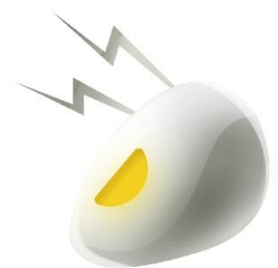


INSTALLATION INSTRUCTION

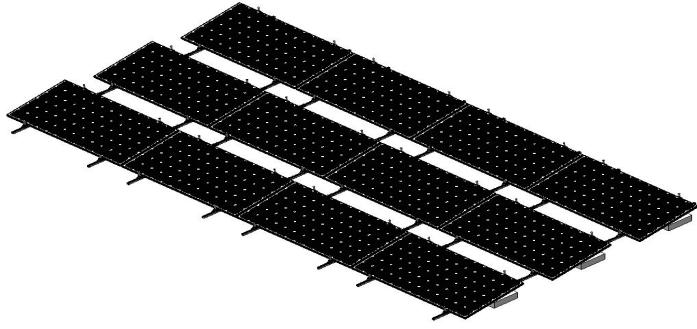


Installation Instruction

Aluminium Ballast Mount



ANTAI
Aluminum & AI Tech for Solar



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I. Safety Precautions

Thank you for purchasing Antai solar mounting system products. Please refer to this installation instruction before installation, operation, maintenance, and inspection.

● General considerations

The installation is limited to those who have professional experience and can carry out construction according to the specified items.

Please abide by the local national or local building regulations and environmental protection regulations.

Please comply with the regulations on the prevention of industrial accidents and the relevant regulations of the insurance union.

There must be at least 2 operators during installation to prevent accidents.

Please wear safety clothes. (Especially protective helmets, work boots and gloves).

Please always prepare at least one installation work instruction when installing.

- When working at heights, please set up scaffolds and carry out construction after eliminating the danger of falling. Please use gloves and seat belts.
- In order to prevent accidents and failures, please do not arbitrarily change the product style.
- Please pay attention to the profile section and sharp parts, and avoid collision and injury during construction.
- Please pay attention to tightening the bolts, nuts, self-tapping screws, etc. of each part, and pay great attention to whether they are locked.
- When working on electrical wiring works, please pay attention not to touch the profile section, which may damage the wiring.
- Please do not use damaged, faulty, or deformed products in case injury or accident happens.

Please use the accessories designated by our company for construction parts, and do not arbitrarily transform and change the products.

Please avoid hitting strongly on the profile as aluminium profile is easy to deform and scratch.

This information is related to the installation of the system. Please consider the characteristics of the stand during the construction of the foundation, components, inverter, and electrical wiring.

II. Instruction

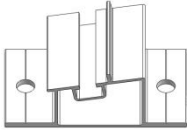
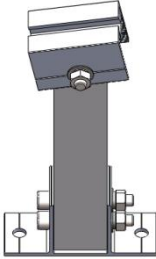
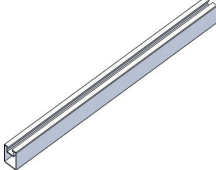
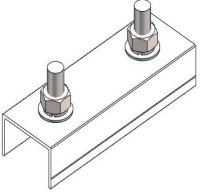
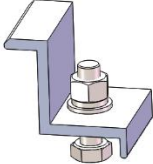
Antai Cement Flat Roof Ballast System is a PV support system for cement flat roofs. It has a lightweight profile design and a stable triangular structure, which can be widely used on various types of cement flat roofs. The cement ballast design can provide a stable and reliable foundation for the support without damaging the roof itself. The whole system has a stable and simple structure, which saves the user's installation time and cost. It is an efficient solution for cement flat roof projects.

Before installation, please read the entire manual carefully!

