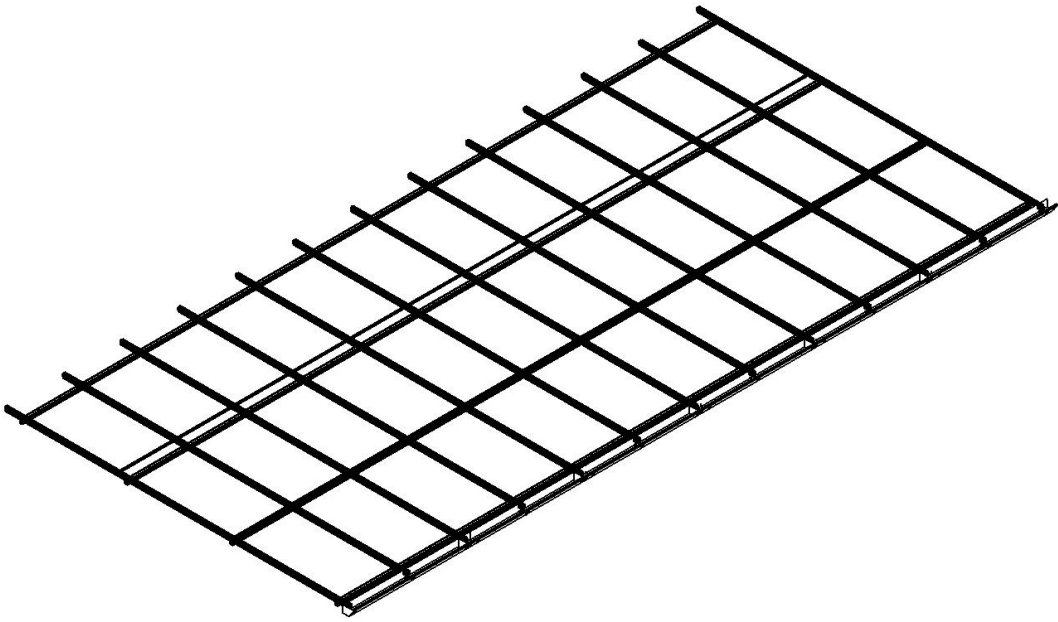


3P12
Carport Top
MagicSolar System®





Disclaimer

This manual only describes the applicable standards and appropriate procedures for the installation of the MagicSolar System®. Installation must fully comply with all standards and requirements. Failure to follow the instructions in this manual may result in property damage, personal injury, or even death. This manual is only intended for use with the certified products of the MagicFrame® produced by our company. This product is patented and any imitation is strictly prohibited!

References

Structure Standards—Asce7-22

All components in this manual :

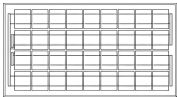
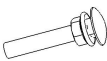
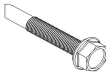
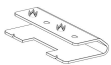
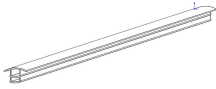
Modules—UL61703

Mounting Structures—UL62703

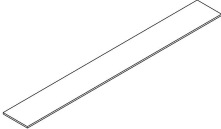
Integrated Grounding—UL467

All components in this manual (see limitations and UL standards)

Main Components List

No.	Materials	Specification	Unit	Quantity	Image
1	Rail	U41 × 62 × 2.0	piece	13	
2	U-Connector	C47 × 60 × 2.0	ste	42	
3	C-Crossbeam	C120 × 50 × 20 × 2.0	piece	4	
4	Module	72/580w/L2278 × W1134 × H30mm	piece	36	
5	Carriage Bolt	M12 × 50	set	42	
6	Hex Washer Head Self-Drilling Screw	M4.8 × 30	set	84	
7	Bonding Clip	304 Stainless Steel	piece	144	
8	Drainage Channel		piece	1	
9	PV Module Edge Seal		piece	18	

