



TUNE[®]

Merlin Solar Panel - Install Guide

About This Guide

This guide covers the install of your Merlin Solar Panel: unboxing, prep, installing, and troubleshooting.

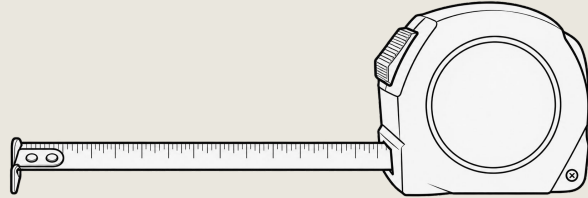
→ [Prep](#)

→ [Install](#)

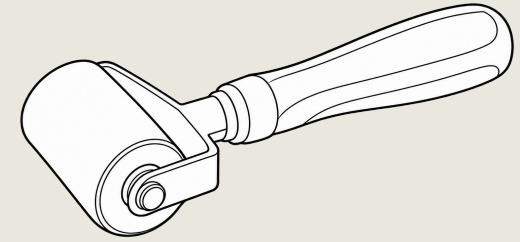
→ [Troubleshooting](#)

Service Tools Required

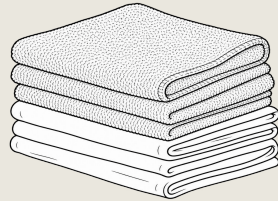
Tape Measure



Small Rubber Roller



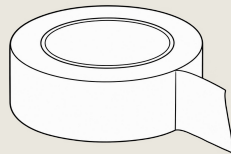
Clean Rags & Microfiber Cloths



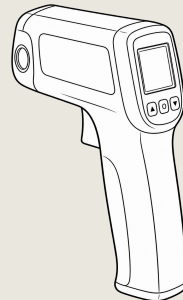
Isopropyl Alcohol



Masking Tape



IR or Surface Thermometer

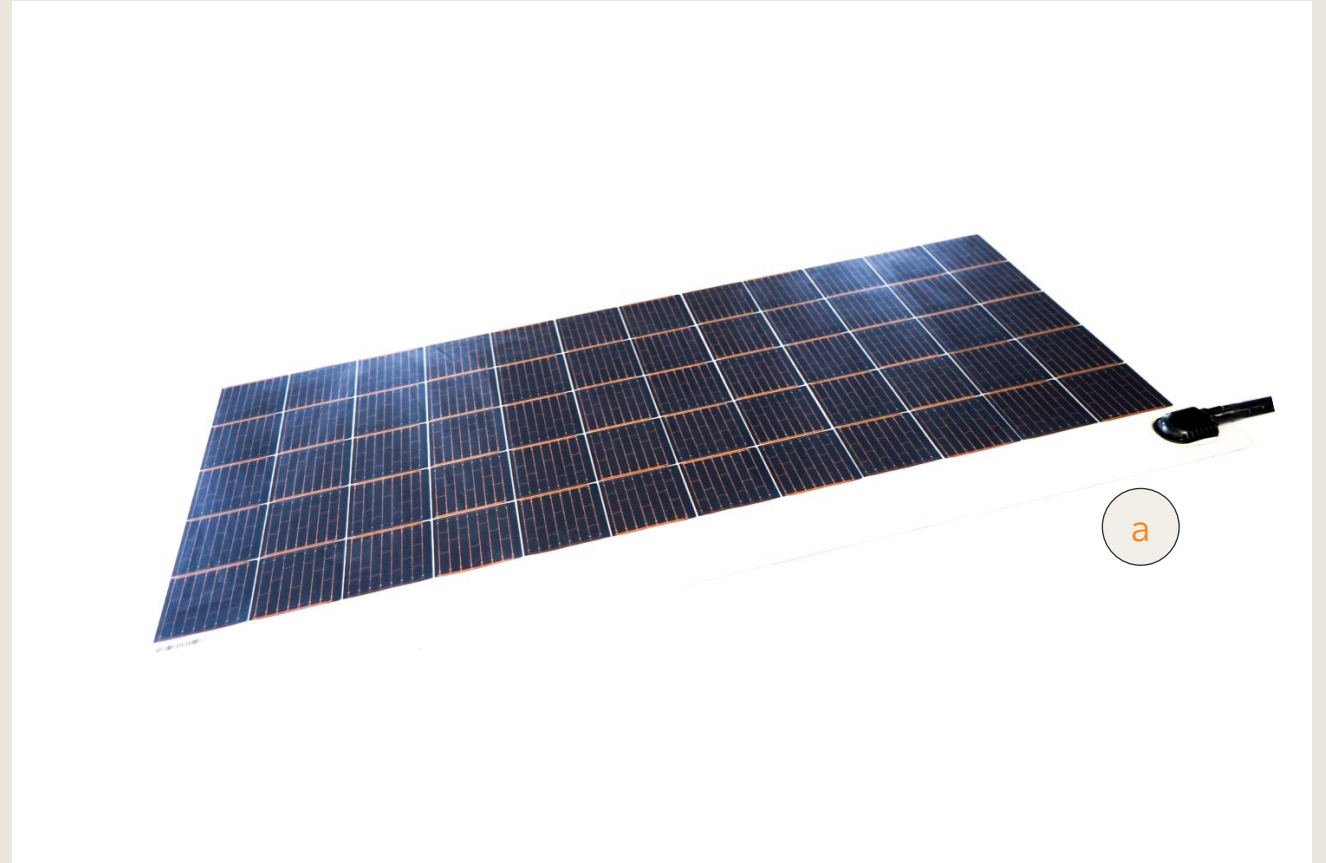


Might Need: Electric Blanket, Heat Gun, Hair Dryer, or Fan

What's in the Box?

Opening the Box

1. Check for all components:
 - a. Merlin Solar Panel with attached MC4 Panel Output Wires



Test your panel by plugging it in to ensure functionality before continuing with your install.

Prep: Placement and Cleaning

Your camper's roof consists of three separate fiber-reinforced polypropylene (FRP) panels that create the perfect smooth and flat surface for the installation of your Merlin solar panel, but first you need to ensure the surface is properly prepared.

1. Dry fit your Merlin solar panel on top of your camper by placing it flat on the panel you wish to stick it onto while keeping the following in mind:
 - a. Ensure there are no protrusions or obstacles on the FRP panel you want the Merlin solar panel installed on, such as your solar port or roof vent.
 - b. Ensure the wiring is facing the direction that makes the most sense for routing, and that the Merlin solar panel is able to sit centered on the panel with at least a 1" offset from either the front or rear edge of the camper.
 - i. You will mark this location later.

Prep: Placement and Cleaning

2. Now that your location is determined, remove the Merlin solar panel and place it somewhere safely out of the way.
3. Use a mild soap and water with some clean rags and gently clean the entire FRP panel you are installing the Merlin solar panel on.
4. Once that panel has dried, take another clean rag and your isopropyl alcohol, and thoroughly wipe the entire panel clean until there are no surface contaminants.
 - a. The Merlin solar panels will not properly adhere to a surface that is contaminated or dirty.

Prep: Measure and Mark