III. Tools

			
8mm Inner Hexagon Spanner	Electric Drill	Tape Measure	Thin Marker
			
Torque Spanner	String	Adjustable Wrench	Socket Wrench (M8)

IV. Components

Main Part List			
			
Front Base	Rear Base	Floor Beam	Floor Beam Splice
			
End Clamp			

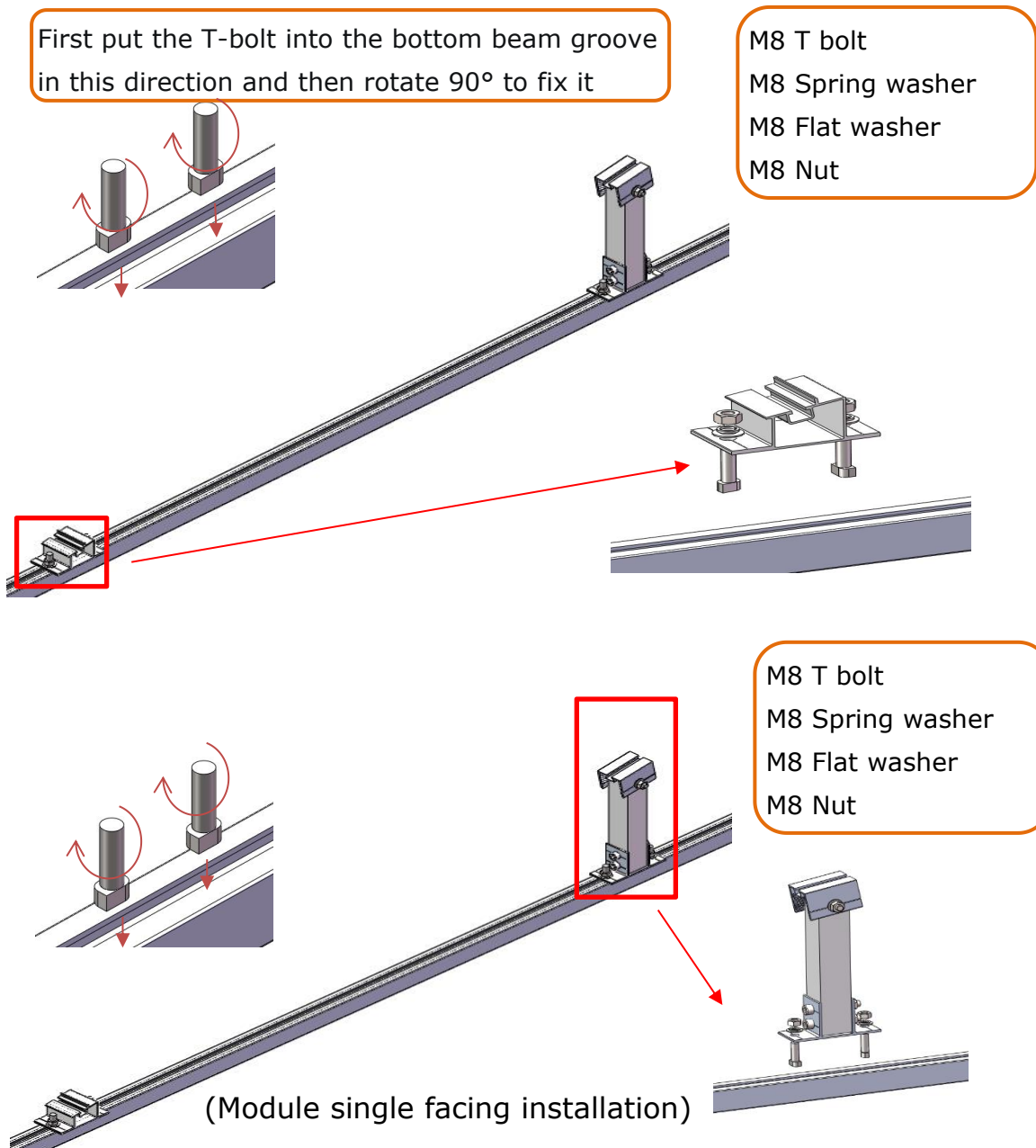
V. Installation Instruction

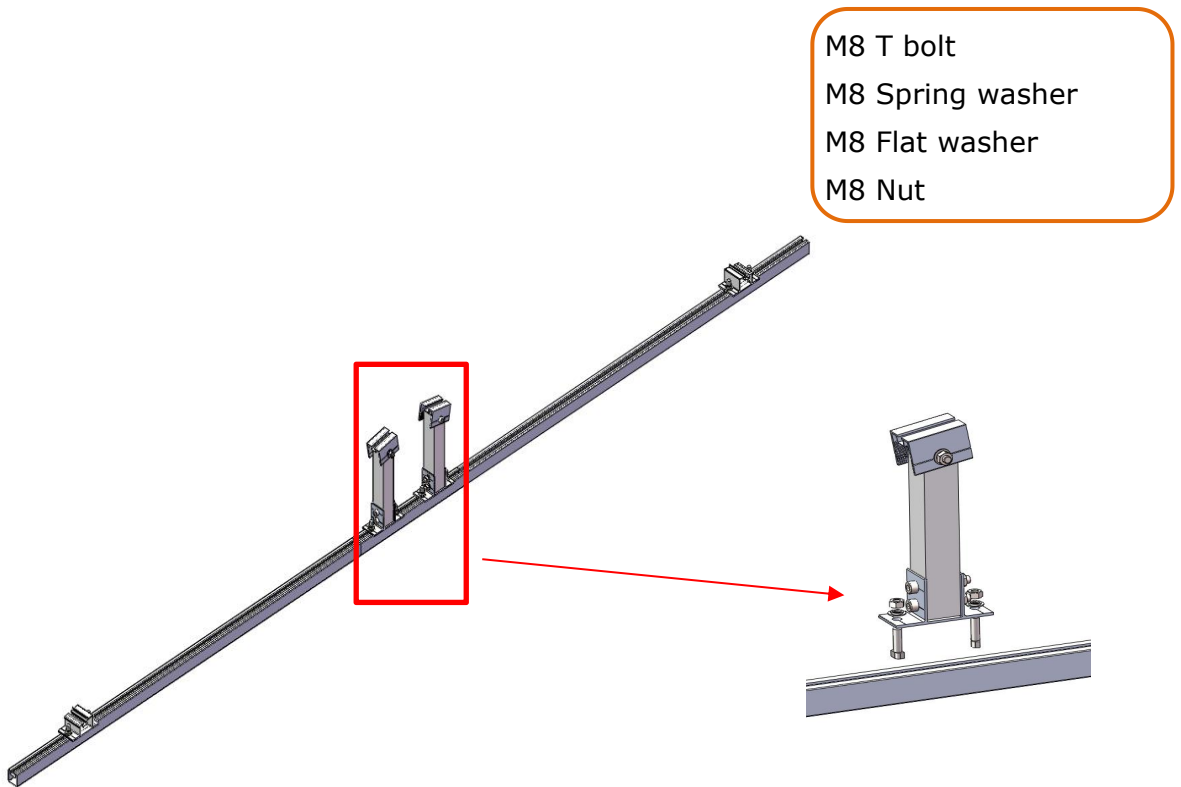
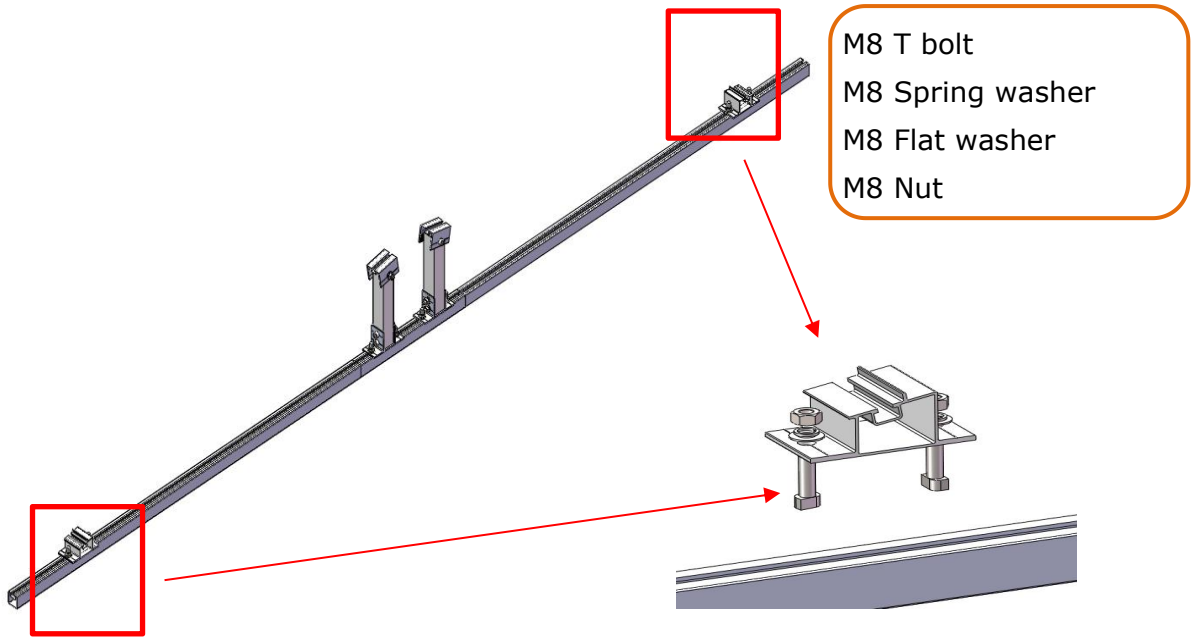
5.1 Place the Ballast

