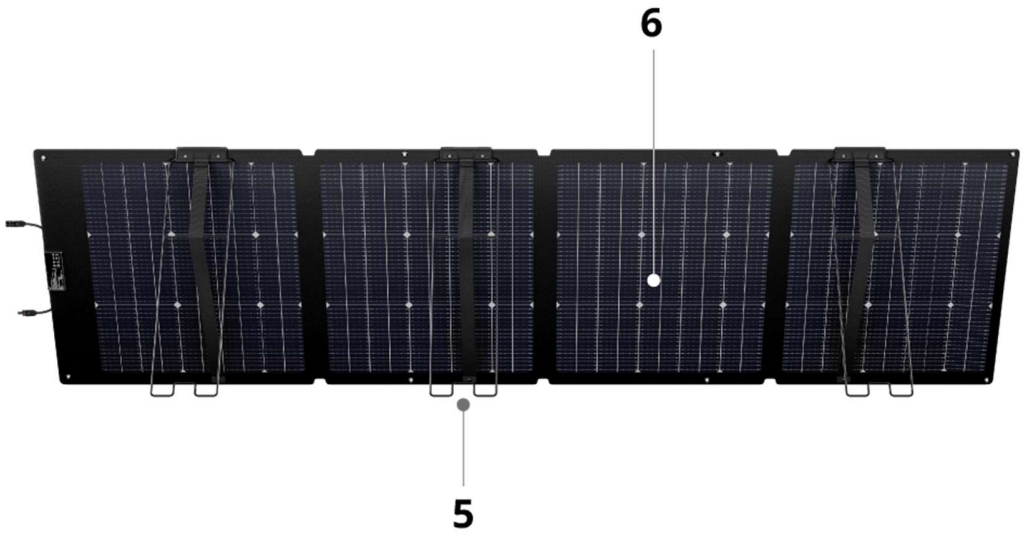
Overview



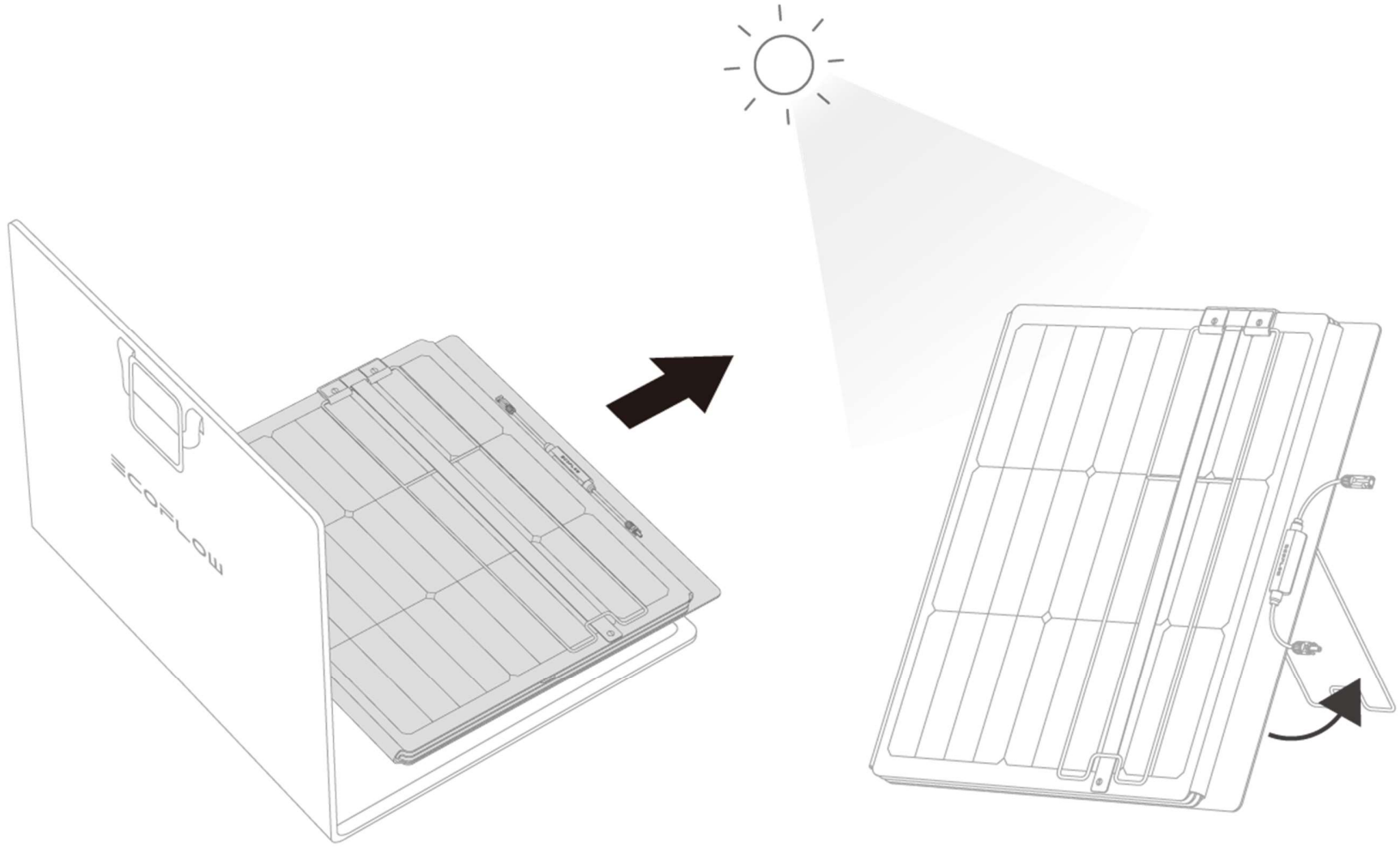


1	**Photovoltaic module (Front)**	Contains a solar angle guide and a junction box. Face this side to the sun during use. It's recommended to use the panel on sunny days with ample sunlight.
2	**Solar angle guide**	Indicates the angle between the sunlight and the panel. When the sunlight's shadow point aligns with the center of the plate, it indicates a 90° angle.

