

DOKIO DFSP

# DOKIO Semi-Flexible Solar Panel 100W 12V Instruction Manual

Model: DFSP

## 1. INTRODUCTION

The DOKIO Semi-Flexible Solar Panel 100W 12V is an innovative solution for portable and off-grid power needs. Its lightweight and bendable design makes it ideal for installations on curved surfaces, offering high efficiency and durability. This manual will guide you through the proper use and care of your solar panel.

Image: DOKIO 100W Semi-Flexible Solar Panel, showcasing its bendable nature and lightweight design.

## 2. KEY FEATURES

- **Lightweight:** Weighing only 2.3 lbs (1.05 kg) and 0.03 inches thin, it is significantly lighter and thinner than conventional solar panels, making it easy to transport, hang, and remove.
- **Extremely Flexible:** Can be curved to a maximum 30-degree arc, perfect for installation on curved surfaces found in RVs, campers, trailers, boats, cabins, sheds, and tents.
- **High-Quality Material:** Utilizes ETFE material for superior light transmission and enhanced durability.
- **Highly Durable:** Designed to withstand high wind-pressure, snow loads, and extreme temperatures. Includes a bypass diode for input overcurrent protection and reverse protection.
- **Easy Installation:** Features four metal grommet mounting holes for quick and easy hanging with hooks or secure attachment to a surface using adhesive.

Image: Close-up showing the 4 mounting holes, bypass diodes, Grade A+ monocrystalline cells, and IP67 MC4 output cable.

Image: Diagram illustrating the panel dimensions (38.4 in x 22.2 in) and MC4 cable length (35 in), with examples of panel quantity for boats and RVs.



Image: Demonstrating the panel's bendable curvature (up to 30°) and its ultra-lightweight nature (2.3 lb / 1.05 kg).



Image: Exploded view showing the layers of the panel: ETFE (anti-scratch, high transparency), EVA Film, High Efficiency Grade A+ Solar Cell, EVA Film, and TPT (better heat dissipation), contributing to 22-23% efficiency.

### 3. SETUP & INSTALLATION

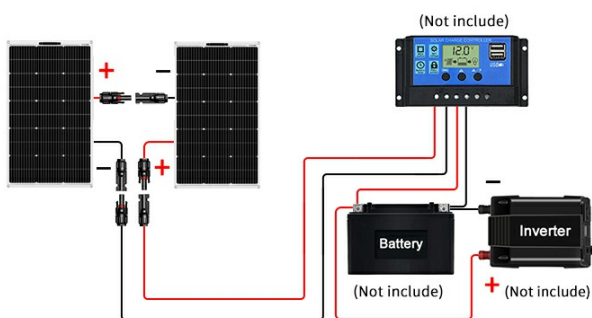
Proper installation is crucial for the optimal performance and safety of your DOKIO solar panel. Follow these general guidelines for setup:

1. **Mounting:** Utilize the four metal grommet holes for secure attachment. The panel can be hung with hooks or adhered directly to a clean, dry surface. Ensure the surface can support the panel and any associated wiring.
2. **Positioning:** For maximum sunlight exposure, position the panel where it will receive direct sunlight throughout the day, free from shadows.
3. **Wiring:** Connect the MC4 output cables from the solar panel to a compatible PWM or MPPT charge controller. Ensure correct polarity (positive to positive, negative to negative).
4. **Battery Connection:** Connect the charge controller to your 12V battery system. The charge controller regulates the voltage and current from the solar panel to prevent overcharging and protect the battery.
5. **Inverter Connection (Optional):** If you need AC power, connect a power inverter to your battery. The inverter converts DC power from the battery into usable AC power for your appliances.



Image: A diagram showing the connection steps: Solar panel to PWM Charge Controller, Charge Controller to Battery, and Battery to Power Inverter. (Note: Charge Controller, Battery, and Power Inverter are not included).