Items Required

No.	Item	Image
1	Long & Short Tape Measure	
2	Socket Torque Wrench	
3	Impact Electric Wrench(M10-12) Socket	
4	Gloves	
5	Safety Shoes	
6	Safety Helmet	
7	Reflective Vest	
8	Rangefinder	
9	Tool Plate	
10	Pry Bar (Testing Tool)	
11	Compass	
12		

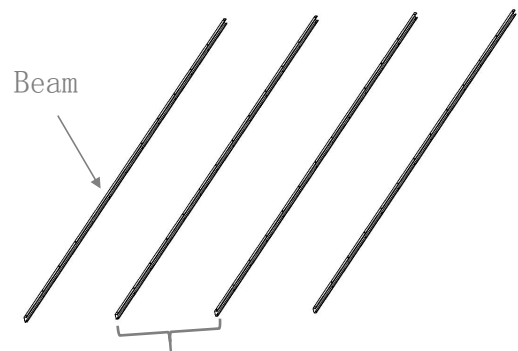
3P12 Carport Top

Support Installation Process

I. Crossbeam Installation

Step 1

Install beams according to design drawings and site conditions. Installation spacing as per design drawings.

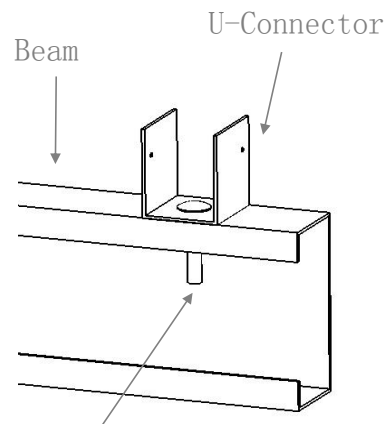


According to design drawings

II. U-Connector Installation

Step 1

Fix U-connectors to C-crossbeams using M12 carriage bolts. Maintain 1152mm spacing between C-connector. Lock the first column connectors tightly, leave others unlocked.

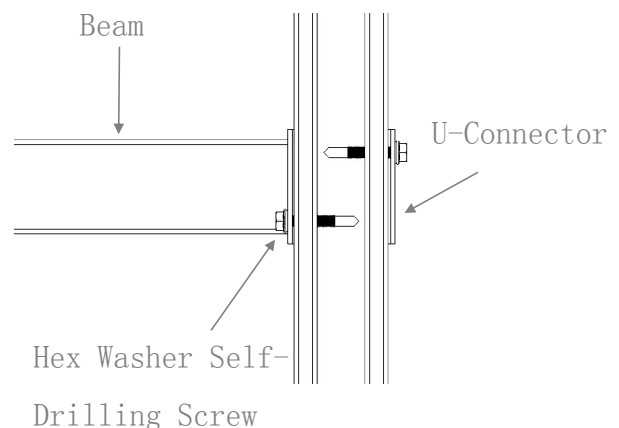


Carriage
Bolt

III. Rail Installation

Step 1

Install rail sequentially on U-connectors. Secure with dedicated M4.8 hex washer self-drilling screws at specified positions.

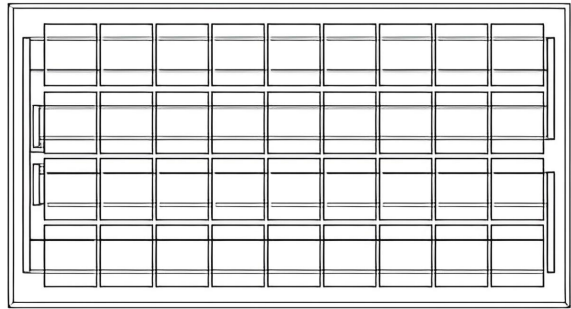


Module Installation Process

I. Module Installation

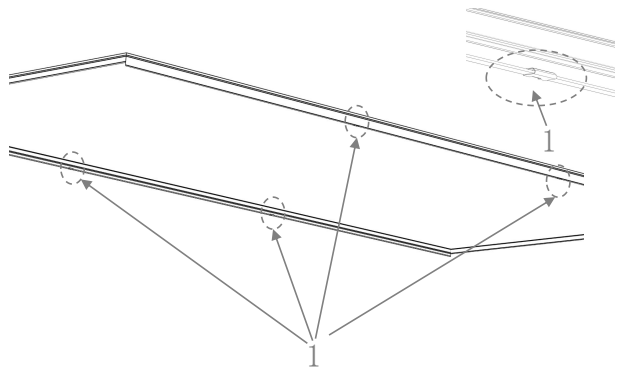
Step 1

Check if the modules are intact.



