



UNI-SPHD
6072 Mount

Installation Manual

2018 Edition V 1.0

For model:

UNI-SPHD/4-90

NOT INCLUDED/WILL NEED TO BE
SOURCED LOCALLY:

4", sch-40/80 pipe (installs in ground)

2", sch-40 pipe- Cross piece at top of
mount, needs to be approximately 7"
longer than the center-to-center
measurement of mounting holes



Table of Contents

- 1 Introduction, Customer Support
- 2 Tools and components.
- 3 Assembly: Step 1.
- 4 Assembly: Steps 2-3
- 5 Assembly: Steps 4-5
- 6 Assembly: Step 6
- 7 Assembly: Step 6
- 8 Final steps and BOM list
- 9 Warranty Information

Introduction

The Heavy Duty Side of Pole Mount for 60 and 72 cell panels is a simple and universal pole mounting solution for small area solar photovoltaic (PV) needs. With its user-adjustable angle settings, the Side of Pole Mount can support installations in a wide range of locations, using a 4" Sch-40 Pipe for the pole or a flat surface mounting option.

Customer Support

Tamarack Solar makes every effort to ensure your mounting kit is easy to install. If you need assistance at any point with your installation or have suggestions on how we can improve your experience, call our customer support at **1-800-819-7236** or email us at info@tamaracksolar.com.



Tools Required

Wrenches, sockets that support the following size hexheads: **3/8", 5/16", 1/4"**

Components

The following parts are used for our UNI-SPHD/4-90 Side of Pole mount and ships with all necessary hardware:

Note: **Customer supplied 4" sch-40/80 pipe and the 2" sch-40 pipe are purchased separately at a local supplier.**

(1ea) Upper 4" Pole Clamp Bracket



(1ea) Lower 4" Pole Clamp Bracket



(2ea) Lower Brace Bracket



(2ea) 2" Pole Clamp Bracket



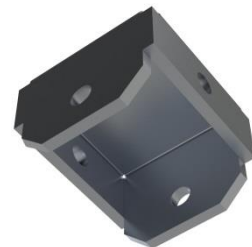
(2ea) Swivel Bracket



(2ea) Pivot Bracket



(2ea) Swivel Pivot Bracket



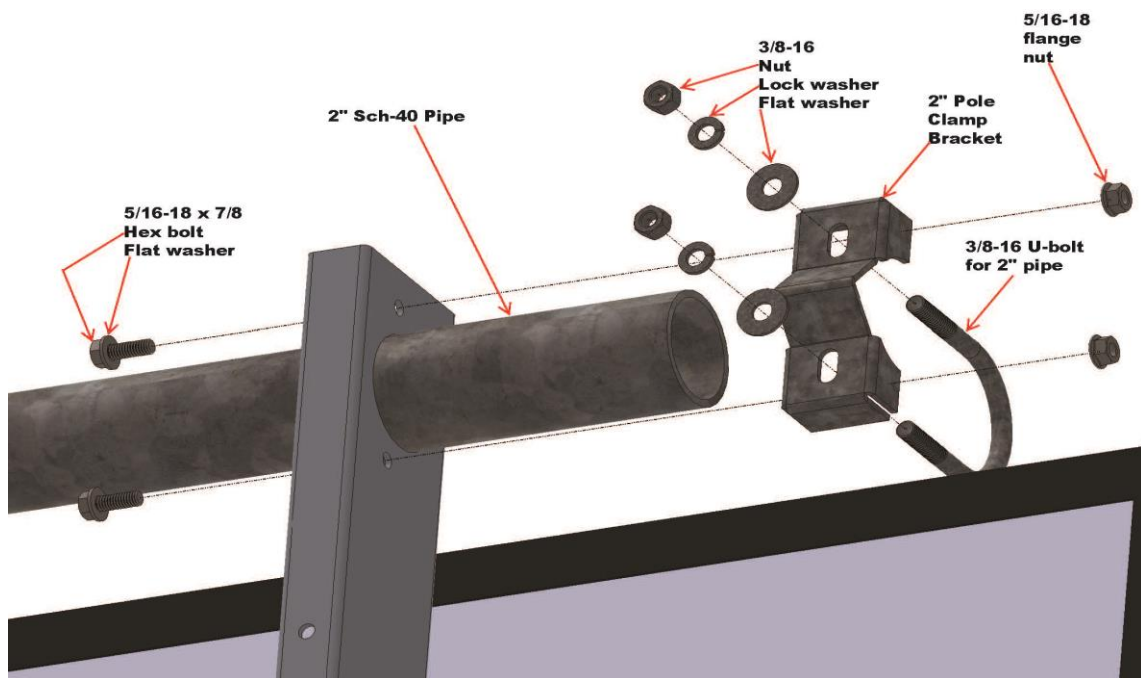
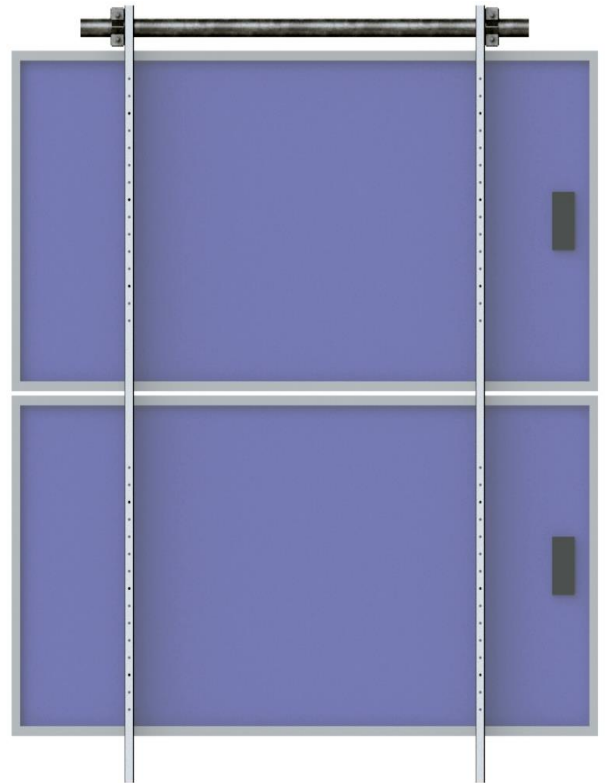
(2ea) panel supports