According to position and distance on the drawing, fix the base to the floor beam, then place the ballast and put the module on it and adjust it. Lock end clamps on both sides, detail as the following shows.

5.1.1 Place the ballast

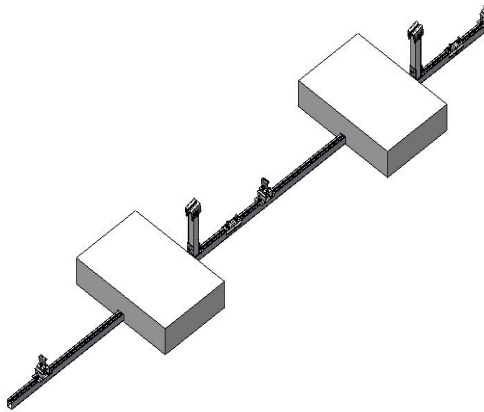
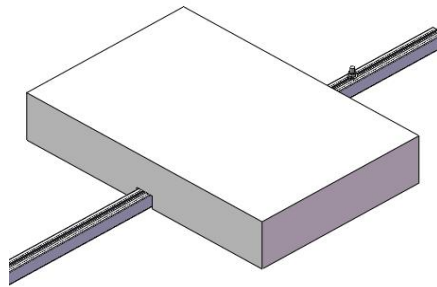
According to the distance on the drawing, determine the position of each base, lock them with T bolt.



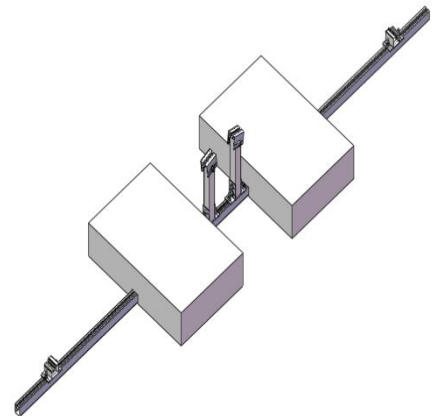


(module back to back installation)

According to the position of the ballast in the drawing, place the grooves of the ballast on the floor beam.

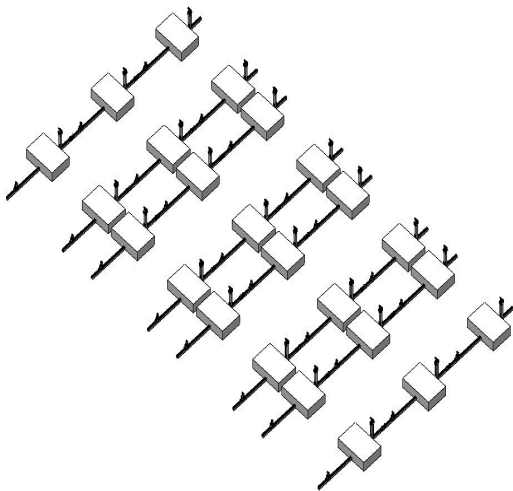


(Modules single facing)

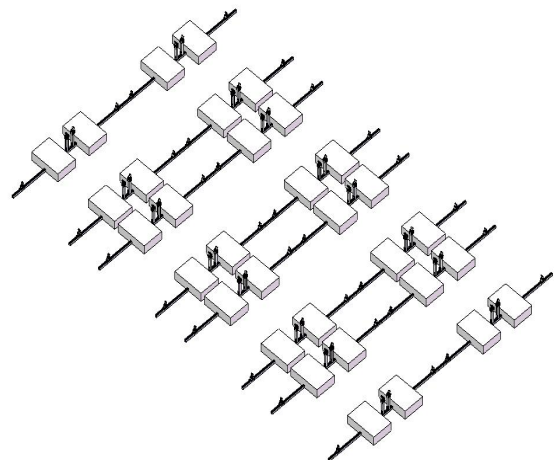


(Modules back to back)