#### How to connect in **series**



#### How to connect in **parallel**

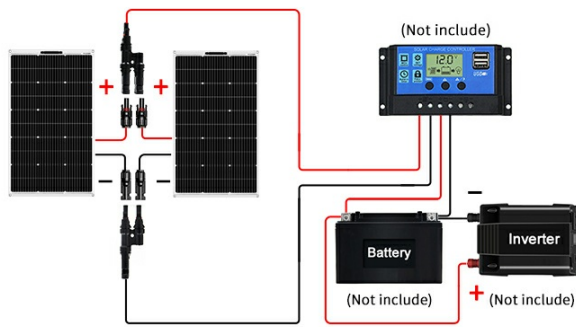


Image: Diagrams illustrating how to connect multiple solar panels in series for increased voltage or in parallel for increased current, depending on system requirements.



*Image: Visual representation of easy installation, showing the panel hung with straps on a vehicle and being attached to a surface using an adhesive.*

## 4. OPERATION

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Once installed and connected, your DOKIO solar panel will begin converting sunlight into electrical energy. The charge controller will manage the power flow to your battery, ensuring it is charged efficiently and safely. Monitor your charge controller's display for real-time information on power input, battery status, and load output.



*Image: Examples of common applications for the DOKIO solar panel, including RVs, yachts, camping setups, and cars.*

## 5. MAINTENANCE

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To ensure the longevity and efficiency of your solar panel, regular maintenance is recommended:

- **Cleaning:** Periodically clean the surface of the solar panel with a soft cloth and mild, non-abrasive cleaner to remove dirt, dust, and debris that can reduce efficiency.
- **Inspection:** Regularly inspect the panel and wiring for any signs of damage, corrosion, or loose connections. Ensure all mounting points are secure.
- **Environmental Protection:** The panel is IP67 waterproof, but avoid prolonged submersion. Ensure proper drainage if installed in areas prone to water accumulation.



*Image: Close-up of the panel surface with water droplets, highlighting its IP67 waterproof rating.*

## 6. TROUBLESHOOTING

If you encounter issues with your solar panel, consider the following common problems and solutions:

- **Low Power Output:** Check for shading on the panel. Even partial shading can significantly reduce power output. Ensure the panel is clean and free of debris. Verify all connections are secure and not corroded.
- **Battery Not Charging:** Confirm the charge controller is functioning correctly and its settings are appropriate for your battery type. Check the voltage readings from the panel and to the battery.
- **Physical Damage:** While durable, inspect the panel for any cracks, delamination, or damage to the junction box or cables. Physical damage can impair performance.

## 7. TECHNICAL SPECIFICATIONS

| Specification       | Value                     |
|---------------------|---------------------------|
| Brand               | DOKIO                     |
| Material            | Metal                     |
| Product Dimensions  | 38.4"L x 22.2"W x 0.04"H  |
| Item Weight         | 2.3 Pounds                |
| Efficiency          | Ultra Efficiency          |
| Connector Type      | MC4                       |
| Included Components | Bag                       |
| Maximum Voltage     | 12 Volts                  |
| Maximum Power       | 100 Watts                 |
| UPC                 | 682559946444              |
| Manufacturer        | DOKIO                     |
| Part Number         | flexible solar panel 100w |
| Country of Origin   | China                     |
| Item Model Number   | DFSP                      |
| Size                | 100W                      |
| Style               | Modern                    |
| Wattage             | 100 watts                 |

|                       |               |
|-----------------------|---------------|
| Item Package Quantity | 1             |
| Batteries Included?   | No            |
| Batteries Required?   | No            |
| Date First Available  | July 23, 2019 |

## 8. WARRANTY AND SUPPORT

The DOKIO Semi-Flexible Solar Panel comes with a 1-year warranty. For any inquiries, technical assistance, or support, please contact DOKIO customer service. We strive to provide prompt and helpful responses to ensure your satisfaction.



*Image: Representation of DOKIO's customer support, indicating a 24-hour response time.*

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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.

Submit question

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