

## **Professional Solar Panel 400W – User Manual**

### **Professional Solar Panel 400W Metadata**

Model: SP-400-PRO

Category: solar\_panels

Tags: solar\_panels, SP-400-PRO, Cirrus, Renewable Energy, Professional Solar Panel 400W

#### **1. Professional Solar Panel 400W Overview**

The SP-400-PRO delivers exceptional performance in low-light conditions and is engineered for maximum energy harvest and long-term reliability.

#### **2. Professional Solar Panel 400W Intended Use**

Designed for residential and light commercial renewable-energy applications. Any other use may void the warranty and pose safety risks.

#### **3. Professional Solar Panel 400W Safety Information**

- a. Always de-energize circuits at the combiner box and apply lock-out/tag-out before wiring work.
- b. Use fall-arrest systems when working on rooftops; ensure anchors are rated  $\geq 5$  kN.
- c. Wear DC-rated gloves and keep tools insulated to mitigate arc-flash hazards.

#### **4. Professional Solar Panel 400W Prerequisites**

- a. Read this manual in full before installation.
- b. Ensure local electrical codes and permits are satisfied.
- c. Have the following tools: multimeter, torque wrench, crimping tool, PPE.

#### **5. Professional Solar Panel 400W Installation Guide**

- a. Perform shade analysis to target  $\leq 10$  % annual shading.
- b. Tilt modules to site latitude  $\pm 10^\circ$ ; orient south-facing in the northern hemisphere.
- c. Use wind/snow-load-rated stainless hardware; comply with ASCE-7-22.
- d. Route cables in UV-resistant conduit; label per NEC 2024 Article 690.

#### **6. Professional Solar Panel 400W Configuration & Operation**

Refer to the controller or inverter interface to set voltage and charging parameters. Adjust based on battery chemistry or site requirements.

### 7. Professional Solar Panel 400W Maintenance Schedule

- a. Rinse with de-ionized water when soiling losses exceed 5%.
- b. Inspect wiring and connectors annually for corrosion or damage.
- c. Track daily production; investigate drops >10 % from baseline.

### 8. Professional Solar Panel 400W Troubleshooting

- a. **No Output / Zero Power:** Check PV input voltage; verify connectors.
- b. **Low Power Output:** Inspect for shading, soiling, or loose wiring.
- c. **System Fault Code:** Consult controller/inverter fault table; reset after corrective action.

### 9. Professional Solar Panel 400W Technical Specifications

Specification	Value
Power Output	400W
Voltage	24V
Dimensions	79.1 x 39.4 x 1.6 inches
Weight	49.6 lbs
Warranty	25 years performance, 12 years product
Efficiency	21.8%
Operating Temperature	-40°C to +85°C

### 10. Regulatory & Standards

- a. IEC 61215
- b. IEC 61730
- c. NEC 2024 Article 690
- d. UL 1703

### 11. Professional Solar Panel 400W Warranty & Support

Warranty: 25 years performance, 12 years product

For assistance, contact Cirrus support: [support@cirrus.com](mailto:support@cirrus.com) or +1-800-CIRRUS-1.