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## LVYUAN CSSP-30

# LVYUAN CSSP-30 Foldable Solar Panel User Manual

Model: CSSP-30 | Brand: LVYUAN

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your LVYUAN CSSP-30 Foldable Solar Panel. Please read it thoroughly before use and retain it for future reference.

The LVYUAN CSSP-30 Foldable Solar Panel is a portable and lightweight solar charger designed for outdoor activities and emergency power backup. It features USB-A and Type-C outputs, a maximum 25W power output, high conversion efficiency, and an IP65 waterproof rating, along with an anti-reverse current design.

## 2. KEY FEATURES

- **Maximum 25W Output with USB-A & Type-C:** Equipped with two ports, USB-A and USB-C, providing a maximum output of 25W. Compatible with a wide range of devices including smartphones, tablets, and mobile batteries. Supports fast charging standards such as QC3.0, Apple 2.4A, and Samsung AFC.
- **Foldable & Ultra-Lightweight Design:** Weighs only 850g and folds to less than 3cm thick. Approximately A4 size when folded, fitting neatly into bags and backpacks. Features hanging holes on all four corners for easy use during outdoor activities or emergencies.
- **High Conversion Efficiency for All Conditions:** Utilizes high-efficiency solar panels, capable of generating over 18W in clear weather, over 1W on cloudy days, and approximately 3W indoors through a window. Designed to maximize solar energy utilization, ensuring reliable power during disasters or outdoor adventures.
- **Anti-Reverse Current Design for Power Outages:** Equipped with an anti-reverse current function to prevent power backflow to smartphones and other devices. Ensures stable charging even with minimal power, minimizing the risk of battery depletion during power outages or disasters.
- **Durable & Waterproof (IP65 & Multi-Layer Structure):** Features an integrated multi-layer

construction (ETFE/EVA/monocrystalline cell/fabric) for both durability and flexibility. IP65 waterproof rating provides resistance to rain and dust, making it suitable for various scenarios such as mountaineering, camping, and emergency preparedness.

### 3. PRODUCT OVERVIEW



The LVYUAN CSSP-30 Foldable Solar Panel in its compact, folded state.



Illustrates the thinness and portability of the folded solar panel, showing it fitting into a backpack.



The solar panel actively charging two smartphones via its USB-A and Type-C ports, highlighting its dual output capability and Smart IC technology.

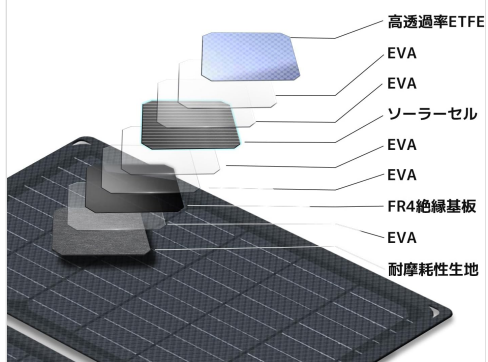
非常時には、  
低照度発電と逆流防止が大変  
重要な機能となる。



A solar panel laid out in a camping setting, emphasizing its anti-reverse current protection for safe device charging outdoors.

### 9層構造一体成型の 高耐久性ソーラーパネル

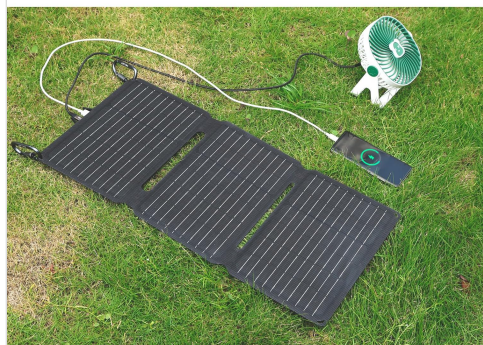
高い透過率で、曇りの日でもかなりの発電量



An exploded view diagram illustrating the durable multi-layer construction of the solar panel, including ETFE, EVA, and monocrystalline cells.

天候や送電ロスの影響を考慮し、  
25Wの出力を確保するために、  
ソーラーパネルの出力は30Wとなっている。

日差しが十分な場合、単ポート出力18W、合計出力25W



The solar panel deployed on grass, charging a portable fan and a smartphone, demonstrating its 25W total output under sufficient sunlight.

独自の設計構造で、  
曇りの日でもかなりの発電が可能。



Illustrates the power output of the solar panel in various conditions: approximately 18W in clear weather, 6W on cloudy days, and 1W in completely overcast conditions.

## 4. SETUP INSTRUCTIONS

1. **Unfold the Panel:** Carefully unfold the solar panel completely to expose all solar cells.
2. **Position for Sunlight:** Place the solar panel in direct sunlight. For optimal performance, ensure the panel is angled directly towards the sun.
3. **Secure the Panel:** Use the integrated hanging holes and carabiners (if included) to secure the panel to a backpack, tent, or other stable surface, especially in windy conditions.
4. **Connect Devices:** Open the integrated pocket to access the USB-A and Type-C output ports. Connect your device(s) using appropriate charging cables.
5. **Verify Charging:** Check your device's screen to confirm that charging has begun.