(2 pair) 34" Inner and Outer Brace Channels



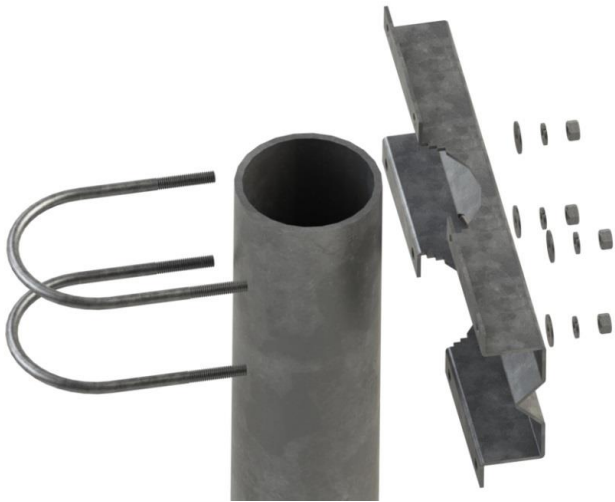
Step 1. Attach Panel Supports to Panels

- A. Lay the panels face down on a protected surface in the landscape orientation. Leave approximately 1" between panels.
- B. Lay the panel supports across the panels over their mounting holes, with the open side of the channels facing each other.
- C. **Loosely** secure the panel supports with 1/4-20 x 3/4" bolt, lock washers, and hex nut in each of the panel mounting holes (4 on each panel).
- D. Slide the 2" Sch-40 pipe (not included) through both panel supports and center in between them. **NOTE: the 2" pipe needs to be 7" longer than the center to center distance of the mounting holes on the panels.**
- E. Lay the 2" Pole Clamp Brackets on the pipe and attach to the panel supports with the 5/16-18 x 7/8 hex bolt, flats, and flange nuts. Insert the bolts from the panel support side, **Torque to 12Ft Lbs.**
- F. Install the 2" U-bolts over the 2" pipe through the Pole Clamp Brackets and **Torque to 15Ft Lbs.** Note: Do not over tighten and distort the bracket the U-bolts are not intended to lock rotation on the pipe, just to keep panels centered on the pipe.
- G. Check panels to be square and parallel and **Torque the 1/4" bolts to 7 Ft Lbs.**