1. Bring your Merlin solar panel back to the install area and ensure you have your tape measure and masking tape handy.
2. Place your Merlin solar panel flat on the FRP panel you are installing it onto and center it.
3. Using your tape measure, place a few pieces of masking tape 1" off the front or rear of the camper (depending on where you are installing your Merlin solar panel) to establish the front or rear boundary of placement.
4. Now, use your tape measure to center the panel from side-to-side.
 - a. Placing the hook of the tape measure into the inner edge of the roof's T-Track is a helpful way to standardize your measurements.
5. Once your Merlin solar panel is centered on the panel, mark the remaining three sides with your masking tape.
6. You can now move your Merlin solar panel off safely to the side.

Prep: Temperature Control

Your Merlin solar panel requires the surface temperature to be between 60-75°F before adhering it.

1. Immediately before installing your Merlin solar panel, use your IR or surface thermometer to take measurements throughout the install area of the FRP panel and ensure the surface temperature falls between the 60-75°F range.
 - a. If your panel is not within this range, do not proceed with the installation and follow the hot or cold procedures below.
2. If it is hot outside, ensure your camper is in the shade, and ensure there is proper airflow across the surface to keep the temperature within that range.
3. If the temperature is cold, use an electric blanket over the panel, a heat gun from a safe distance, or a hair dryer (which may take some time) to gently warm the entire install area up.



Fig. 1

Merlin Solar Panel Install

1. Carefully remove the adhesive backing and place the Merlin solar panel within your masking tape guidelines, making sure to avoid creating any air bubbles under the panel.
2. Once the panel is in place, slowly and carefully apply light pressure with a clean microfiber cloth all around the full surface of the Merlin solar panel.
3. With your rubber roller, apply light pressure around the **perimeter** of the Merlin solar panel while making sure to avoid the black solar cells.
 - a. DO NOT USE THE RUBBER ROLLER ON THE BLACK SOLAR CELLS OR YOU WILL CAUSE DAMAGE!



Fig. 1



Fig. 2

Getting Help

For replacement parts, warranty questions, or anything this guide does not cover, contact [Tune Outdoor Customer Care](#).