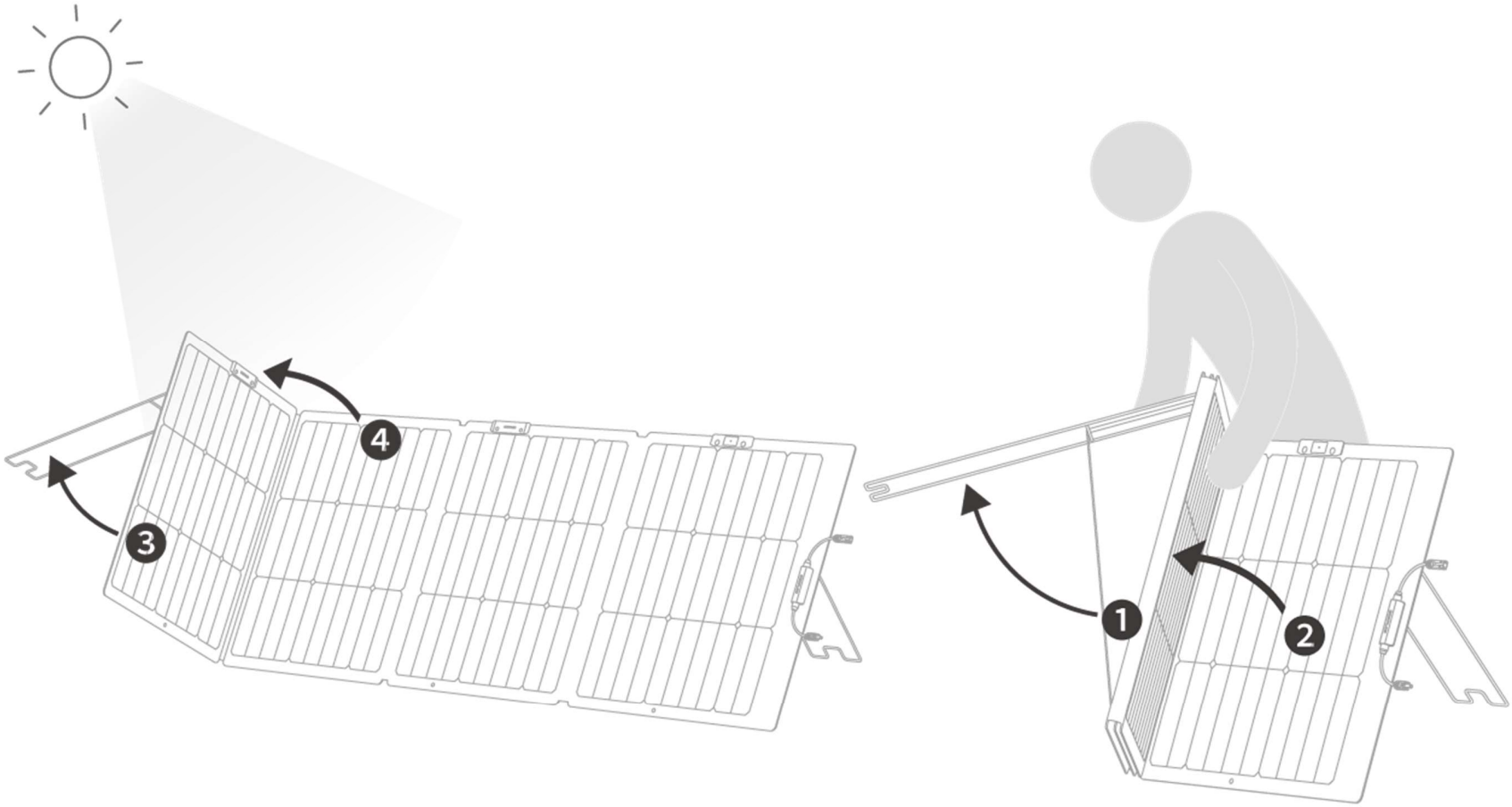
1	**Photovoltaic module (Front)**	Contains a solar angle guide and a junction box. Face this side to the sun during use. It's recommended to use the panel on sunny days with ample sunlight.
3	**Junction box**	Contains a solar output cable (1.5 m long, with MC4 connectors). Pay attention to the positive and negative labels when connecting.
4	**Preset holes**	The panel has 6 preset holes with an internal diameter of 8 mm, allowing for mounting the panel with zip ties or hooks.
5	**Bracket**	Contains elastic straps, making it easy to adjust the panel's angle.
6	**Photovoltaic module (Rear)**	Contains brackets and and is designed to harness sunlight reflected from the surroundings.

Get Started

Lay the solar panel flat and take it out of the case. Face the junction box to the sun, and unfold the bracket to place the panel.

