ROCKPALS 100W Foldable Solar Panel

ROCKPALS 100W Foldable Solar Panel User Manual

Model: 100W Foldable Solar Panel

1. Product Overview

The ROCKPALS 100W Foldable Solar Panel is a high-efficiency, portable solar charger designed to provide power for various devices, especially portable power stations. Its compact, foldable design and durable ETFE material make it ideal for outdoor activities, emergency preparedness, and everyday use.

Key Features:

- **High Compatibility:** Equipped with Anderson, DC5.5*2.1mm, DC6.5*3.0mm, and DC7.9*0.9mm connectors to charge most portable power stations.
- **Advanced ETFE Material:** Features a high light transmittance ETFE coating for superior durability, heat resistance, corrosion resistance, and a high conversion efficiency of up to 23%.
- **Multiple Fast Charging Outputs:** Includes DC output (18V, max 5A), USB-A (QC3.0, 24W), and USB-C (18W) for rapid charging of smartphones, tablets, and other USB-powered devices. Supports parallel connection for increased power output (up to 200W).
- **Portable & Convenient Design:** Folds down to a compact size (44 x 37 x 5.5 cm) and weighs only 4 kg. Features an integrated self-standing kickstand for optimal sun exposure and eyelets for easy attachment to backpacks or tents.
- **Safety & Warranty:** Built-in protection against overcharge, overcurrent, overload, and short circuit. Comes with an 18-month warranty.



Figure 1: The ROCKPALS 100W Foldable Solar Panel in its open, ready-to-use configuration, showcasing its four solar panels and integrated stand.

2. Package Contents

- ROCKPALS 100W Foldable Solar Panel x 1
- 4-in-1 Conversion Cable x 1 (Includes Anderson, DC5.5*2.1mm, DC6.5*3.0mm, DC7.9*0.9mm connectors)
- User Manual x 1

3. Setup Instructions

1. **Unfold the Solar Panel:** Carefully unfold the solar panel until all four panels are fully extended.
2. **Position the Kickstand:** Locate the integrated kickstand on the back of the panel. Extend the kickstand to support the panel at an optimal angle towards the sun.



Figure 2: Adjusting the self-standing kickstand to angle the solar panel towards the sun for maximum efficiency.

3. **Orient Towards the Sun:** Adjust the panel's position to face direct sunlight. For best results, ensure no shadows fall on the panels.
4. **Connect to Device:**
    - For portable power stations: Use the provided 4-in-1 conversion cable. Connect the Anderson connector from the solar panel to the appropriate adapter tip (DC5.5*2.1mm, DC6.5*3.0mm, or DC7.9*0.9mm) that matches your power station's input port. Then, plug the adapter into your power station.



Figure 3: Illustration of the solar panel's compatibility with different portable power stations using various DC connector types (Anderson, 5.5*2.1mm, 7.9*0.9mm, 6.5*3.0mm).

- For USB devices: Connect your smartphone, tablet, or other USB-powered device directly to the USB-A (QC3.0) or USB-C port on the control box of the solar panel.



Figure 4: A user charging a smartphone directly from the solar panel's USB ports, demonstrating its use in off-grid situations.

4. Operating Instructions

4.1 Charging Devices

Once the solar panel is set up and connected to your device, charging will begin automatically when sufficient sunlight is available. The charging indicator (if present on your power station or device) will confirm the charging status.

- **Optimal Sunlight:** For maximum charging efficiency, ensure the panels are in direct sunlight and free from obstructions.
- **Re-positioning:** Periodically adjust the panel's angle throughout the day to follow the sun's movement.

4.2 Parallel Connection (for increased power)

The ROCKPALS 100W solar panel supports parallel connection with another identical ROCKPALS 100W solar panel to double the output power (up to 200W). This significantly reduces charging time for larger portable power stations.

1. Ensure both solar panels are unfolded and positioned for optimal sun exposure.
2. Connect the output of the first solar panel to the input of the parallel connector (sold separately or included with

specific kits).

3. Connect the output of the second solar panel to another input of the parallel connector.
4. Connect the combined output from the parallel connector to your portable power station.



Figure 5: Two ROCKPALS 100W solar panels set up for parallel connection, demonstrating how to increase power output for faster charging.

5. Maintenance

- **Cleaning:** Regularly wipe the solar panels with a soft, damp cloth to remove dust, dirt, or debris that may reduce efficiency. Avoid abrasive cleaners or harsh chemicals.
- **Storage:** When not in use, fold the solar panel and store it in a dry, cool place away from direct sunlight and extreme temperatures.



Figure 6: The solar panel in its folded, compact state, highlighting its portability and ease of storage.

- **Durability:** The ETFE material provides excellent durability and water resistance (IP65 rated). However, avoid submerging the panel in water or exposing it to prolonged heavy rain.

