

160W SemiFlex Solar Panel with Integrated Edge Seal Installation Instructions

STOP! BEFORE CONTINUING:

SCAN THE QR CODE BELOW TO WATCH THE STEP-BY-STEP VIDEO



[OR CLICK HERE TO WATCH THE STEP-BY-STEP VIDEO](#)

Clean the installation location with a >90% concentration of isopropyl alcohol and a **clean** towel or rag.



Pick up the 160W solar panel packaged in cardboard with banding. Place the box near the installation location, oriented correctly (**sticker shows THIS SIDE UP**).

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Cut the banding and remove it.



Once the bands are removed, the cardboard sandwiching the panel can be removed. Gently slide the bottom piece of cardboard out.



Slide the panel approximately into place. Now, you can remove the plastic clips holding the thin plastic.

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THIS STEP IS CRITICAL: To install the panel where intended, slowly pull the release liner, exposing 1-2 inches of the butyl adhesive. Ensure the panel is aligned as desired, and when ready, set the exposed butyl portion in the installation location. Use a plastic felt-edged squeegee to install the panel.



IMPORTANT: Strokes for the squeegee should start in the center of the panel and move at an angle toward the edge and the remaining release liner.



Slowly pull the double-release liner, and use the felt-tipped squeegee to work the panel down using the method described in 7.

Start in the center portion with the solar cells and fiberglass and work out along the integrated butyl adhesive border. The panel's position will be permanently fixed at this point, and there is no going back. **DO NOT** attempt to pull the panel up, or you will damage it.

Once complete, dispose of the release liner and continue to work out any potential air pockets under the panel and integrated edge tape exterior.

SCAN THE QR CODE BELOW TO WATCH THE BATTERY CONNECTION VIDEO



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1. Mount the charge controller securely to a mechanically sound surface (e.g., inside compartment, battery box or metal frame) using the included screws.
 - If the desired mounting location is inside a compartment
 - Use a step drill to drill an 11/16" hole in the bottom rear of the compartment for the cables to enter/exit.
 - Fasten the charge controller to the wall of the compartment using the provided screws.
 - Run the battery and panel extension cables out of the hole and fit the provided grommet around the wires as they exit the compartment.
2. Remove the fuse from the wiring harness before connecting to the battery.
3. Connect the ring terminals:
 - **Red** to positive (+)
 - **Black** to negative (-)
4. Use a multimeter to measure the battery voltage between the negative battery post and the charge controller side of the fuse holder, and confirm:
 - 12V system
 - Correct polarity
5. Ensure the extension cable is routed loosely so it does not rub against anything and wear out over time.
6. Connect the extension cable to the solar panel pigtails and secure a zip tie over the connector locks as a secondary lock. To provide additional strain relief, support each connector side with a zip tie mounting block.

- **IMPORTANT:** Clean the areas where mounting blocks will be applied using >90% isopropyl alcohol.
- 7. Use zip ties and self-adhesive zip tie mounting blocks to secure the cable in an orderly fashion between the panel and battery. Clean the area where the mounting blocks will be stuck with isopropyl alcohol and let it dry before sticking the block in place.
- 8. Reinstall the fuse in the harness.
- 9. When the solar panel is exposed to sunlight:
 - Measure the battery voltage again—it should be slightly higher, based on the intensity of sunlight.
 - If your charge controller has a single LED, it should light when the solar panel provides sufficient illumination to start trickle charging the battery.
- 10. Use a DC current clamp around the wire with the fuse installed to measure current:
 - Current will vary between 0–15A



- A 0 or low reading may indicate the battery is fully charged (above 14.2V) or deeply discharged (below 9.5V)

Final Inspection and Testing

- Visually inspect all panel edges for full adhesion.
- Squeegee the entire surface again to eliminate air bubbles or wrinkles. Clean off any remaining labels; do not leave them on the panels.
- Avoid placing weight (such as a knee or palm) directly on the panel during installation.
- Slight cell cracks will not significantly impact performance, but may reduce efficiency.

You've completed the installation of the 160W SemiFlex Solar Panel!