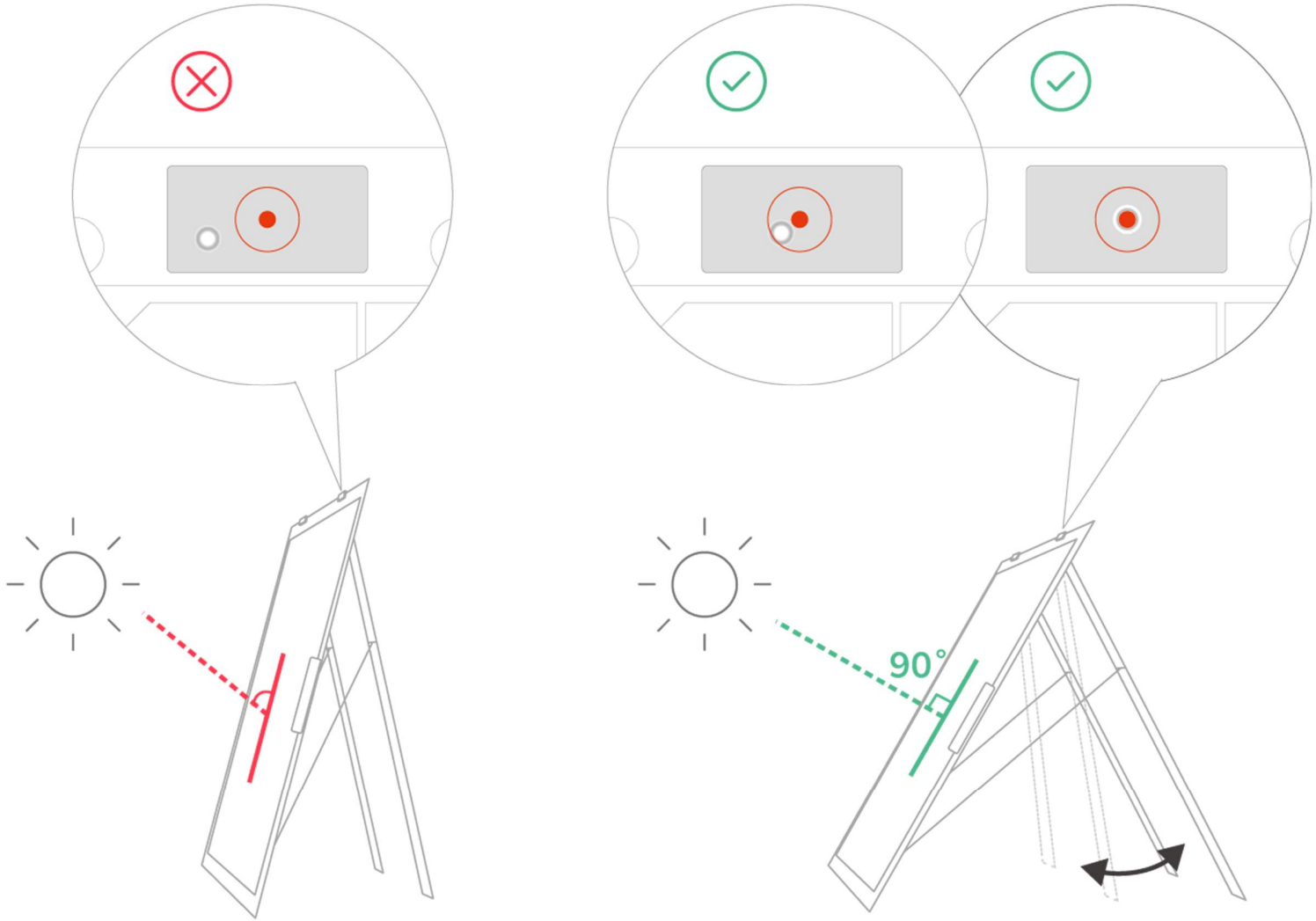


As shown in the picture, it's recommended to unfold the bracket first before unfolding the panel.



For easier operation, it's recommended to stand behind the panel when unfolding it.

Check the shadow point on the solar angle guide to adjust the brackets, aiming to align the shadow as close to the center as possible.


90°

Tips

- Ensure the shadow does not move outside of the red circle on the angle guide. Otherwise, the power output will decrease.
- When the shadow point hits the center, it indicates a 90° angle and the highest power output.

Power Your Devices

Prerequisites

You can connect the panel to an EcoFlow portable power station to store power, or to an EcoFlow smart device to power the device directly.

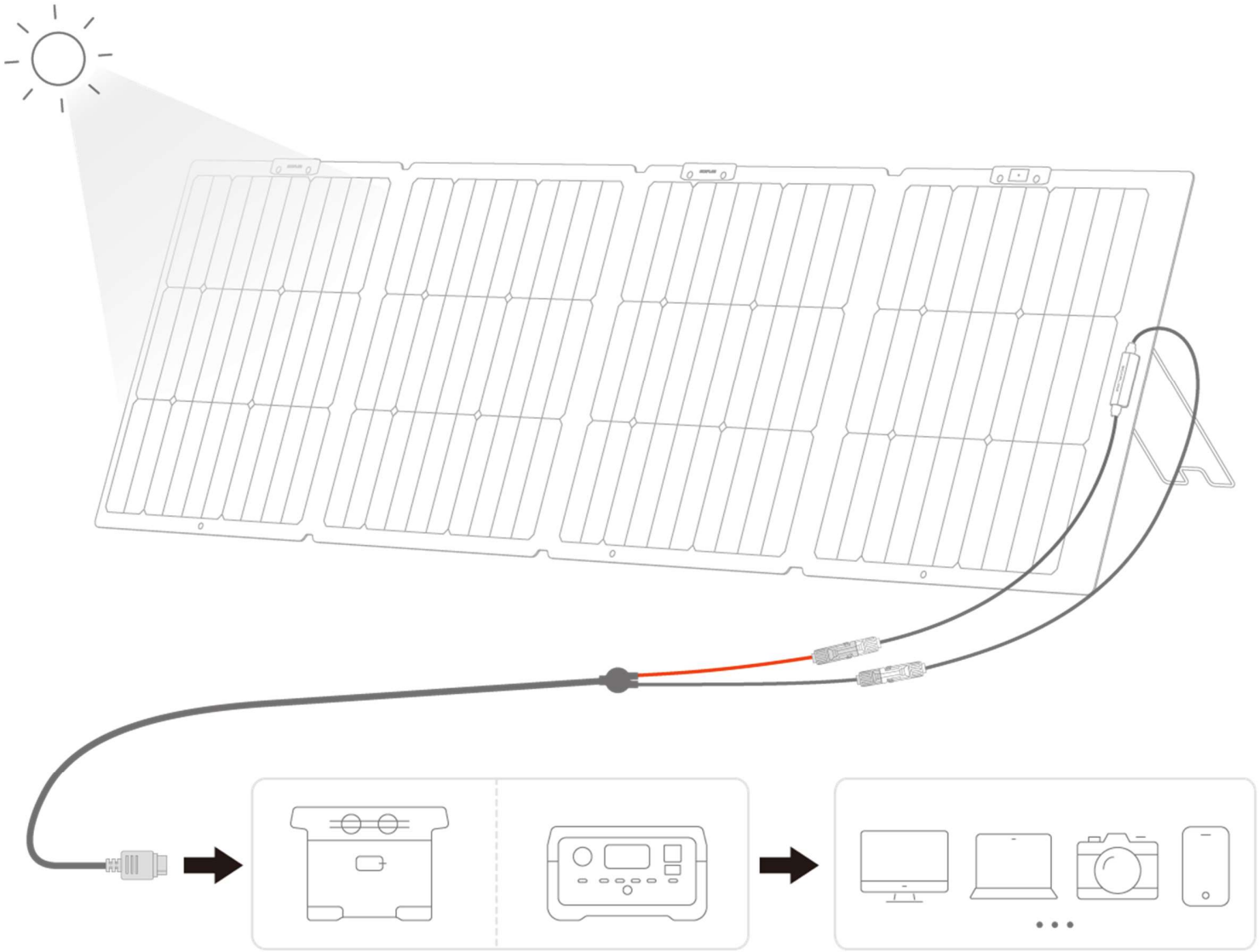
When using the panel with your devices, please make sure the **maximum output parameters**[1] of the panel are within the input range of the devices to avoid any possible damage to your device. To connect the panel with a third-party device, please make sure that the device allows solar input, and that its output ports and electrical parameters meet the panel's requirements.

