

# **Rollable Solar Panel Operating Instructions**

Rollable Solar Panels are made with professional, marine-grade components and rugged, UV-stabilized materials.

To see our full line of solar products, accessories, and FAQs visit us at: www.powerfilmsolar.com

# **Important Notes**

Always roll solar side out and don't roll too tight. Rolling the panel too tightly will likely reduce the effectiveness of the solar panel. The inner roll should measure at least 3" across (42 Watt Rollable (R-42) and 60 Watt Rollable (R-60) at least 5").

All connections must be solar positive (red) to battery positive and solar negative (black or blue) to battery negative. Reversing can damage the solar panel. Consult your battery manufacturer if you have questions about the specifications of your battery.

A charge controller is not required if the battery capacity is 100x greater (or more) than the panel output. For example, a 100Ah battery would not need a charge controller as long as the panel output is 1A or less. If a charge controller is required please size it appropriately to the panel output.

# **How To Charge**

- 1. Unroll the panel with the solar side facing up and pointed towards the sun.
- 2. Use the grommets on each of the corners and a tie cord to hold the panel in place and reduce loss or damage from high winds.
- 3. Connect the appropriate accessory and cable for the type of device you will be charging.

### **Charging Electronics**

- 1. Connect the 12V Female Car Charger Adapter (RA-2) (included) to the panel.
- 2. Use your own USB car charger adapter to connect your device to the RA-2 or use a 2.4A Dual USB 12V Adapter (RA-14B) (not included) to charge USB electronics.

# **Charging 12V Batteries**

- 1. Connect panel output to the input of appropriate charge controller, if required (4.5A, 6A, and 10A charge controllers available) (not included) (see Important Notes section for more information).
- 2. Connect the desired cable to the output of the charge controller or panel. Use the 15 ft. Extension Cord with O-ring Connectors (RA-11) (included) or 15 ft. Extension Cord with Alligator Clips (RA-8) (not included) when connecting directly to the battery. Use the 12V Male Car Charger Adapter (RA-1) (not included) when connecting through a vehicle's cigarette lighter or accessory outlet.
- 3. If using an RA-8 or RA-11, connect the red connector to the + battery connection and the blue or black connector to the battery connection. If using the RA-1, plug into your vehicle's cigarette lighter or accessory outlet. Note: in some vehicles, these outlets are not connected to the battery when the ignition is off, so the solar panel will not charge the battery. Consult your vehicle's owner's manual for more information.



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### **How To Clean & Store Your Solar Panel**

Use a damp cloth and a mild soap solution to clean the solar panel. Wait a few minutes for the panel to dry before storing it. Always roll with the solar side facing out. Use the attached velcro strip to hold in place when rolled. Store in a cool dry environment (temperature range -30 to 60° C).

## **Specifications**

	7 Watt	14 Watt	21 Watt	28 Watt	42 Watt	60 Watt
Operating Voltage	15.4V	15.4V	15.4V	15.4V	15.4V	15.4V
Operating Current	0.45A	0.9A	1.35A	1.8A	2.7A	3.9A
Weight	0.7lb / 0.3kg	1.0lb / 0.5kg	1.5lb / 0.7kg	1.7lb/ 0.8kg	2.3lb / 1.0kg	3.3lb / 1.5kg
Rolled Dimensions (in/mm)	14.6 x 3.0 370.8 x 76.2	14.6 x 3.0 370.8 x 76.2	14.6 x 3.0 370.8 x 76.2	14.6 x 3.0 370.8 x 76.2	26.5 x 3.0 673.1 x 76.2	26.5 x 3.0 673.1 x 76.2
Unrolled Dimensions (in/mm)	22.8 x 14.6 579.1 x 370.8	41.8 x 14.6 1061.7 x 370.8	60.8 x 14.6 1544.3 x 370.8	79.6 x 14.6 2021.8 x 370.8	60.7 x 26.5 1541.8 x 673.1	85.7 x 26.5 2176.8 x 673.1

<sup>\*</sup> Tests performed at Standard Test Conditions (STC) (Spectrum: AM1.5, Intensity: 1000W/m^2, Temperature: 25C). Power performance may vary due to temperature, spectral, and intensity variation.

### **Certifications**

- CE (Directives 2014/30/EU and 2014/35/EU)
- MIL-STD-810G
- RoHS
- REACH
- Berry Amendment Compliance

Full compliance statements available at: www.powerfilmsolar.com