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## Sunforce 38108

# Sunforce 100 Watt Crystalline Solar Panel Kit

## USER MANUAL

Model: 38108

### Introduction

This manual provides essential information for the safe and efficient operation of your Sunforce 100 Watt Crystalline Solar Panel Kit. This kit is designed to provide reliable power for charging 12V batteries in various applications, including RVs, cottages, and emergency power systems. Please read this manual thoroughly before installation and use.

### Safety Information

- Always wear appropriate safety gear, including eye protection, when working with electrical components.
- Ensure all connections are secure and properly insulated to prevent short circuits.
- The solar charge controller is **not weatherproof** and must be mounted in a dry, protected environment.
- Do not attempt to disassemble or modify the solar panel or charge controller. Refer all servicing to qualified personnel.
- Avoid touching the solar panel surface with sharp objects to prevent damage to the tempered glass.
- Disconnect the solar panel from the charge controller and battery before performing any maintenance or installation work.

### Package Contents

Your Sunforce 100 Watt Crystalline Solar Panel Kit includes the following components:

- 1 x 100 Watt Crystalline Solar Panel
- 1 x 8.5 Amp Solar Charge Controller



Figure 1: Front view of the Sunforce 100 Watt Crystalline Solar Panel and included 8.5 Amp Charge Controller.

## Setup and Installation

Proper installation is crucial for optimal performance and safety. Follow these steps carefully:

- 1. Choose a Location:** Select a location for the solar panel that receives maximum direct sunlight throughout the day, free from obstructions like trees or buildings. The panel is weatherproof and designed for outdoor use.
- 2. Mount the Solar Panel:** Securely mount the solar panel using appropriate hardware (not included) to a stable surface. The aluminum frame provides mounting points. Ensure the panel is angled towards the sun for best efficiency.
- 3. Mount the Charge Controller:** The 8.5 Amp charge controller must be mounted in a dry, protected environment, away from direct moisture or extreme temperatures.
- 4. Connect to Battery:** Connect the charge controller to your 12V battery. Ensure correct polarity: positive to positive, negative to negative. The charge controller protects the battery from overcharging.
- 5. Connect Solar Panel to Controller:** Once the battery is connected, connect the solar panel to the charge

controller. Again, ensure correct polarity. The integrated blocking diode in the panel prevents battery discharge at night.

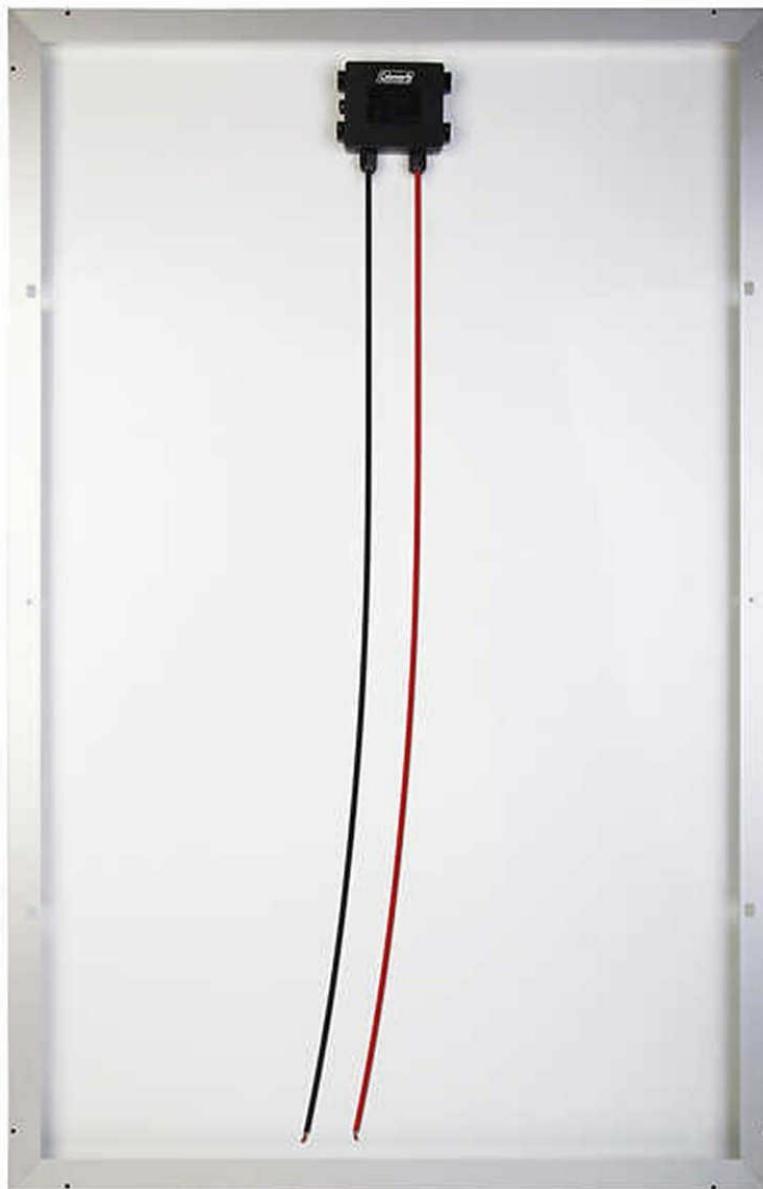


Figure 2: Back view of the solar panel, illustrating the junction box and wiring for connection.

## Operating Instructions

Once installed, the solar panel system operates automatically:

- The solar panel converts sunlight into electrical energy.
- The 8.5 Amp charge controller regulates the voltage and current from the solar panel to safely charge your 12V battery, preventing overcharging and extending battery life.
- For optimal performance, ensure the solar panel is clean and free from debris or shading.

## Maintenance

Regular maintenance ensures the longevity and efficiency of your solar panel kit:

- Cleaning:** Periodically clean the surface of the solar panel with a soft, damp cloth to remove dust, dirt, or other debris that may reduce efficiency. Do not use abrasive cleaners or harsh chemicals.
- Connections:** Annually inspect all electrical connections for tightness and corrosion. Loose or corroded connections can lead to power loss or system malfunction.
- Charge Controller:** Ensure the charge controller remains in a dry, protected environment. Check for any signs of damage or overheating.

## Troubleshooting

Problem	Possible Cause	Solution
No power output from panel	Insufficient sunlight; Panel is dirty or shaded; Damaged wiring/connections.	Ensure panel is in direct sunlight; Clean panel surface; Check all wiring for secure connections and damage.
Battery not charging	Incorrect wiring polarity; Faulty charge controller; Discharged battery.	Verify correct positive/negative connections; Test charge controller (if possible); Check battery health.
Low power output	Partial shading; Panel surface dirty; Sub-optimal panel angle.	Remove any shading; Clean panel; Adjust panel angle for better sun exposure.

## Specifications

Feature	Specification
Product Model Number	38108
Maximum Power Output	100 Watts
Maximum Current	5.8 Amps
Charge Controller	8.5 Amp (PWM)
Panel Dimensions (L x W x H)	50" x 26" x 2"
Item Weight	17.41 Pounds
Material	Aluminum, Plastic
Efficiency	High Efficiency

## Warranty and Support

For warranty information and technical support, please refer to the contact details provided with your product packaging or visit the official Sunforce website. Keep your purchase receipt as proof of purchase.

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