Step 2. Attach Upper Pole clamp to pole

- A. Attach the Upper 4" Pole Clamp Bracket with the 3/8-164" U-bolts, nuts flats and lock washers as shown, flat side facing south. Keeping the U-bolts level to the pipe **Torque to 20Ft Lbs.**



Step 3. Attaching pre-assembled panel array to Pole

Depending upon your location and equipment available this can be done with a forklift, crane, or a few strong individuals

- Lift the array up to the 4" Pole Clamp Bracket, center and Align with the VEE on the 4" Pole Clamp Bracket.
- Attach the 2" pipe with the 2" U-bolts, flats, locks and nuts
- Tighten just enough to hold into the VEE but allow rotation to set the array angle.

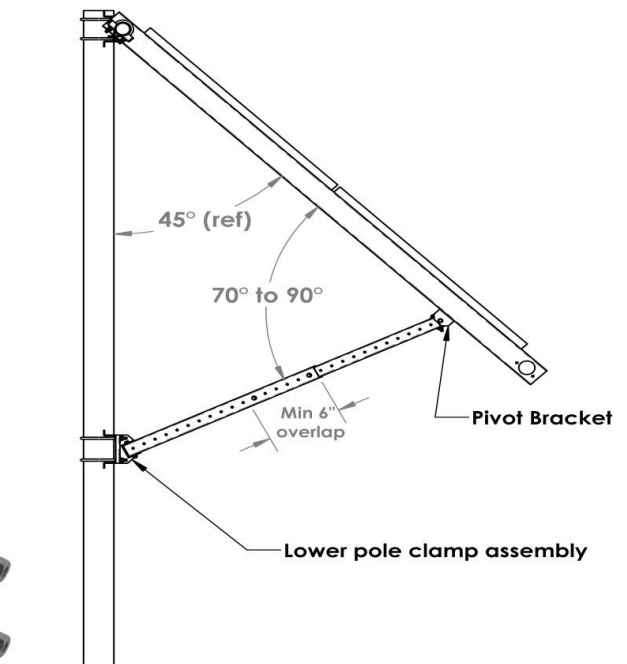
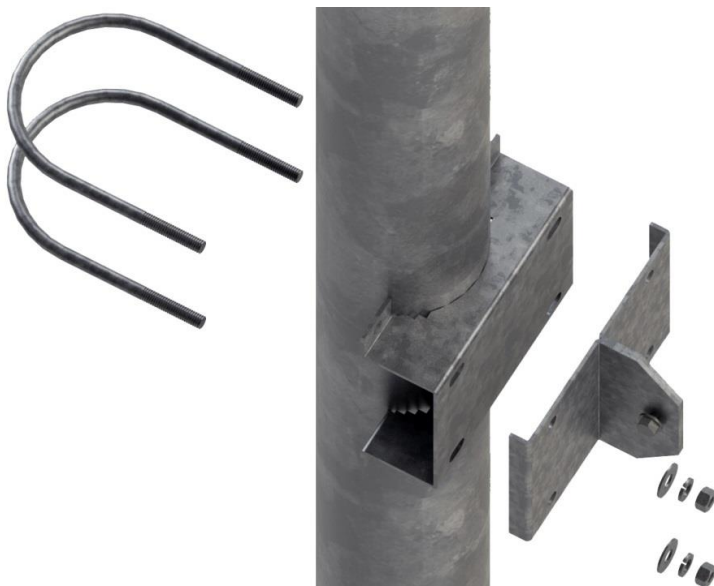
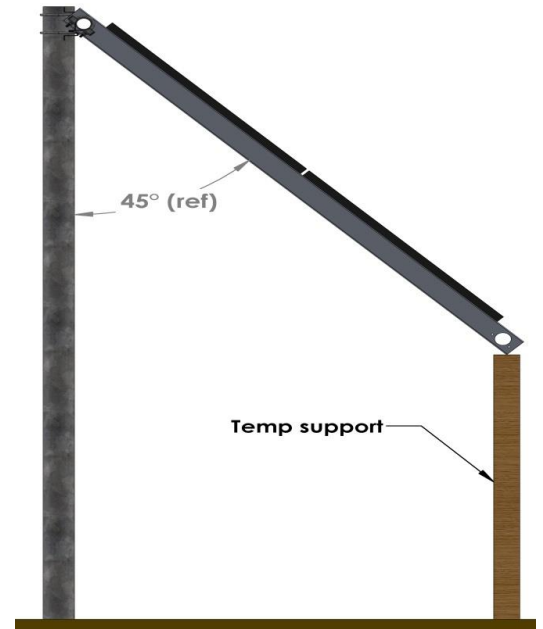