Maximum output parameters[1]
Please refer to the open circuit voltage and the short circuit current of the panel.

How to Connect

When the panel is in place, connect the output cable to the MC4 connectors of the **solar to XT60i charging cable**[1]. To do so, **connect male connectors to female ones**[2].

Connect the other end of the charging cable to the **solar input port (XT60)**[3] of the device to complete connection. If the port is not of the XT60 variety, refer to the device's user manual for connection instructions.



Solar to XT60i charging cable[1]

Use the charging cable included in the box. Third-party cables are not recommended.

Connect male connectors to female ones[2]

Do not connect the MC4 connectors of a panel to each other. Otherwise, short circuits will occur.

Solar input port (XT60)[3]

Make sure the cables were connected firmly before use to avoid port melting caused by poor connection.

If the panel is connected to an EcoFlow device, you can check real-time output data on the screen of the device or on the device's homepage of EcoFlow app.

Maximize Power Output

Find an Ideal Environment

Use the panel on sunny or mostly sunny days

On a sunny noon when sunlight is strong, the panel yields more power. On cloudy or rainy days with weaker sunlight, the panel's output decreases accordingly.

Minimize shading

Keep the panel free from shading, dust, leaves, droppings, or other debris. Otherwise, the panel's power output will decrease dramatically.

Ensure a 90° tilt angle

The direction of sun rays changes throughout the day. It's recommended to check the shadow point on the solar angle guide from time to time and make sure it remains in the middle.

Place the panel on highly reflective surfaces

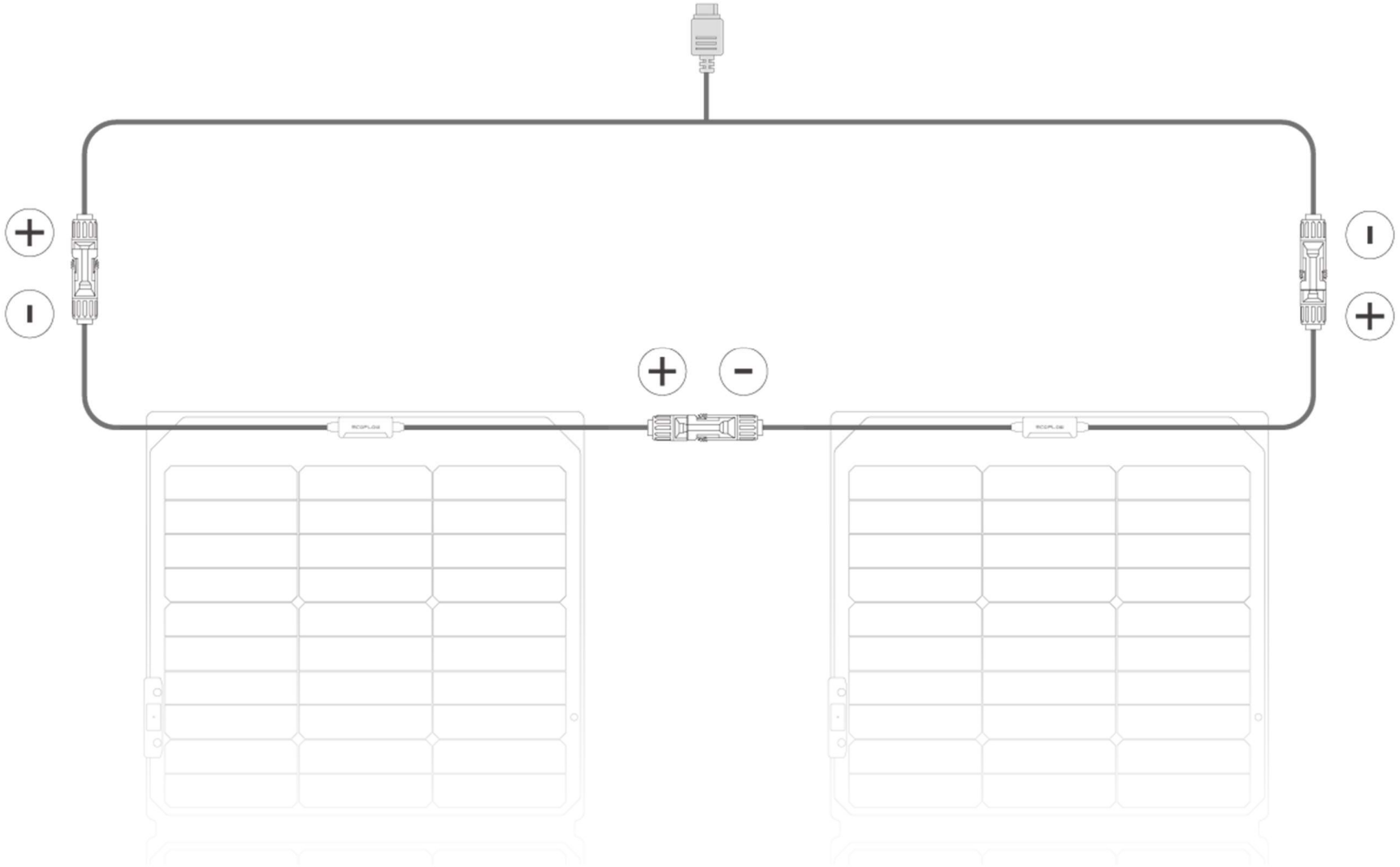
Smooth, light-colored surfaces (such as mirrors or sand) are more reflective. The rear side of a bifacial panel placed on such surfaces can harness more reflected rays.

Wire Your Panels

You can wire panels in series or in parallel to get higher output. When wiring, pay attention to the electrical parameters of your solar array and make sure that the parameters meet the requirements of the device that the panels will be connected to. Generally speaking, it's recommended to wire solar panels in series for connecting with a portable power station.