Step 2

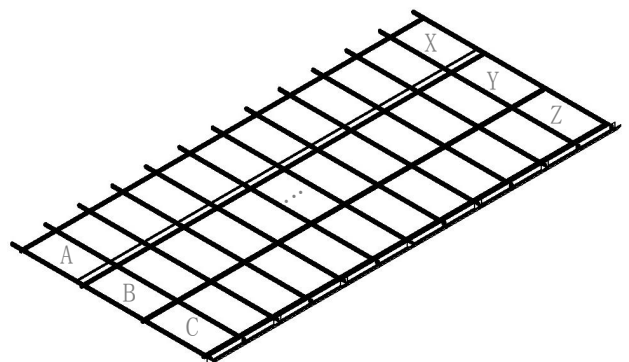
Install 4 specialized bonding clips per group of modules (minimum 300mm spacing between the short-edge of each clip and the outermost module).



Note: Install two clips on each side of the module

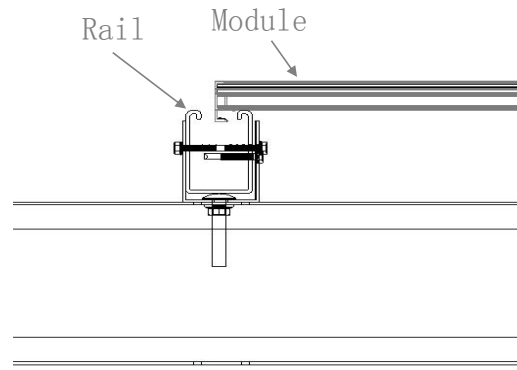
Step 3

Install modules in sequence from A to Z.



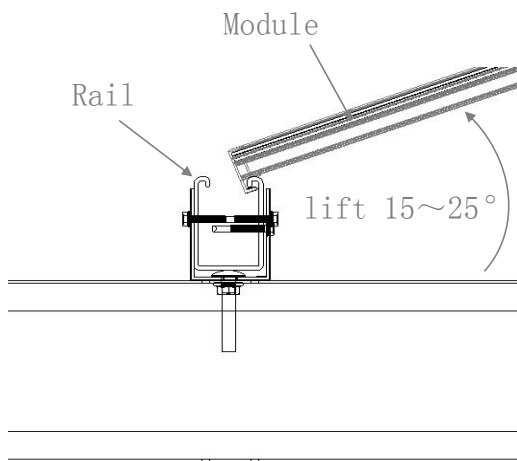
Step 4

Module A Installation:
Place one side of the
module into the purlin
groove.



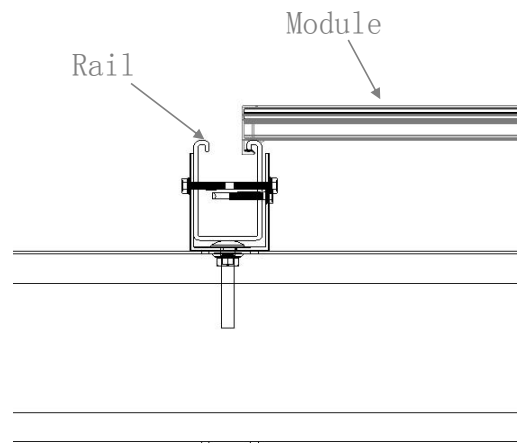
Step 5

Module A Installation:
Lift the other side of
the module to 15 -25° .