Step 4. Attach lower brace and set array angle

- A. Lift the array from the bottom up to meet the angle requirements for your location, place a temporary support under the ends of the panel supports to hold position while attaching the VEE brace..
- B. Determine the location of the Pivot Bracket noting the angle range of the brace to the panel supports and minimum overlap of the Inner and Outer Brace Channels. Bolt the brackets to the panel supports using the 5/16-18 x 7/8 bolts, flats and flange nuts. **NOTE: Insert the bolts in from the Pivot Bracket side putting the flange nut inside the panel support. Torque to 12Ft lbs.**

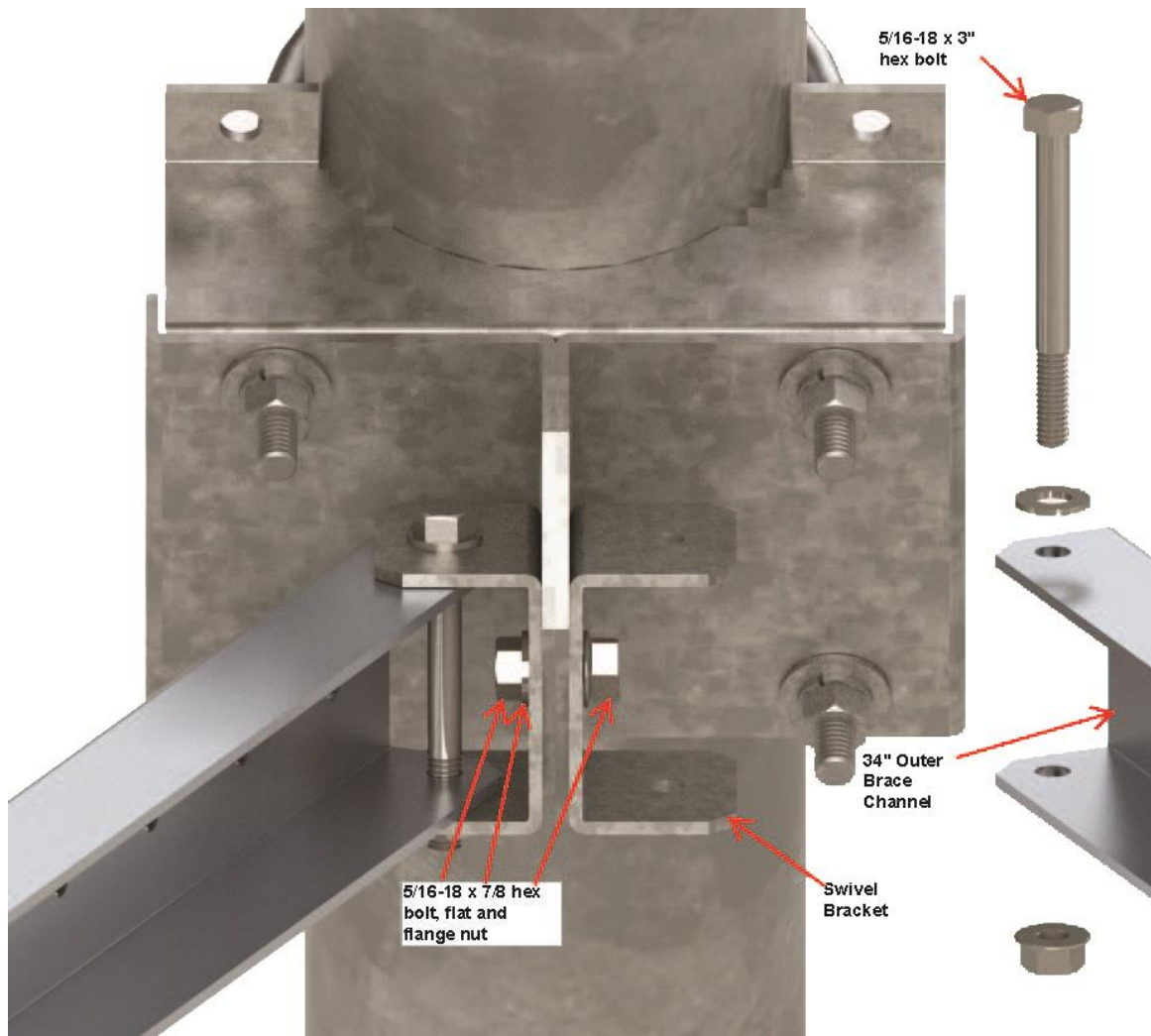
Step 5. Attach the lower brace

- A. Determine the approximate position for the lower Pole Clamp assembly.
- B. Attach the (2) Lower Brace Brackets together temporarily with 5/16 x 7/8 bolt and flange nut to keep faces against each other.
- C. Loosely attach the Lower Pole clamp and lower brace brackets to the pole with the 3/8-16 , 4" U-bolts flats locks and nuts. So it can be moved up or down a little when final position is made.

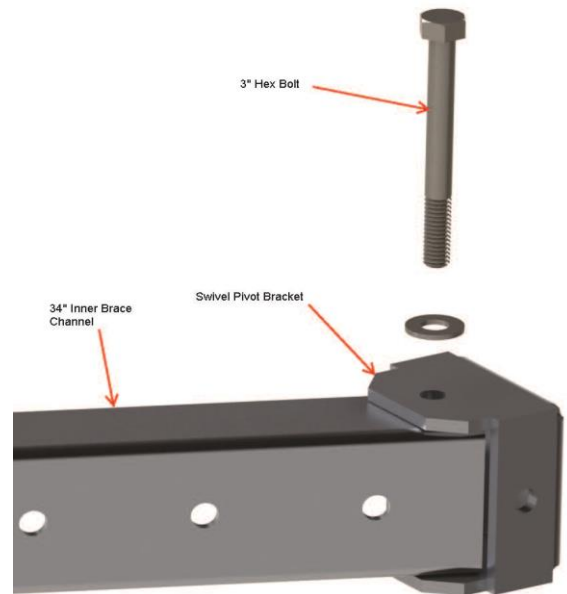
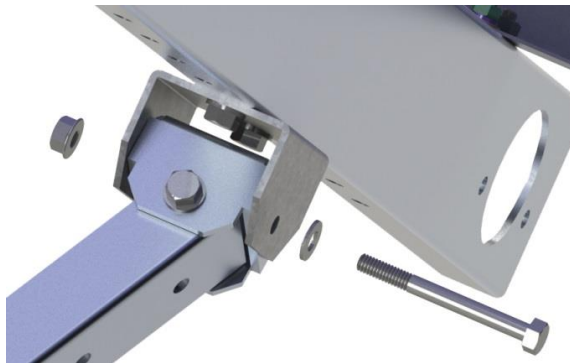


Step 6. Attach the lower Brace Components