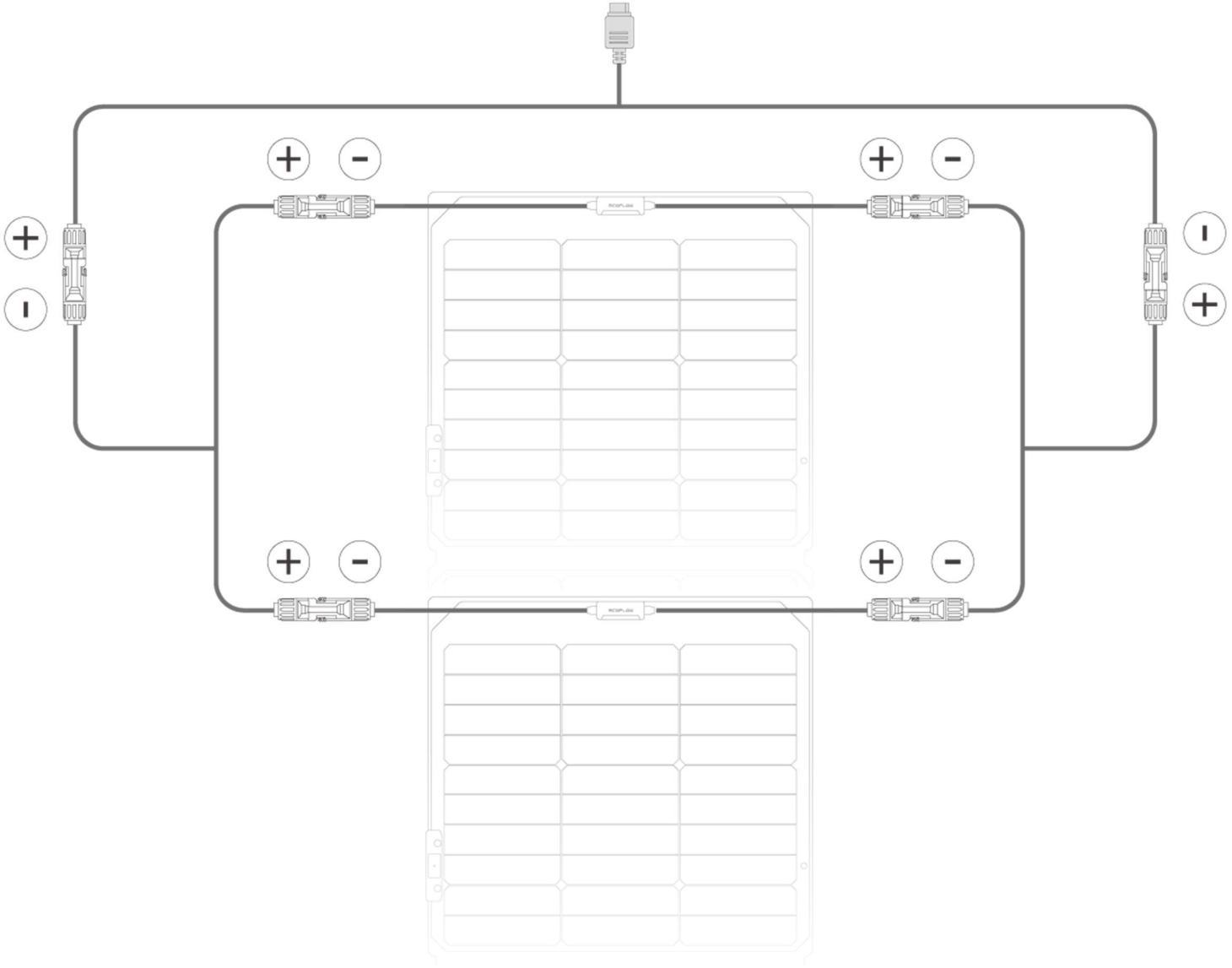
How to Connect

To wire **in series**, connect the male connector of the first panel to the female connector of the next, and so on. Then, connect the solar to XT60i charging cable with the output cables of the first and the last panels. If the cables fall short, you can use solar extension cables for extended distances.



To wire **in parallel**, connect all positive ends of the panels' output cables to a solar parallel connection cable, and do the same for the negative ends. Then, connect the solar to XT60i charging cable to the solar

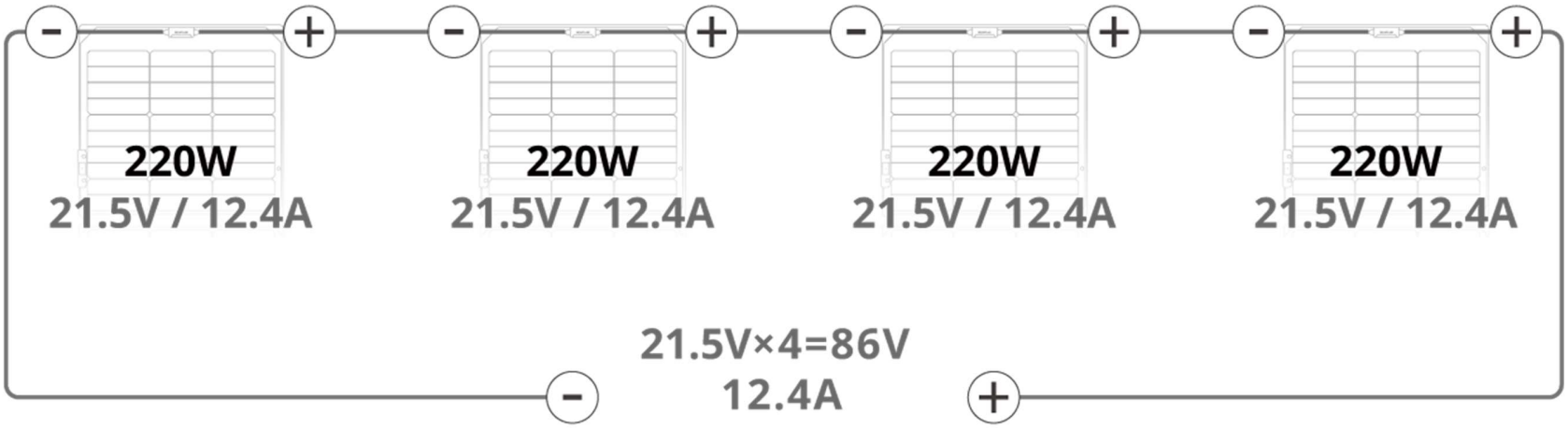
parallel connection cables. When connecting, refer to the instruction images to avoid misconnecting the male and female connectors of the parallel connection cables.

