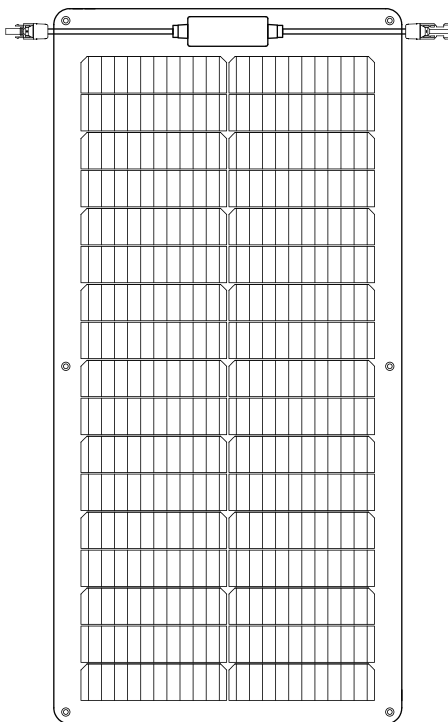




## 50W Flexible Solar Panel



V2.0

### **USER MANUAL**

Model : CALLSUN-R50W



# 50W Flexible Solar Panel

Thank you for purchasing the Solar Panel. Before using this product, please carefully read this manual. Once you use this product, it will be deemed that you fully acknowledge and accept all the contents of this manual. Please strictly follow the instructions in this manual when using this product and pay close attention to the precautions.

We are not responsible for any direct or indirect losses or injuries caused by improper use of the solar panel, including but not limited to short-circuiting the product, overheating, inserting foreign objects, disassembly, throwing, heavy pressure, and using low-quality controllers, etc.

***\*Please confirm in advance whether the parameters of this solar panel match the specifications of your equipment. Failure to meet these specifications may result in damage to the products.***

## Product Use Precautions

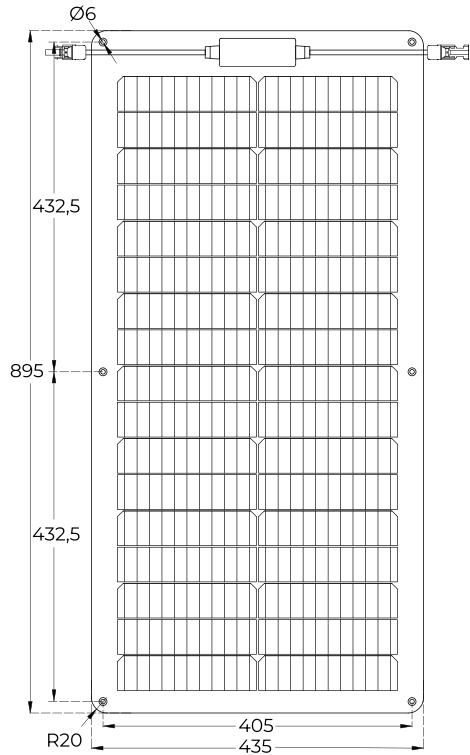
1. Do not short-circuit.
2. Do not reverse polarity.
3. Never attempt to disassemble, inserting foreign objects damage or modify the unit, as this may lead to unforeseen risk.
4. Keep the product away from oil, flammable gases, corrosive substances, combustible materials and other hazardous materials.
5. Avoid dropping, placing heavy objects on, or subjecting this unit to strong impacts.
6. Handle with care during use to prevent collisions with the solar panel. Avoid touching it with sharp objects and refrain from forcefully striking the product.
7. Do not step on, stand on, or jump on the surface of the solar panel. Heavy or sharp objects may scratch the solar panel, causing small cracks and affecting output power or posing a risk of injury.
8. Do not pull the power cable hard to avoid the power cable from breaking or falling off.

## Product Highlights:

1. Utilizes high-performance, high-quality monocrystalline solar cells, achieving impressive conversion efficiency.
2. This product is flexible design, making it suitable for various surfaces.
3. This product adopts a waterproof, dustproof, wear-resistant, and high-temperature-resistant ETFE surface protection layer.
4. Equipped with bypass diodes to help the current bypass shaded or soiled areas, ensuring the unaffected sections continue to produce electricity, thereby enhancing the overall system efficiency.
5. Wide Compatibility, this solar panel has universal Solar Connectors.