- A. Loosely attach (2) Swivel brackets to the Lower Brace Brackets with the 5/16-18 x 7/8 hex bolt, flat and flange nut.
- B. Loosely attach the 34" Outer Brace Channels to the Swivel brackets with the 5/16-18 x 3" hex bolt, flats and flange nuts with the open side of the channels facing each other.



- C. Loosely attach the Swivel Pivot Bracket to the end of the Inner 34" brace channel with 5/6-18 3" bolt, flat and Flange nut.
- D. Loosely attach the 34" Inner Brace Channel to the Pivot Brackets, through the Swivel Pivot Bracket, with the 5/16-18 x 3" hex bolt, flat and flange nut with the open side of the channels facing each other.



- E. Rotate the Inner and Outer Brace channels up and slip the Inner inside of the Outer, move the lower 4" pole clamp assembly up or down so that the holes in the Inner\Outer Brace Channels line up and connect with the 5/16-18 x 7/8 hex bolts in the last hole on each, **Torque to 12 Ft Lbs.**





Step 7 . Final steps

- A. Keeping the U-bolts level to the pipe on the lower 4" pole clamp assembly, **Torque to 20 Ft Lbs.**
- B. Finish torqueing all the 5/-16 hex bolts to **12 Ft Lbs**
- C. Torque the 2" U-bolts on the upper pole clamp holding the 2" Sch-40 pipe to **15 Ft Lbs.**