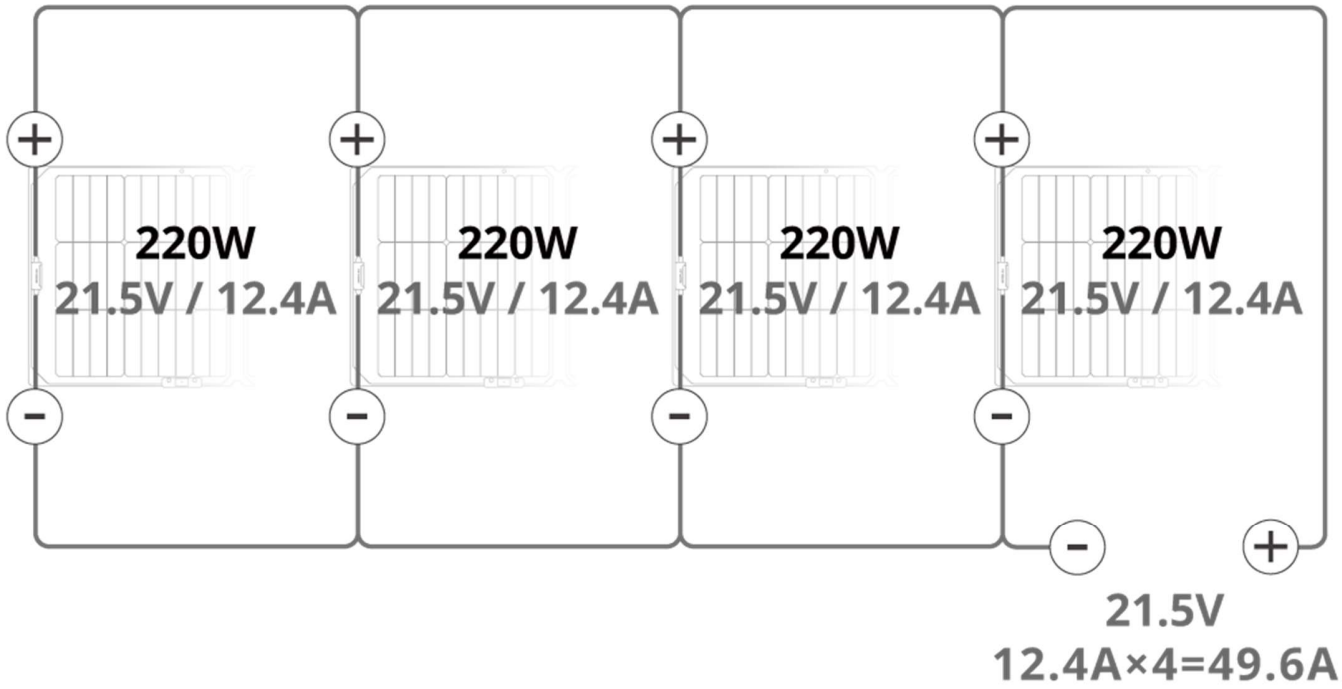


Array Parameter After Connection

- Solar panel wiring of same ratings

	In Series	In Parallel
Total Voltage	Stacked	Unchanged
Total Current	Unchanged	Stacked
Total Power	Stacked	Stacked

