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› LVYUAN 200W Portable Solar Panel Instruction Manual

LVYUAN CSSB-200W-3M

LVYUAN 200W Portable Solar Panel Instruction Manual

Model: CSSB-200W-3M

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INTRODUCTION

This manual provides essential information for the safe and efficient use of your LVYUAN 200W Portable Solar Panel. Please read these instructions carefully before use and retain them for future reference.

SAFETY INFORMATION

- **Voltage Compatibility:** The solar panel outputs 20V-24V. Ensure your power station or device is compatible with this voltage range. Incompatible voltage or connectors can prevent proper function or cause damage.
- **Physical Inspection:** Before use, inspect the solar panel for any signs of damage, such as cracked solar cells. Damage during transportation may reduce output or cause complete failure.
- **Water Exposure:** Avoid leaving the solar panel out in heavy rain. While weather-resistant, the ports are not fully waterproof.
- **Electrical Connections:** Ensure all electrical connections are correct and secure. Compatibility depends on the physical connector, voltage parameters, and proprietary charge controller technology of your power station.
- **Overcharging Protection:** The built-in smart chips protect your devices from overcharging and overloading, extending the lifespan of the solar panel cells.

PRODUCT FEATURES

- **High Efficiency:** Optimized monocrystalline silicon solar cells achieve up to 23% efficiency.
- **Portable and Foldable Design:** Features a centripetal inward-folding design, folding down to 15.3 × 15.3 × 2.16 inches. Unfolded dimensions are 56 x 44.6 inches.
- **Lightweight:** Weighs approximately 11.6 pounds, making it easy to transport.
- **Durable Construction:** Made with PET, EVA, Monocrystalline Cell, EVA, and Backsheet layers for solid quality.
- **Universal Compatibility:** Works with most solar generators, power stations, and DC-powered equipment.
- **Included Accessories:** Comes with 6 carabiners and 4 S-hooks for flexible attachment options.
- **Smart Built-in Chips:** Continuously monitors operations to optimize charging speed and ensure safety, protecting against overcharging and overloading.
- **Weather-Resistant:** IP64 rated for dust protection and resistance against water splashes from any direction.



The LVYUAN 200W Portable Solar Panel in its compact, folded state, ready for transport.



The LVYUAN 200W Portable Solar Panel fully unfolded, showcasing its solar cells.

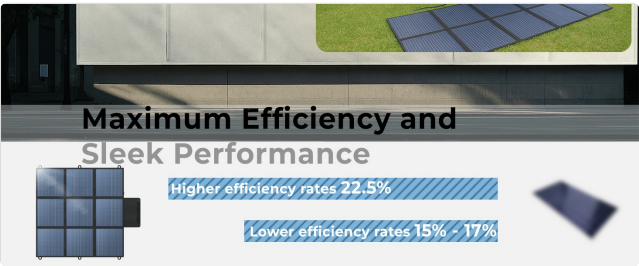


Illustration highlighting the 23% conversion efficiency of the solar panel.

Monocrystalline VS Polycrystalline		
Factor	Monocrystalline	Polycrystalline
Efficiency	15 to 23% efficiency	13 to 16% efficiency
Power Output Per m²	Over 160 watts	125 to 150 watts
Appearance	Black hue	Blue hue
Temperature Coefficient	-0.3 %/°C to -0.4 %/°C	-0.37 %/°C to -0.5 %/°C

A comparison table detailing the differences between Monocrystalline and Polycrystalline solar panel technologies.

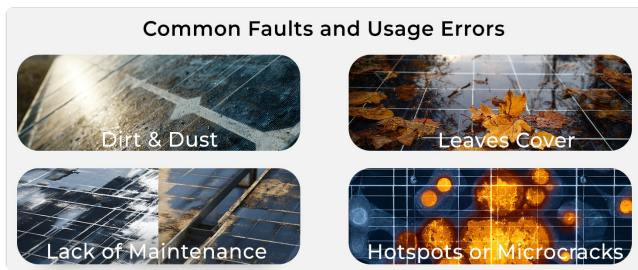


Diagram illustrating the layered construction of the solar panel, including PET, EVA, Monocrystalline Cell, EVA, and Backsheet.

PACKAGE CONTENTS

Verify that all items are present in the package:

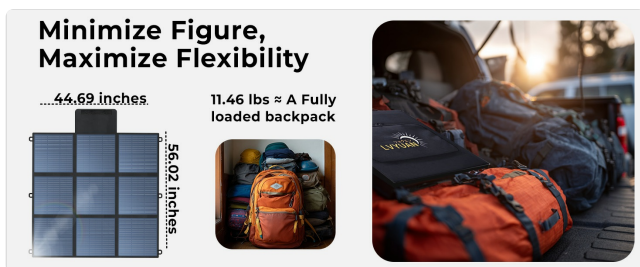
- LUYUAN 200W Portable Solar Panel x 1
- Carry Bag x 1
- Universal Plug Adapters x 4 (DC5521, DC7909, XT60, Anderson)
- Fixed Hooks (S-hooks) x 4
- Carabiners x 6
- User Manual x 1



Image showing the LUYUAN 200W Portable Solar Panel, carry bag, universal plugs, and hooks.