PART NUMBER	DESCRIPTION	
51-SPSC-090 REV B	90" PANEL SUPPORT CHANNEL	2
51-SPCT-4TC REV A	4" PIPE CLAMP (TOP)	1
51-SPCB-4BC REV A	4" PIPE CLAMP BOTTOM	1
51-SLAB-000 REV A	LOWER BRACE ANGLE BRACKET	2
51-0534-000 REV B	INNER CHANNEL	2
51-0534-001 REV B	OUTER CHANNEL	2
51-SOSB-200 REV A	SWIVEL BRACKET	2
51-0610-015 REV A		2
51-SOPB-300 REV A	PIVOT BRACKET	2
51-SPCS-2SC REV B	2" PIPE CLAMP	2
23-0100-040	U-BOLT 3/8-16 , 4" PIPE GALV	4
23-0100-025	U-BOLT 3/8-16 , 2" PIPE GALV	4
25-3702-GLV	Washer, Flat 3/8" HDG	16
25-3701-GLV	Washer, lock 3/8" HDG	16
24-3716-GLV	Nut, 3/8-16 Hex HDG	16
23-3118-865	Bolt, Hex 5/16-18 x 3" SST.	6
23-3118-875	Bolt, Hex 5/16-18 x .875 SST	13
25-3102-000	Washer, flat 5/16" SS	19
25-2501-015	Nut, flange 5/16 SST	19
23-2520-050	Bolt, 1/4-20 x .75 SS	8
25-2502-000	Washer, flat 1/4 SS	16
25-2501-000	Washer, lock 1/4"	8
24-2520-440	Nut, 1/4-20 fin hex SS	8



Installer Responsibility

The installer is solely responsible for:

- i. Complying with all applicable local or national building codes, including any that may supersede this manual;
- ii. Ensuring that Tamarack Solar and other products are appropriate for the particular installation and the installation environment;
- iii. Using only Tamarack Solar parts and installer-supplied parts as specified by Tamarack Solar. Substitution parts may void the warranty;
- iv. Ensuring safe installation of all electrical aspects of the PV array; and
- v. Ensuring correct and appropriate design parameters are used in determining the design loading used for the specific installation. Parameters, such as snow loading, wind speed, exposure and topographic factor should be confirmed with the local building official or a licensed professional engineer.

Warranty Information

Tamarack Solar warrants each Mounting Structure to be free from defects in materials and workmanship for ten (10) years from the date of first purchase (“Warranty Period”), when installed properly and used for the purpose for which it is designed, except for the finish, which shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of three (3) years, from the earlier of 1) the date the installation of the Product is completed, or 2) 30 days after the purchase of the Product by the original Purchaser (“Finish Warranty”). The Finish Warranty does not apply to any foreign residue deposited on the finish. All installations in corrosive atmospheric conditions are excluded. The Finish Warranty is VOID if the practices specified by AAMA 609 & 610-02 – “Cleaning and Maintenance for Architecturally Finished Aluminum” (www.aamanet.org) are not followed by Purchaser for Tamarack Solar’s aluminum based products.

The warranty covers the replacement cost of parts to repair the product to proper working condition.

Transportation and incidental costs associated with warranty items are not reimbursable. The warranty does not cover normal wear, or damage resulting from misuse, abuse, improper installation, negligence, or accident. The warranty does not cover any defect that has not been reported in writing to Tamarack Solar within ten (10) days after discovery of such defect. Furthermore, it does not cover units that have been altered, modified or repaired without written authorization from the manufacturer or its authorized representative, or units used in a manner or for a purpose other than that specified by the manufacturer. Tamarack Solar’s entire liability and Purchaser exclusive remedy, whether in contract, tort or otherwise, for any claim related to or arising out of breach of the warranty covering

the Mounting Structures shall be correction of defects by repair, replacement, or credit, at Tamarack Solar’s discretion. Refurbished Mounting Structures may be used to repair or replace the Mounting Structures.

Tamarack Solar shall have no liability for any injuries or damages to persons or property resulting from any cause, whatsoever, or any claims or demands brought against Tamarack Solar by Purchaser, any employee of Purchaser, client of Purchaser, end-user of the Product or other party, even if Tamarack Solar has been advised of the possibility of such claims or demands (collectively, “Third Party Claims”). This limitation applies to all materials provided by Tamarack Solar during and after the Warranty Period.