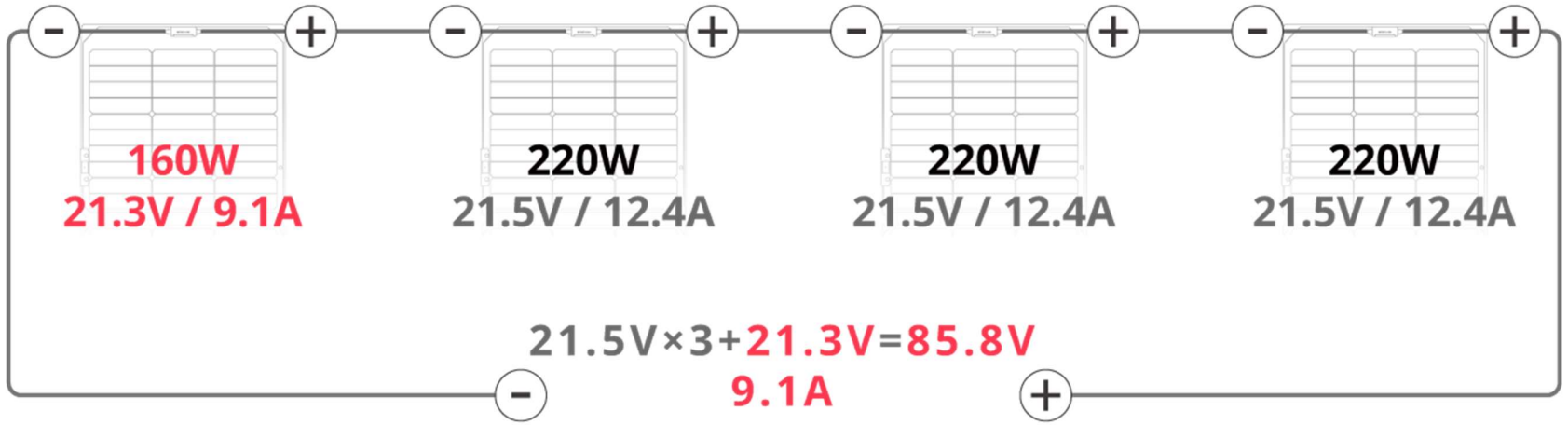


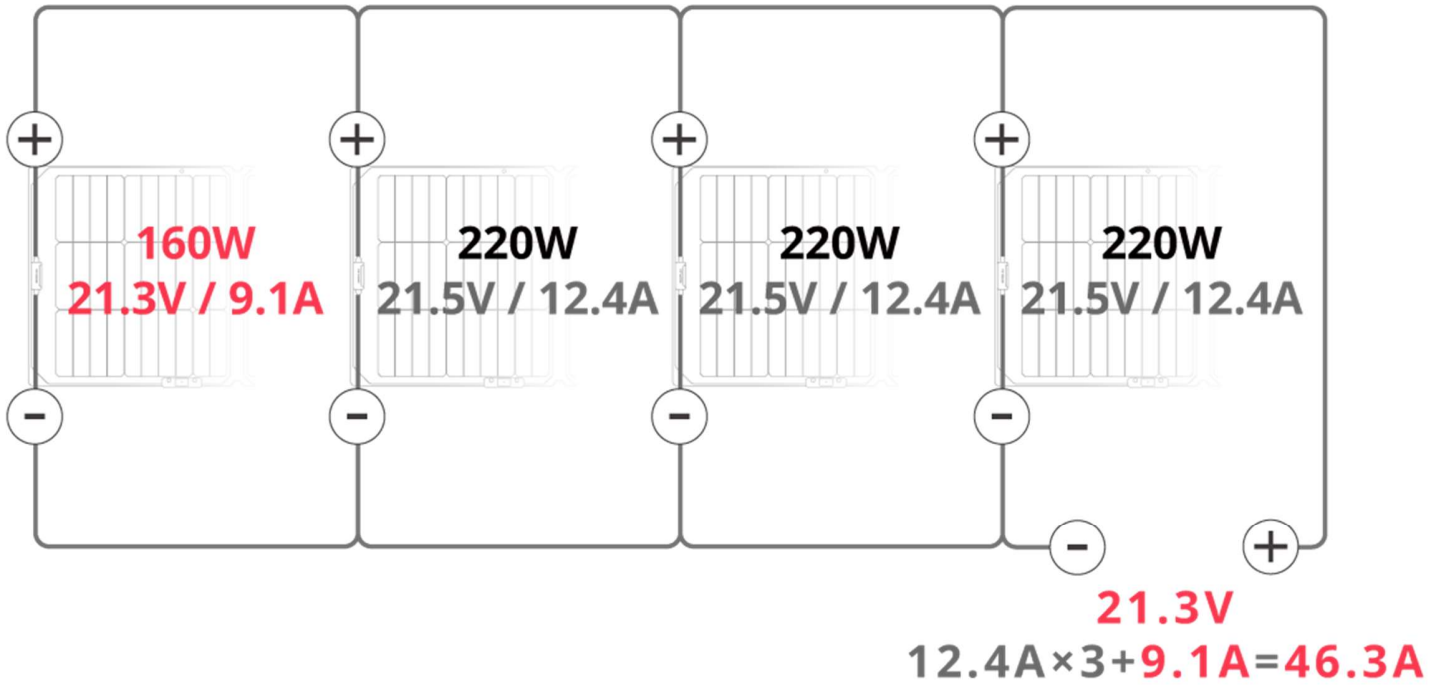


- Solar panel wiring of different ratings

	In Series	In Parallel
Total Voltage	Stacked	Subject to the lowest value of the panels
Total Current	Subject to the lowest value of the panels	Stacked

	In Series	In Parallel
Total Power	Lowest current × total voltage	Total current × lowest voltage





Determine Wiring Plan

Take the following factors into consideration when determining whether to wire in series or in parallel.

Feasibility

- Series connection is simple and allows you to keep the total current at a relatively low level so that it will fall within the solar input range of the connected device.

- Parallel connection needs more effort and results in a higher total current, which demands higher ratings for the solar cables and for the solar input of the connected device.

Solar port ratings of connected device

The total voltage and the total current of the solar array should fall within the device's solar input range. When making your wiring plan, refer to the open circuit voltage and the short circuit current of the panels to calculate the total voltage and the total current.

Distance between panels and connected device

Long distances between panels and the device arouse needs for longer cables. Also, as currents add up in parallel connection, thicker cables are needed. As a result, the cost of cables increases. In this case, series connection is more economical.

Stability of solar array

For series connection, if one of the panels is shaded or damaged, the total output decreases noticeably. As for parallel connection, shaded or damaged panels barely influence the performance of other panels.

Storage and Maintenance

Storage

- If the panel is not in use, it's recommended to disconnect the panel, fold it, and store it away.

- For long-term storage, secure the output cable to avoid any contact with the photovoltaic module, and then fold the panel and put it back in the case.

Cleaning

- Make sure the panel is not connected to portable power stations or any other loads, and that the panel's surfaces have cooled to room temperature. Then, wet a soft cloth with clean water, twist dry the cloth, and clean the panel's surfaces with it. Avoid wiping or washing the photovoltaic connectors when cleaning.

FAQ

1. Is the panel waterproof?

The panel has an IP68 rating. If the panel gets wet in the rain or falls into water by accident, check if any water has got into the connectors immediately. If yes, dry the connectors with a cloth and the panel will function properly. However, pay attention not to soak the panel in water.

2. Why isn't my panel generating power?

Make sure the connection is correct, the terminals are tightly secured, and that the environmental conditions such as adequate sunlight are ideal for solar power generation. If the panel still generates no power after you checked and addressed the factors above, contact EcoFlow's official customer service for help.