SETUP AND INSTALLATION

1. **Unfold the Solar Panel:** Carefully unfold the solar panel completely.
2. **Positioning:** Place the solar panel in a location fully exposed to direct sunlight.
3. **Secure Placement:**
 - Use the included carabiners to attach the panel through its reinforced grommets to backpacks, tents, or other suitable structures.
 - The weather-resistant construction allows for ground placement without compromising the panel or electrical components.
4. **Angle Adjustment:** Adjust the angle of the solar panel to maximize sunlight exposure. Optimal angles typically range from 30° to 40° relative to the horizontal ground for 90%-100% output. Flat placement yields approximately 65% output, while vertical placement yields around 40%.
5. **Connect to Power Destination:** Open the socket on the back of the panel and connect the appropriate output connector (MC4 output cables + adapter bundle including XT60/DC5521/DC7909/Anderson plugs) to your power supply destination (e.g., solar generator, power station).



Guide illustrating different solar panel placement angles and their corresponding power output percentages.



Diagram showing how to connect two solar panels in parallel using a Y-branch MC4 connector (sold separately).



Diagram illustrating how to connect two solar panels in series.

OPERATION

Once set up and connected, the solar panel will begin converting sunlight into electrical energy. The integrated smart chips will manage the charging process to optimize speed and protect connected devices.

- For optimal power harvesting, ensure the panel's VMP (Voltage at Maximum Power) aligns with your power station's requirements.
- The VOC (Open Circuit Voltage) of the panel must be within the accepted range of your power station.
- Regularly check the charging status on your power station or connected device.

COMPATIBILITY

The LVYUAN 200W Portable Solar Panel is designed for wide compatibility with various solar generators, power stations, and DC-powered equipment.

- **Included Adapters:** The panel comes with an adapter bundle including XT60, DC5521, DC7909, and Anderson plugs for maximum versatility.
- **Specific Power Stations:** For most Jackery, EcoFlow, and Bluetti power stations, the included solar panel connectors may not be directly compatible. A separate adapter might be required. Always verify compatibility

before purchasing or connecting.

- **12V Batteries:** Cannot be used directly with 12V batteries; an MPPT controller is required for proper charging.



Illustration demonstrating the wide compatibility of the solar panel with different power stations using various adapter types.

MAINTENANCE

- **Cleaning:** Keep the solar panel surface clean from dirt, dust, leaves, and other debris to ensure maximum efficiency. Use a soft, damp cloth for cleaning.
- **Storage:** When not in use, fold the panel and store it in its carry bag in a dry, protected area.
- **Inspection:** Periodically inspect the panel and connectors for any signs of wear or damage.

TROUBLESHOOTING

Low or No Power Output

- **Sunlight Exposure:** Ensure the panel is in direct, unobstructed sunlight. Shadows, even partial ones, can significantly reduce output.
- **Panel Angle:** Adjust the panel's angle to optimize sun exposure (30°-40° from horizontal is often ideal).
- **Cleanliness:** Clean the solar panel surface if it's covered in dirt, dust, or leaves.
- **Connections:** Verify all physical connectors are securely attached and compatible with your power station.
- **Voltage and Controller:** Confirm that the panel's VOC and VMP are within your power station's accepted range. Some power stations have proprietary charge controller technology that may not be compatible without a specific adapter.
- **Damaged Cells:** Inspect for any visible damage to the solar cells, such as cracks, which can reduce or eliminate output.

Why shouldn't I set up a home solar power backup system?

- Reduces vulnerability to blackouts
- Ensures power during disasters
- Makes off-grid living more feasible
- Reduced monthly bills
- Power for outdoor lights, security cameras, etc



Visual guide to common issues affecting solar panel performance, such as dirt, leaves, lack of maintenance, and hotspots.

TECHNICAL SPECIFICATIONS

Feature	Specification
Brand	LVYUAN
Model Number	CSSB-200W-3M
Material	Monocrystalline Silicon
Maximum Power	200 Watts (Rated)
Output Voltage	20V-24V
Amperage Capacity	12.5 A
Efficiency	Up to 23%
Folded Dimensions (L x W x H)	15.3" x 15.3" x 2.16"
Unfolded Dimensions (L x W)	56" x 44.6"
Item Weight	11.6 pounds
Connector Type	MC4 (with included adapters for XT60, DC5521, DC7909, Anderson)
IP Rating	IP64 (Dust protected, splash-proof)
Number of Cells	9

WARRANTY AND SUPPORT

The LVYUAN 200W Portable Solar Panel is backed by a **24-month warranty**. For any questions or technical support, please contact LVYUAN customer service. You can expect a fast response within 24 hours.

Upon receiving your solar panel, please verify all accessories, electrical connections, and installation procedures.

For further assistance, visit the official LVYUAN store:[LVYUAN Store on Amazon](#)