# Product Dimensions

Length: ±2mm, Width: ±2mm, Height: ±1mm.



# Electrical Parameters

|                             |        |
|-----------------------------|--------|
| Max Power at STC (Pmax)     | 50W    |
| Power Tolerance             | 0~3%   |
| Maximum Power Voltage (Vmp) | 19.10V |
| Maximum Power Current (Imp) | 2.61A  |
| Open-circuit Voltage (Voc)  | 21.39V |
| Short-circuit Current (Isc) | 2.92A  |
| Max. System Voltage (DC)    | 600V   |
| Max. Over Current           | 5A     |

\*STC(Standard Test Condition): Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5.

## Mechanical Parameters

|                             |                                        |
|-----------------------------|----------------------------------------|
| Cell Type                   | 182 11BB Monocrystalline Silicon, PERC |
| IP Rating                   | IP68                                   |
| Connector                   | Solar Connectors                       |
| Operating Temperature Range | -10°C ~ 70°C                           |
| Application Class           | Class A                                |
| Dimensions                  | 895 × 435 × 25mm ± 2mm                 |

## Temperature Coefficients

|                                  |            |
|----------------------------------|------------|
| Temperature Coefficients of Pmax | -0.32%/°C  |
| Temperature Coefficients of Voc  | -0.26%/°C  |
| Temperature Coefficients of Isc  | +0.046%/°C |
| NMOT                             | 42°C ± 2°C |

## Product Maintenance

After long-term use, dust may adhere to the surface of the panel, blocking sunlight and reducing the cells ability to absorb sunlight. Regularly clean the solar panel by gently wiping it with a damp cloth. Do not use corrosive liquids to clean the solar panel.

## Where to use it?

The solar panels must be exposed to direct sunlight with no obstructions on its surface to achieve optimal power generation. Please use it in sunlight without cloud cover, trees, or buildings blocking the panels as much as possible.

## Frequently Asked Questions

**Q: Is it waterproof?**

**A:** The solar panel of the device is rated IP68 for waterproof performance, suitable for outdoor use. To extend the lifespan of the solar panel, please do not immerse it in water.

**Q: Can the solar panels be connected in series or parallel?**

**A:** The solar panels can be connected in series or parallel (Package does not include parallel Y connectors.) via its Solar Connectors. Connecting them in series increases the voltage, while connecting them in parallel increases the current, thereby increasing the total power. When considering series or parallel connec-

tions, please check the specifications of the solar controller/batteries or power station you are using to ensure they support higher input voltage or current. This will help prevent damage to your equipment. Additionally, choose the appropriate wire gauge based on the change in output current to ensure a safe connection.

It is not recommended for non-professionals to connect solar panels with different output voltage or current parameters in series or parallel. If you need to connect solar panels with different parameters, ensure a thorough understanding of their performance and consult a professional to evaluate feasibility. This will help ensure that the connection method is reasonable and safe, avoiding damage to equipment and negatively impacting power generation efficiency.

## Warranty Policy

We provide a 5-year warranty service for materials and workmanship on this Solar Panel.

Within 5 years from the date of purchase, if the product experiences faults under normal usage, please apply for warranty with the purchase receipt.

The following situations are not covered by the warranty:

1. Cosmetic flaws are caused during use.
2. Product malfunctions resulting from self-disassembly, repairs, or human-induced causes.
3. Damages caused by uncontrollable factors such as natural disasters, thunderstorms, accidents, and the like.

### Warranty Application Process:

1. Please contact our customer service team, providing the purchase receipt and a detailed description of the issue.
2. Our customer service team will assist you in submitting the necessary information and documents.
3. After confirmation, we will provide you with an appropriate warranty solution.

If you have any questions or need assistance, please feel free to reach out to us via the following email: **[callsun-service@outlook.com](mailto:callsun-service@outlook.com)**

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