Step 6

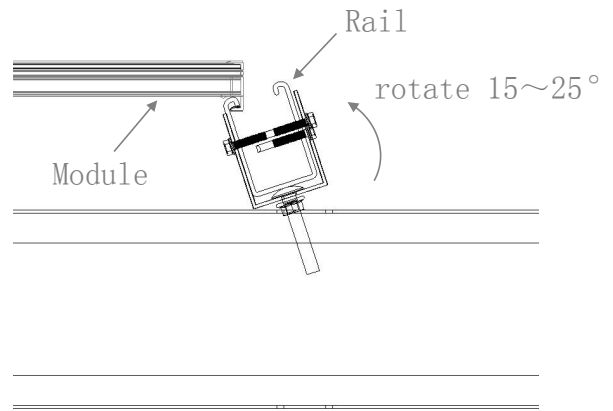
Module A Installation:
Lower the module horizontally.
Confirm that the inner channel of
the module frame engages with the
rolled edge of the rail to complete
installation.



Step 7

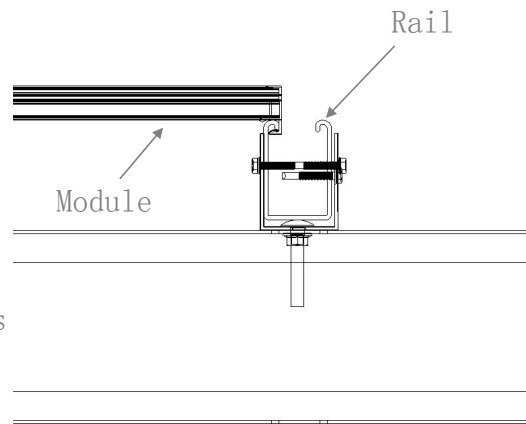
Module A Installation:

Rotate the opposite rail by 15 -25° to ensure the inner channel of the module frame is positioned within the rail groove.



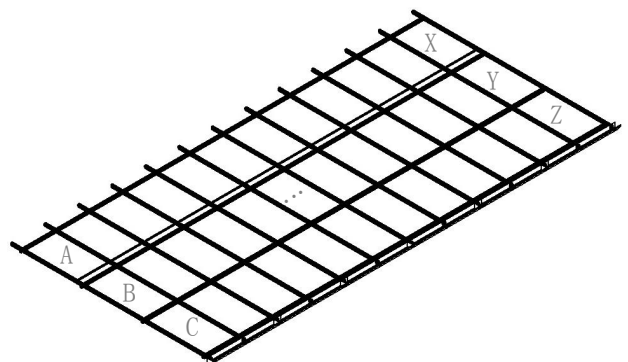
Step 8

Lower the rail to horizontal. Confirm the engagement between the module frame's inner channel and the rail's rolled inner edge. Securely tighten the carriage bolts at the module-rail interface to complete the installation of Module A in this column.



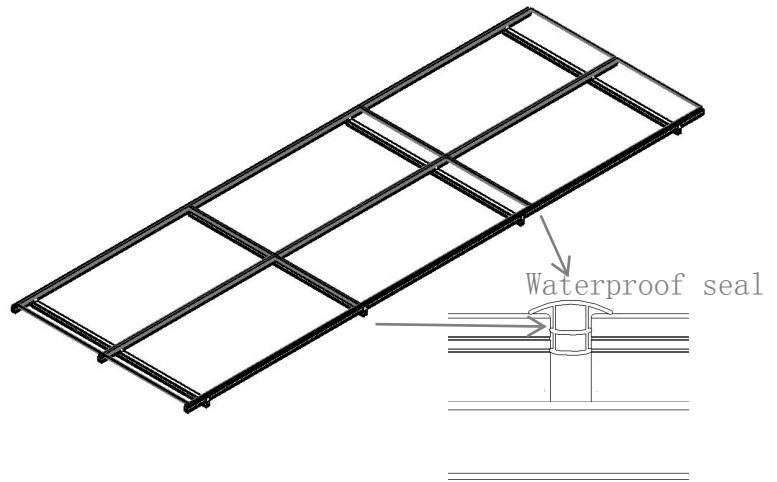
Step 9

After installing Modules A, B, and C, proceed to install the remaining modules sequentially using the above steps until all modules are fully installed.



