



FirstSolar Panel Packaging Instructions

*Your guide to ensuring FSLR Panels arrive safely
at our facility.*

SOLARCYCLE's priority is a safe work environment. To ensure that all personnel loading and unloading end of life solar panels are safe, it is critical that all panels are loaded in a manner which prevents exposure from broken glass/cut edges & prevent tip over hazards and/or shifting in transit. Use the following steps contained in these instructions as a guideline for packaging. Contact SOLARCYCLE with any questions or requests.

In general, matching the original manufacturer's packaging material is ideal. If variation to the original packaging is required, please consult your SOLARCYCLE representative. Always use an appropriately sized pallet in good condition, if glass is broken & may migrate from the panels stack, wrap the pallet & panels in commercial grade shrink wrap. Physically band the panels together to the pallet.

A Site Load Plan will be provided as an appendix to your project Work Order. The Site Load Plan will include panel stacking and loading specifics. Use the following steps contained in these pages as a guideline for packaging and contact SOLARCYCLE with any questions or requests.

STEP ONE – STACK

Use sound, intact pallets in good condition.

When possible, use SOLARCYCLE's custom Tunnel Dunnage solution or the original manufacturer's pallet to stack and ship end-of-life panels to be sent to SOLARCYCLE for recycling.

It is critical that pallets are intact & not falling apart. Pallets should be capable of withstanding the panel stack weight, handling, and transport. Using pallets that are in poor condition, failing and unable to support the panel weight can result in a safety hazard. Contact SOLARCYCLE for a low cost pallet alternative solution if pallets are needed.

It is SOLARCYCLE's goal to maximize the total panel quantity per truck safely. Please refer to your Site Load Plan for the specifics on panels to stack per pallet and how many pallets to load per truck. To maximize the quantity of panels per truck, double stacking is required in most cases.

Frameless Series 2, 3 & 4 Panels

If original packaging is not available, an alternative packaging configuration for Series 2 & 4 follows. Series 4 panels may be stacked flat on a standard Series 6 or similarly sized pallet. Stack by alternating the orientation of the panel J box, and alternate panels stacking glass to glass then j-box to j-box to keep panels flat and stable. The pallet & panels should be strapped to ensure the stacks do not shift in transit, in this configuration 5 straps minimum are recommended.

Stack Series 6 and 6+ Panels glass side up

Thirty-One (31) panels per stack should be oriented glass side up. This will prevent panels from collecting water, increasing the total stack weight and potential issues with transport & recycling. Use two pieces of SOLARCYCLE Tunnel Dunnage per stack of Series 6 panels.

Frameless Series 7 Panels

If the original OEM (crate) packaging is not available, stack Forty-Two (42) Series 7 panels flat on SOLARCYCLE Tunnel Dunnage or appropriately sized pallets, starting with the first panel glass side up then alternating glass to glass and rail to rail. Stacking in this fashion, with a minimum of 4 straps and substantial heavy duty shrink wrap should be used to secure the panels for transit. It is required to include Tunnel Dunnage or an alternative spreader, on top of the Series 7 stacks to secure the band and stack. If Tunnel Dunnage is not used, spreaders may be fashioned from lumber 4x4's. This method of packaging will secure the stacks and prevent truck straps from destroying the glass and further damaging the panels. Note this method may require transit via dry van. Loading the dry van with a pallet jack or other means are necessary.

Palletize broken glass & similarly sized panels together.

Stack broken glass panels on separate pallets from panels with non-broken glass. Stack only one panel type per pallet.

STEP TWO – STRAP

Using nylon or steel bands, strap the panels to the pallet.

Strap the panels to the pallet in a manner that will secure the panels and pallets sufficiently and protect the panels from further damage. If using steel straps, for Series 6 panels three (3) straps are sufficient, if using nylon straps, six (6) or more are required. For Series 7 panels, 4 steel straps should be used, two (2) in each direction, utilizing the panel rails and a catch for two of the straps and the Tunnel Dunnage on the top and bottom of the stack for the two in the other direction. Avoid strapping in a way that will block or otherwise interfere with the forks of pallet jacks and/or forklifts.

STEP THREE – WRAP – SERIES 7 REQUIRED

For all First Solar Panels other than Series 6, wrapping with heavy duty shrink wrap is required to secure the load & avoid glass from falling during transport.

All First Solar Panels, other than Series 6, require heavy duty shrink wrap to secure the stacks. If Series 6 panels are extremely broken and glass has the potential to spread & fall from the panel stacks, use shrink wrap on these Series 6 stacks as well. Wrap the entire pallet from the bottom to the top using several layers of commercial grade shrink wrap. Use packing tape or other means to secure the free end of the wrap to ensure it does not unravel in transit.

STEP FOUR – LOAD

Load pallets onto the truck trailer.

The Site Load Plan provided to you will illustrate the best orientation for loading the pallets based on your specific panel model. If, for any reason, you are not able to load the full amount as illustrated on your load plan, please contact your SOLARCYCLE representative for assistance and next steps BEFORE the truck leaves your site. Quantities of less than a full truckload, as stated on your site load plan, may result in additional freight fees.

Pallets should be loaded in a manner which allows for easy access using a pallet jack or forklift. Leave enough space between pallets to allow for efficient loading and unloading.

Adherence to these instructions helps with both safety, environmental concerns, and the challenges of transporting EOL panels. Not following these instructions may result in additional charges for handling and/or freight. SOLARCYCLE reserves the right to apply commercially reasonable fees in the event of deviation from these instructions.