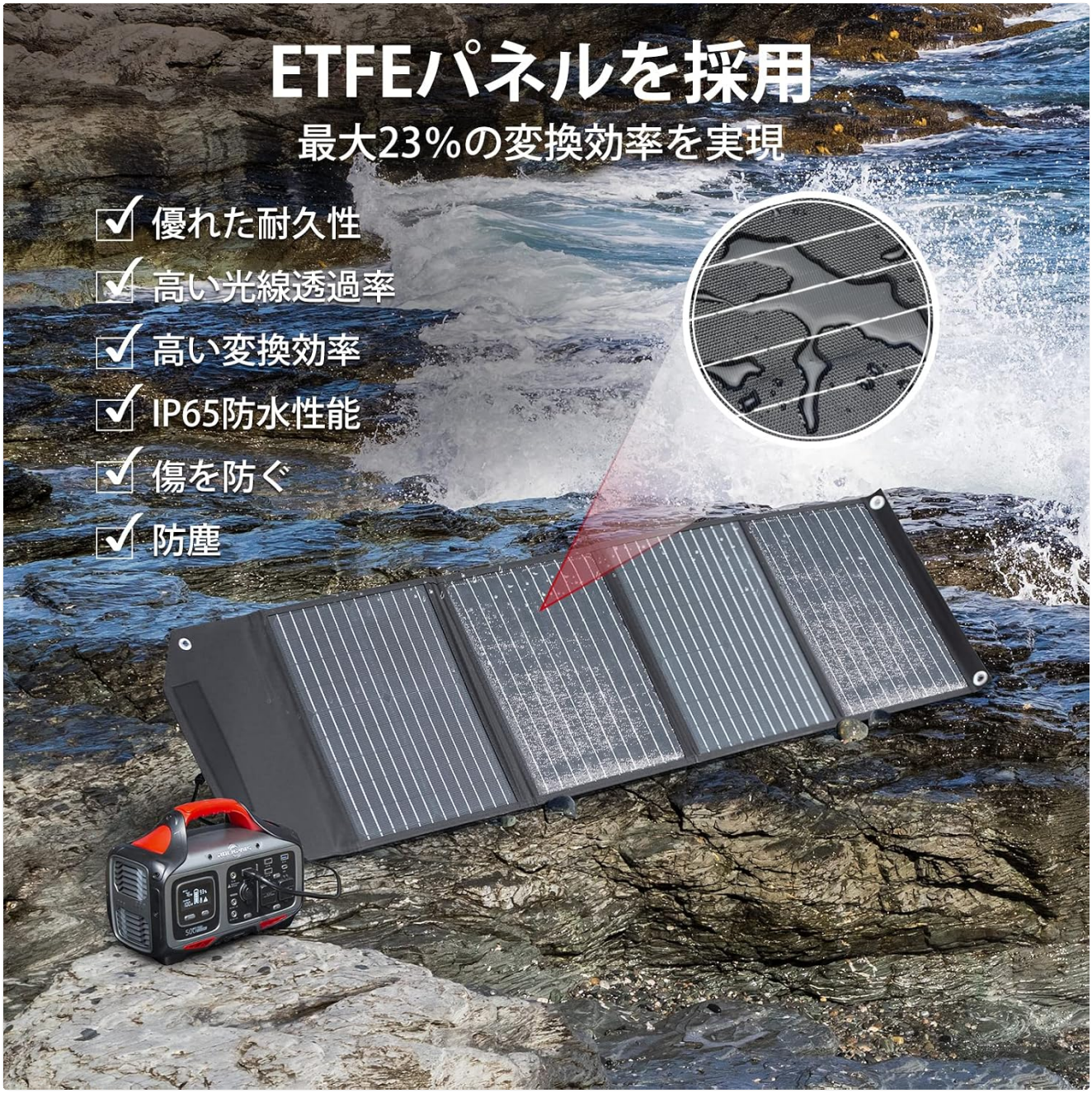


Figure 7: Demonstrating the water-resistant properties of the ETFE material used in the solar panel's construction.

6. Troubleshooting

Problem	Possible Cause	Solution
No charging or slow charging	Insufficient sunlight Panel not optimally angled Shading on the panels Dirty panels Incorrect cable connection Device not compatible or fully charged	Move panel to direct sunlight. Adjust kickstand to face the sun directly. Remove any obstructions causing shade. Clean panel surface with a soft, damp cloth. Verify all cables are securely connected and correct adapter tip is used. Check device's charging status or compatibility.

Problem	Possible Cause	Solution
Device not recognized via USB	Insufficient power output from solar panel Faulty USB cable Device charging port issue	Ensure panel is in direct sunlight. Try a different USB cable. Test charging the device with a wall charger to rule out device issues.
Panel feels hot	Normal operation under direct sunlight	This is normal. The panel is designed to withstand high temperatures. Ensure adequate ventilation around the panel.

7. Specifications

Feature	Specification
Brand	ROCKPALS
Model	100W Foldable Solar Panel
Rated Power	100W
Cell Type	Monocrystalline Silicon
Conversion Efficiency	Up to 23%
Material	ETFE
DC Output	18V / Max 5A
USB-A Output	QC3.0 (5V/3.4A, 9V/2.5A, 12V/2A) - Max 24W
USB-C Output	(5V/3A, 9V/2A) - Max 18W
Folded Dimensions	44 x 37 x 5.5 cm (17.3 x 14.6 x 2.2 inches)
Unfolded Dimensions	173 x 44 cm (68.1 x 17.3 inches)
Weight	4.4 kg (9.7 lbs)
Water Resistance	IP65 (Splash-proof, not submersible)
Included Connectors	Anderson, DC5.5*2.1mm, DC6.5*3.0mm, DC7.9*0.9mm

8. Warranty and Support

The ROCKPALS 100W Foldable Solar Panel comes with an**18-month warranty** from the date of purchase. This warranty covers manufacturing defects and ensures product quality.
If you encounter any issues, defects, or damage with your product, please do not hesitate to contact our customer support team. We are committed to providing excellent products and service.
For support, please refer to the contact information provided in your product packaging or visit the official ROCKPALS website.



Figure 8: Overview of the solar panel's safety features including overcharge, overcurrent, overload, and short circuit protection, along with the 18-month warranty.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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