Repeat the procedure to place the remaining ballast in the appropriate position



(Modules single facing)

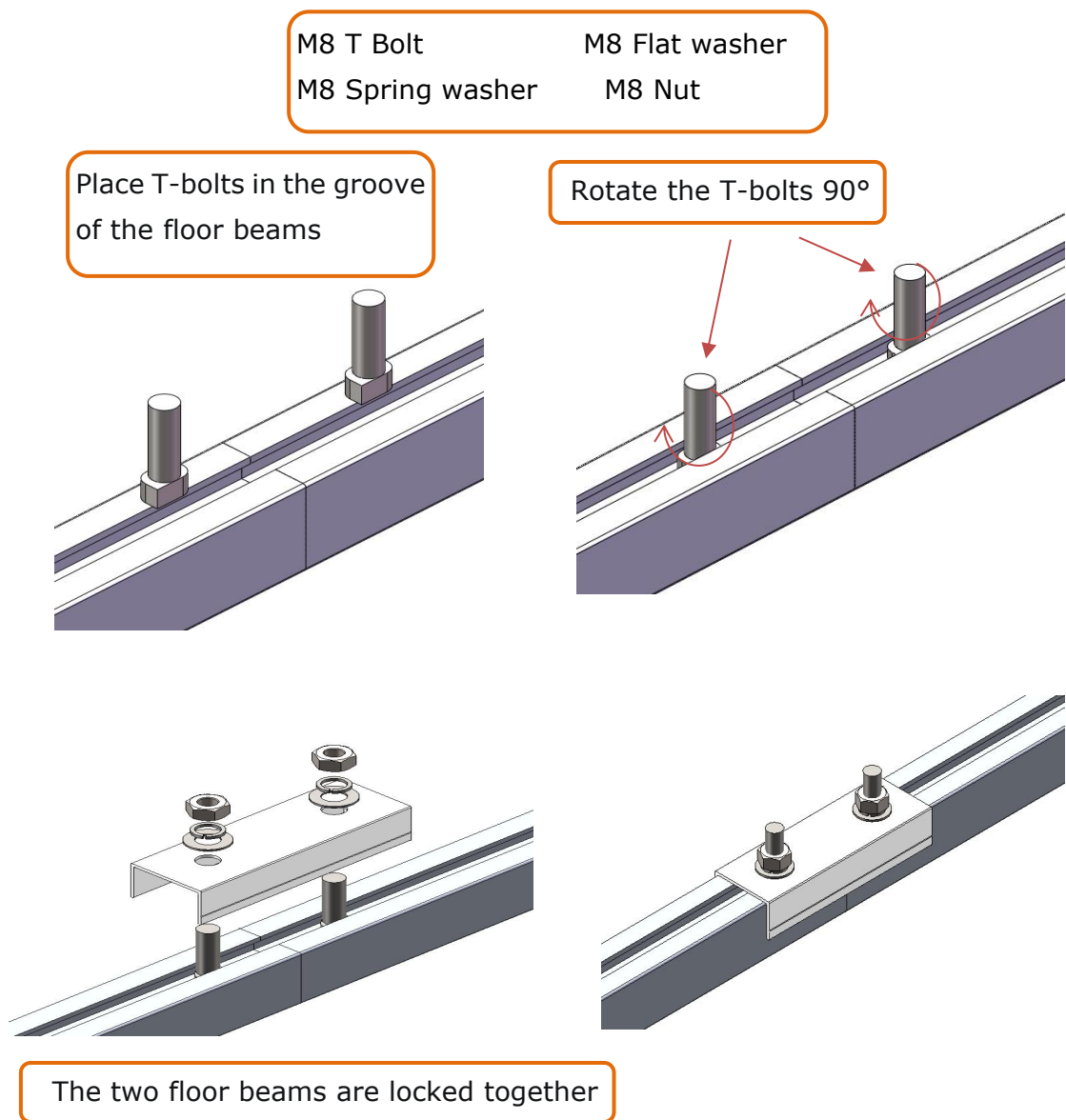


(Modules back to back)