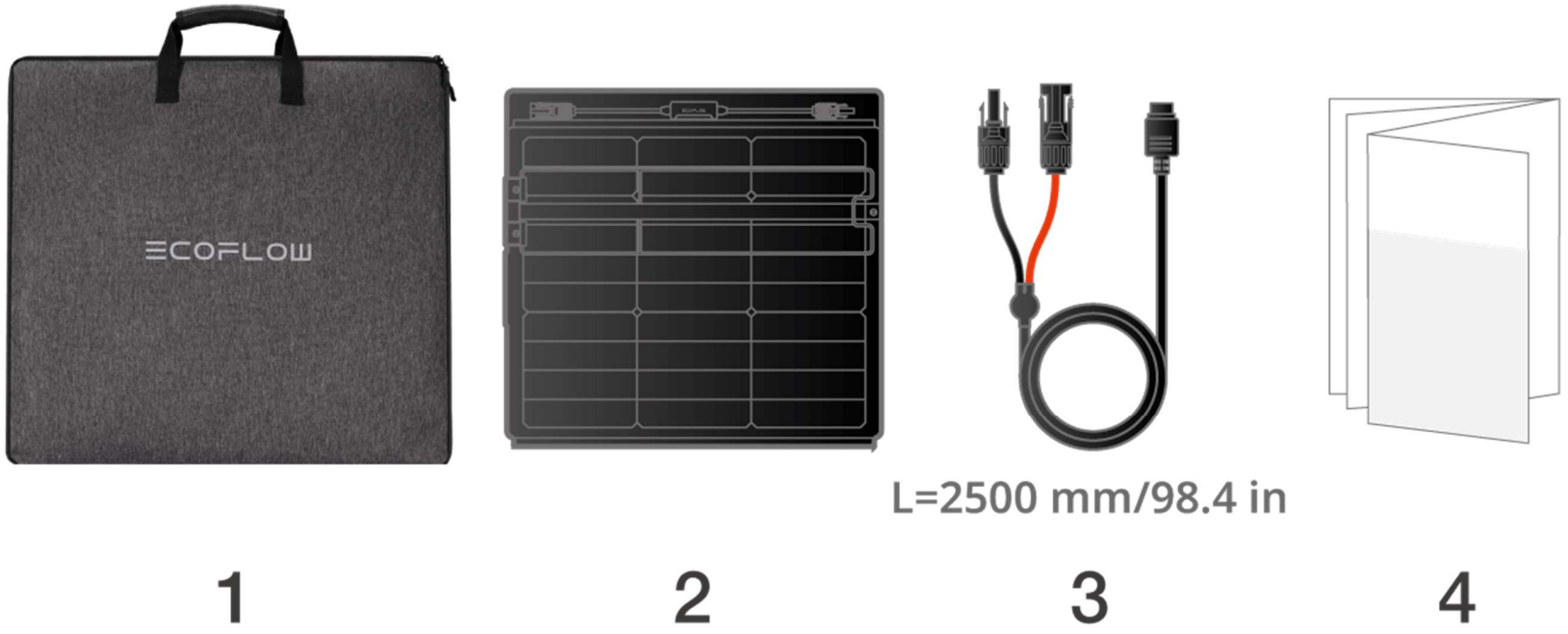
3. Can portable solar panels generate power with weak light, like on rainy days or under indoor lighting?

Portable solar panels barely generate power under such circumstances as they are made of monocrystalline cells, whose performance is restricted under weak light.

4. Is the panel compatible with all EcoFlow portable power stations?

It depends on the electrical parameters of the panel and the solar input parameters of the power station.

What's in the Box



1. Storage case

2. EcoFlow 220W Bifacial Portable Solar Panel
3. Solar to XT60i charging cable (2.5 m)
4. Quick Start Guide, Safety Instructions, and Warranty Card

Accessories

Solar to XT60i Charging Cable(3.5m)

Solar Extension Cable

Solar Parallel Connection Cable

View More →

Specifications

Parameters	
Model	EF-Fold-G220-04
Rated Power	220W (±5W) Front Side 175W (±5W) Rear Side
Open Circuit Voltage	21.5V
Short Circuit Current	12.4A Front Side/9.9A Rear Side
Optimal Operating Voltage	18.4V
Optimal Operating Current	11.9A Front Side/9.5A Rear Side
Recommended Ambient Temperature	−20°C to 85°C (−4°F to 185°F)
Efficiency	25%
Bifaciality Coefficients	80%±5%
Temperature Coefficient of Rated Power	−(0.30±0.02)%/°C
Temperature Coefficient of Open Circuit Voltage	−(0.25±0.03)%/°C

Parameters	
Temperature Coefficient of Short Circuit Current	+(0.045±0.015)%/°C
Dimensions	
Weight	Approx. 7 kg (15.4 lbs)
Unfolded Dimensions (W×L×H)	615×2155×25 mm (24.2 × 84.8 × 1.0 in)
Folded Dimensions (W×L×H)	615×590×32 mm (24.2 × 23.2 × 1.3 in)
Battery Specifications	
Cell Type	TOPCon monocrystalline silicon
Connector Type	Photovoltaic connectors (adapted to MC4 connectors)

- Standard Test Conditions: 1000W/m^2 (92.9W/ft^2), AM1.5, 25°C (77°F)
- When the temperature is too high or too low, the panel's open circuit voltage and short circuit current will vary.

Safety Instructions

Disclaimer

Please read the product document and ensure that you understand it fully before using the product. After reading this document, keep it for future reference. Improper use of this product may cause serious injury to yourself or others, or cause product damage and property loss. Once you use this product, it is deemed that you understand, approve and accept all the terms and content in this document. EcoFlow is not liable for any loss caused by the user's failure to use the product in compliance with the product document.

In compliance with laws and regulations, EcoFlow reserves the right to the final interpretation of this document and all documents related to the product. This document is subject to changes (updates, revisions, or termination) without prior notice. Please visit EcoFlow's official website to obtain the latest product information: https://www.ecoflow.com/.

Safety Guidelines

1. Do not wet the product, or leave it in a humid environment for an extended period of time. Do not allow the junction box or wire connectors to come into contact with liquids.
2. Do not expose any component of the product to highly corrosive materials such as corrosive organic solvents.
3. Do not use this product near open flames or flammable or explosive materials.

4. Do not poke or puncture the solar panel with sharp or pointed tools, or wipe the surface of the solar panel with hard materials such as sandpaper.
5. Do not knock, squeeze or bend the solar panel. It is recommended to place this product upright during transportation or storage.
6. Do not place heavy objects on the solar panel to avoid damage when using the product.
7. Should you wish to store the product for an extended period of time, please secure the positive and negative wires of the solar panel properly to avoid any contact with the sun-facing side of the solar panel.
8. Do not disassemble any component of the product by yourself, as this will void the warranty.
9. When using this product to charge an energy storage power source, please make sure it complies with the requirements for parameters and specifications. If you connect multiple solar panels in series or parallel, please verify the maximum number of solar panels that can be connected to the power source in advance.
10. When connecting this product in series or parallel, it is recommended that you purchase connecting wires through EcoFlow's official sales channels. If you are using a third-party solar panel cable, make sure that the connector and the voltage and current of the cable are compatible.
11. Do not plug or unplug any connecting wires while the solar panel is operating.
12. Do not wear any metal accessories when plugging or unplugging the solar panel.
13. Do not apply any chemicals (such as paint or adhesives) to the sun-facing side of the solar panel.
14. Do not use devices such as magnifying glasses to focus sunlight on the solar panel.
15. Keep this product out of the reach of children and pets.

16. Do not dispose of waste solar panels indiscriminately, please follow local laws and regulations for proper disposal.
17. Make sure the cables were connected firmly before use to avoid port melting caused by poor connection.