Your browser does not support the video tag.

Video demonstrating the unfolding, setup, and device connection of a portable foldable solar panel. This video illustrates general usage for similar products.

## 5. OPERATING INSTRUCTIONS

The LVYUAN CSSP-30 solar panel is designed for straightforward operation:

- **Automatic Charging:** The panel automatically begins charging when exposed to sufficient sunlight and a device is connected.
- **Dual Device Charging:** You can charge up to two devices simultaneously using the USB-A and Type-C ports. The total maximum output is 25W.
- **Optimal Sunlight:** For best results, ensure the panel is positioned to receive maximum direct sunlight. Adjust its angle periodically as the sun moves.
- **Anti-Reverse Current:** The built-in anti-reverse current feature protects your devices from power backflow when sunlight is intermittent or insufficient.
- **Power Storage (Optional):** This solar panel does not store power internally. To store energy for later use, connect the solar panel to a compatible mobile battery or portable power station.

## 6. MAINTENANCE

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- **Cleaning:** Regularly wipe the solar panels with a soft, damp cloth to remove dust, dirt, or debris that may reduce efficiency. Do not use harsh chemicals or abrasive materials.
- **Storage:** When not in use, fold the solar panel and store it in a cool, dry place away from direct sunlight and extreme temperatures.
- **Inspection:** Periodically inspect the panel and cables for any signs of damage, wear, or corrosion. Ensure all connections are secure.
- **Water Exposure:** While IP65 rated, avoid prolonged exposure to heavy rain or submersion. If the panel gets wet, ensure all ports are dry before connecting devices.

## 7. TROUBLESHOOTING

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**Q: Why is the maximum output only 25W for a 30W solar panel?**

A: The 30W rating is a theoretical maximum under Standard Test Conditions (STC). In real-world usage, factors like sunlight intensity, angle, temperature, shading, and dirt can cause the actual output to be lower than the nominal value. Therefore, a stable output of around 25W for a 30W solar panel is normal.

**Q: Why doesn't each port reach its maximum output of 18W even with sufficient sunlight?**

A: Even with strong sunlight, actual output depends on various factors. These include whether the connected device supports fast charging standards like QC or AFC, the quality and length of the charging cable, and the device's battery level. Maximum output may not be reached, especially with incompatible devices or devices that are nearly fully charged.

**Q: If it's IP65 waterproof, is it okay to leave it out in the rain?**

A: IP65 indicates dust resistance and protection against water jets from any direction, but it does not protect against prolonged exposure to heavy rain or submersion. If heavy or prolonged rain is expected, it is recommended to store the solar panel or place it in a location not directly exposed to rain. This helps extend its lifespan and prevent malfunctions due to water ingress at connection points.

**Q: Does frequent starting and stopping of charging on cloudy days affect devices like smartphones?**

A: On cloudy days or with unstable sunlight, the solar panel's power generation may fluctuate, causing devices to repeatedly connect and disconnect. This typically does not directly harm smartphones or other devices, but it can lead to intermittent or unstable charging. When charging two devices simultaneously, if power generation is insufficient, one device might stop charging, or the device might automatically adjust its current. For users concerned about device stability, it is recommended to first charge a mobile battery and then use the mobile battery to power devices, ensuring more stable charging.

**Q: Can this product store electricity?**

A: This product does not have a power storage function. It is a solar panel that generates electricity when exposed to sunlight and directly supplies power to devices or mobile batteries. If you wish to store power for later use, please combine it with a mobile battery or portable power station. This allows for stable power supply even when there is no sunlight.

## 8. SPECIFICATIONS

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<b>Model</b>	CSSP-30W
<b>Brand</b>	LVYUAN

<b>Material</b>	Monocrystalline Silicon (ETFE/EVA/Monocrystalline Cell/Fabric Multi-layer structure)
<b>Conversion Efficiency</b>	22.5%
<b>USB-A Output</b>	Max 18W (5V=3A, 9V=2A)
<b>USB-A Supported Standards</b>	Apple 2.4A, QC 2.0/3.0, Samsung AFC (Max 9V), DCP 1.5A
<b>Type-C Output</b>	Max 18W (5V=3A, 9V=2A)
<b>Type-C Supported Standards</b>	PD 3.0, QC 2.0/3.0, Samsung AFC, Huawei FCP/SCP, Apple 2.4A, DCP 1.5A
<b>Total Max Output</b>	25W (2 ports combined)
<b>Waterproof Rating</b>	IP65
<b>Unfolded Dimensions (L x W)</b>	648 x 315 mm
<b>Folded Dimensions (L x W x H)</b>	315 x 218 x 30 mm
<b>Weight</b>	Approx. 850g
<b>Included Components</b>	MC4 TO DC5521 Cable*1
<b>Country of Origin</b>	China

## 9. WARRANTY AND SUPPORT

LVYUAN offers a **1-year manufacturer's warranty** for this product. For any inquiries or support, please contact our customer service:

**LINE:** [@763yvt](#)

**TEL:** 050-5536-3547

**E-mail:** [service@lvyuan.jp](mailto:service@lvyuan.jp)

We provide reliable after-sales service in Japan.