5.1.2 Floor Beam Splice Installation (If the length of floor beam is enough, skip this step)

If the floor beam required for array installation needs to be spliced with multiple floor beams, the floor beam splice shall be installed, as shown in the following figure:

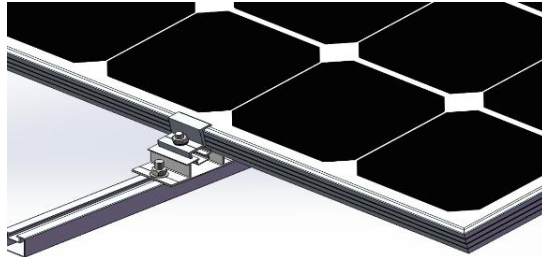
Put the two T-bolts into the floor beam groove to be spliced, rotate the T-bolts 90° to make them stuck in the floor beam groove, and then put the two floor beams close together. Buckle the floor beam splice on the floor beam and adjust it to the middle position of the two floor beams, and finally, tighten the nuts.



Installation of floor beam splice

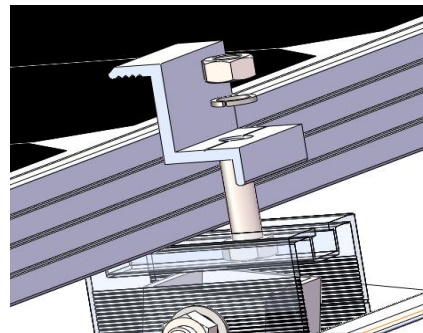
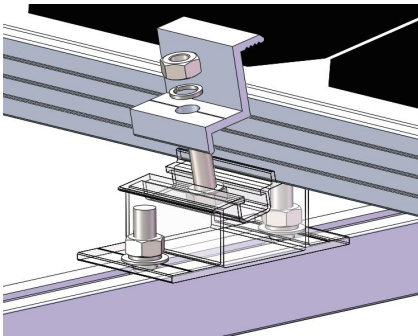
5.2 Module Installation

After all ballasts have been assembled, place the panel on the ballast, have one side of the panel against the front support. Adjust the position of the panel, as shown in the picture:

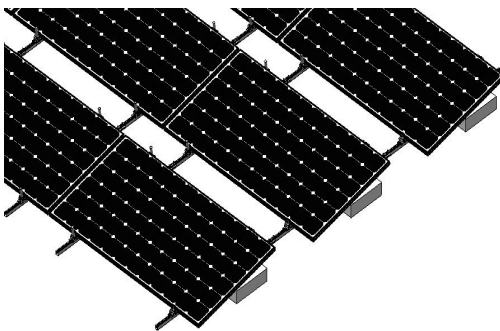
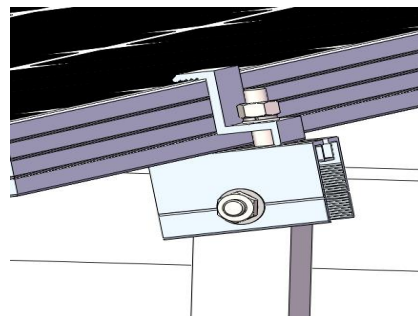
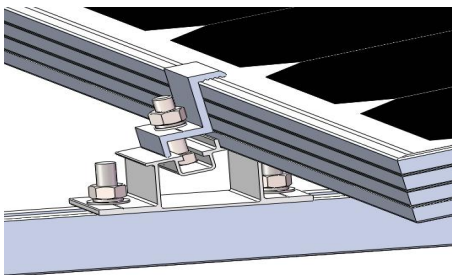


Fix the panel with end clamps after placing them on the ballasts. (put the outer hexagonal bolt head into the groove of the front and rear base and lock it with nuts)

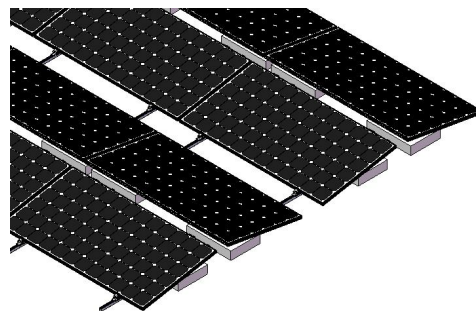
Repeat the steps to secure all panels.