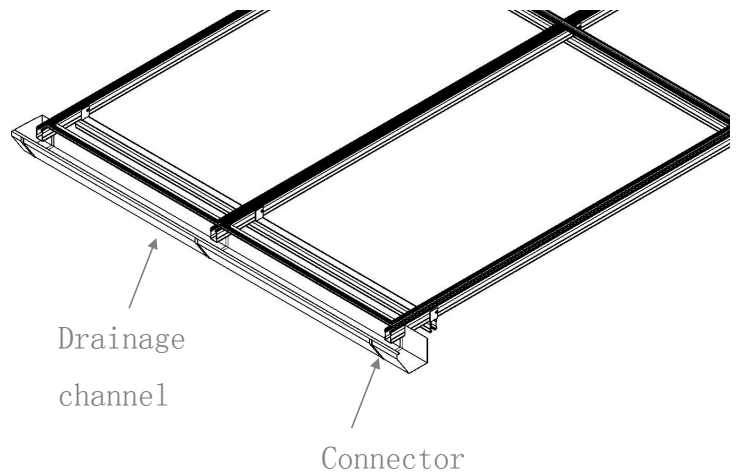
Step 11

After module installation is completed, install PV waterproof seals between module rows to achieve roof waterproofing.



Step 12

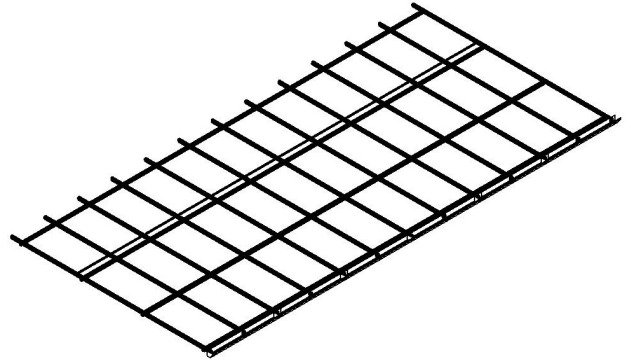
Upon completion of module installation, use connecting brackets and M4.8 screws to secure the components by aligning the slots in the drainage channel with the rail adjustment interface.



Installation Completion

I. Module Completion

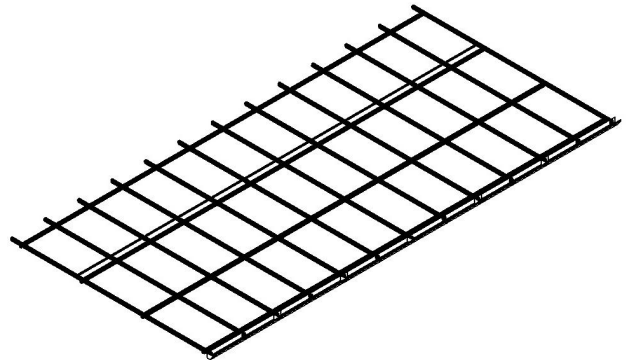
3p12 module installation
completed.



Self-Inspection Process

I. Self-Check

- ① Modules and bracket
installation integrity
(secure and reliable)
- ② Module grounding
verification completed
- ③ Structural tilt
deviation compliance
check
- ④ Azimuth angle deviation
compliance check



Pv module acceptance and commissioning table

PV Module Inspection and Commissioning Test Form			
Project Number		Project Name	
Project Address			
Contact Person		Phone	
System Capacity		Grid Connection Voltage	
Completion Time		Inspection Date	
Weather Conditions on Inspection Day		Inspection Time	
To be completed by on-site inspection personnel			
No.	Inspection Item	Inspection Content	Pass/Fail
1	PV Modules	Installation Position and Layout	
2		Array Alignment Deviation	
3		Module Quantity	
4		Module Model	
5		Visible Damage or Deformation	
6		Batch Installation	
7	Fixed Supports	Support Flatness and Reliability	
8		Construction Tilt Deviation	
9		Orientation Deviation	
10		Support Corrosion Protection Standards	