M8 hexagonal bolt
M8 Spring washer
M8 Nut



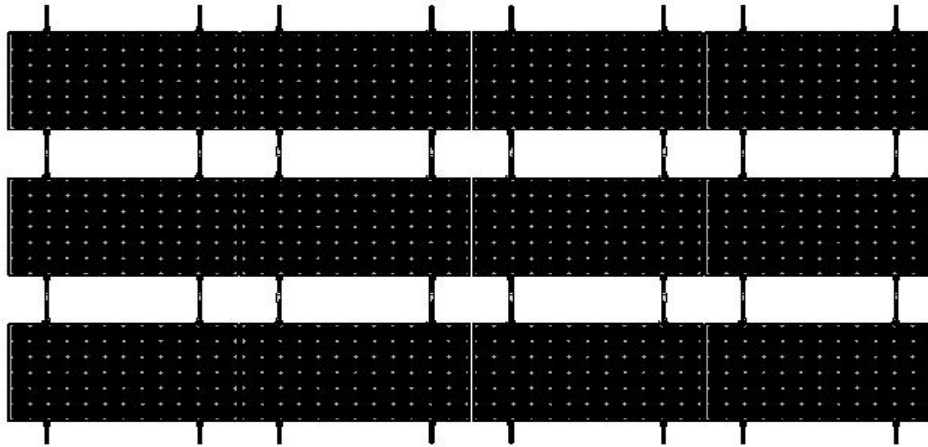
(Modules single facing)



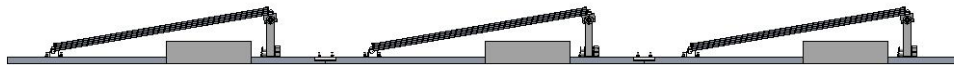
(Modules back to back)

5.3 View of the Installation

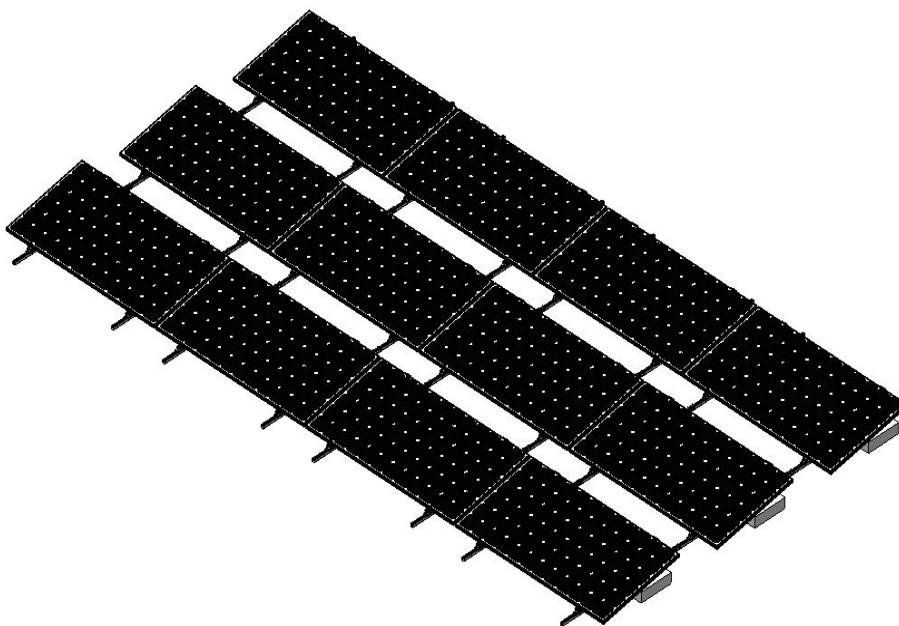
Module single facing installation:



Top View

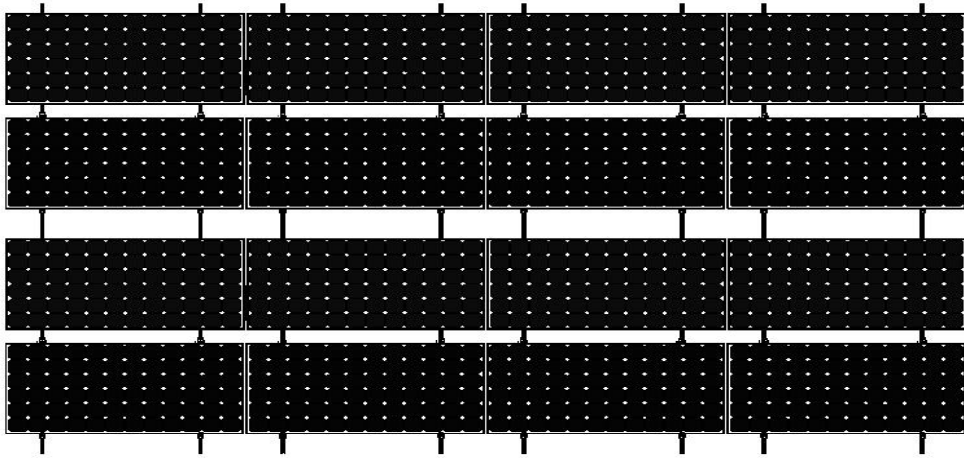


Side View

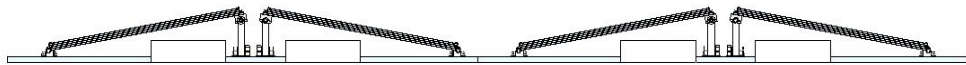


Axonometric view

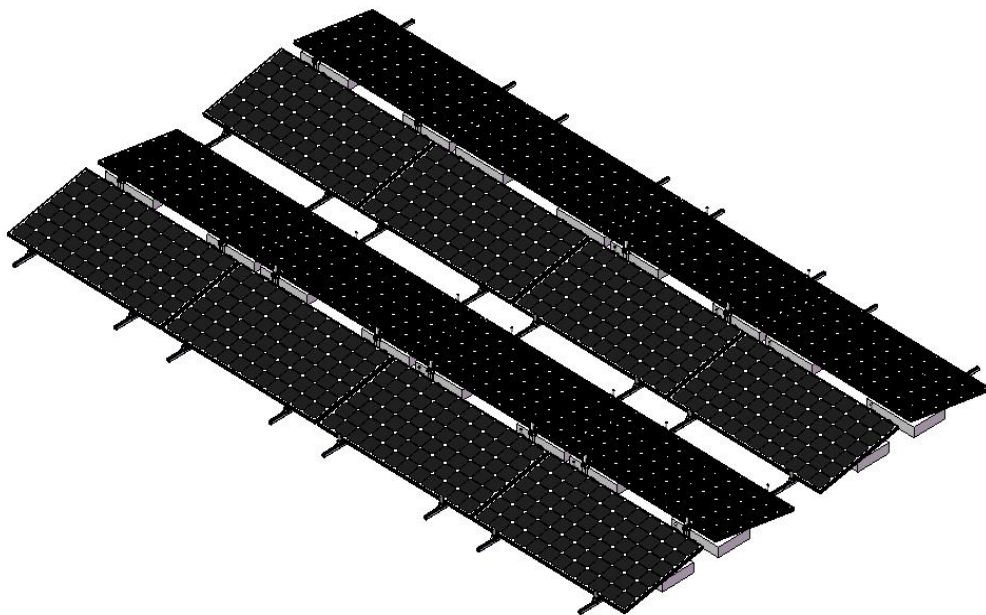
Module back to back installation:



Top View



Side View



Axonometric view

VI. Installation Precaution

6.1 Dimension

The specific dimensions of engineering installation shall be subject to the engineering construction drawings. This installation manual is only for the instruction of product installation method.

6.2. Fastener

Because of the good ductility for stainless steel, fasteners have big difference with carbon steel one in nature. If used in inappropriate way, it will result in bolts and nuts being locked-up. To avoid this situation, please follow the solutions below:

6.2.1.Reducing the friction coefficient:

- (1) Ensure that the screw thread surface is clean (no dust, gravel etc.)
- (2) Use wax or lubricant during installation. (Such as butter, 40 # engine oil);

6.2.2.Correct method of operation:

- (1) Must be perpendicular to the axis of the screw thread when screwing, can never be tilt.
- (2) During the tightening process, strength needs to be even.
- (3) Use torque wrenches or socket wrenches if possible, avoid using adjustable wrenches or electric wrenches. (If so, pls try to reduce the speed.)
- (4) Do not use it when the temperature is high. Do not use it with high speed spin to avoid being locked-up due to the rapid rise of temperature. (Such as electric wrench, etc.)

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