



Huading New Energy

**Installation Manual
of PV Carport**



Zhejiang Huading New Energy Co., Ltd.

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I. Preparations before Installation

1. Confirm the relative distance and size of the foundation bolts (the pre-embedded foundation must be operated in strict accordance with the construction drawings).

Before starting the installation, please confirm the relative distance of the foundation bolts of the site, and the difference between the two diagonal dimensions should be controlled within 10mm.

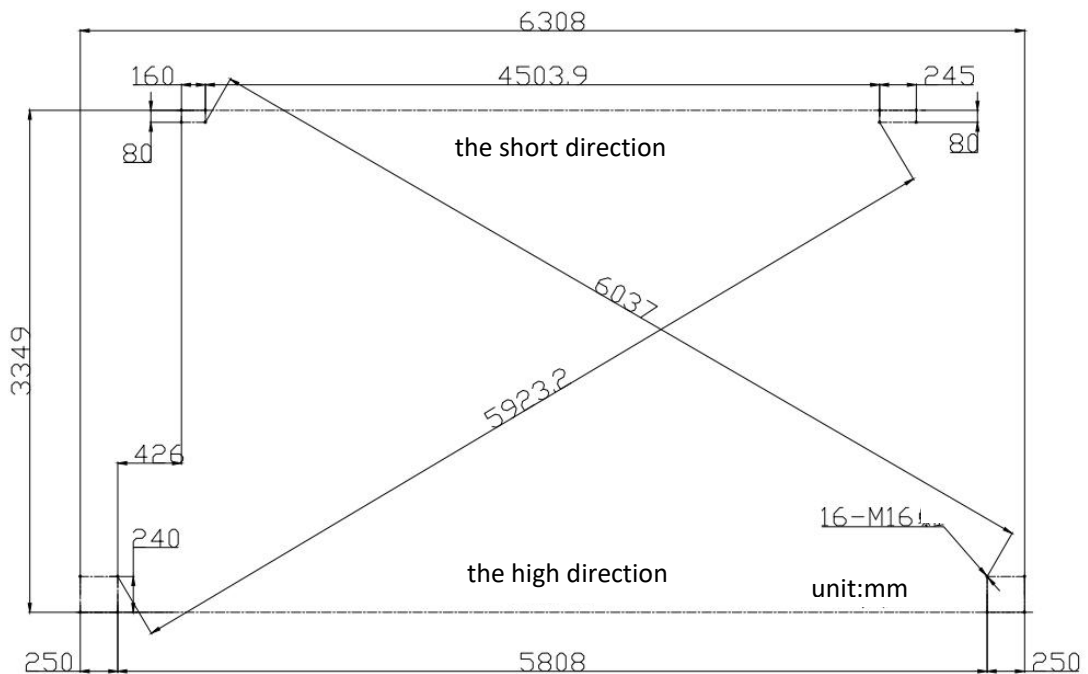
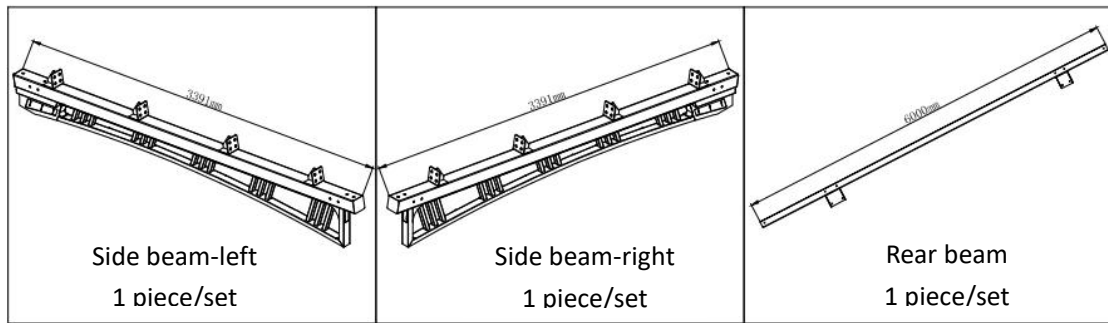
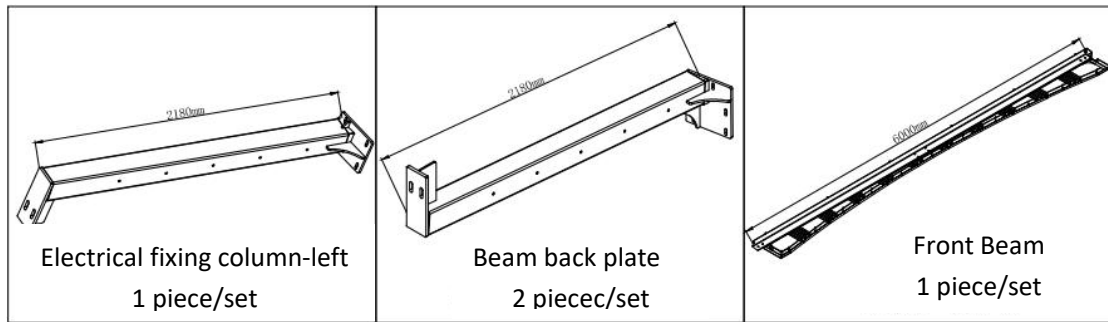
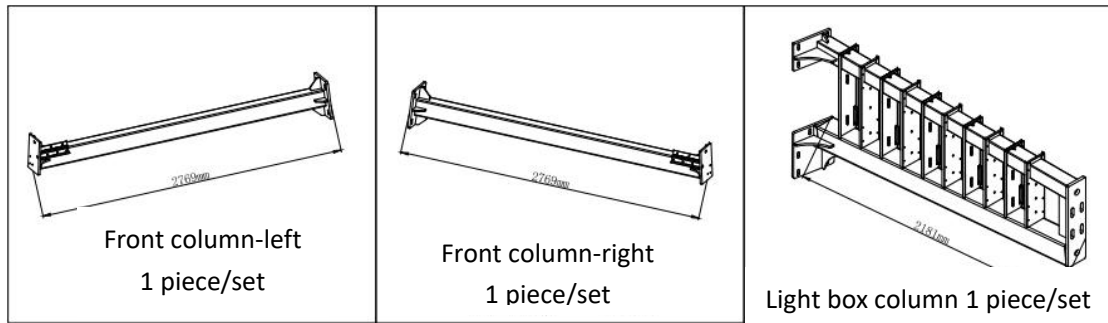
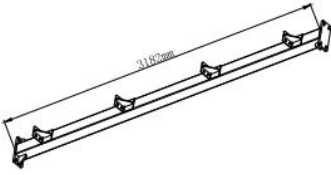
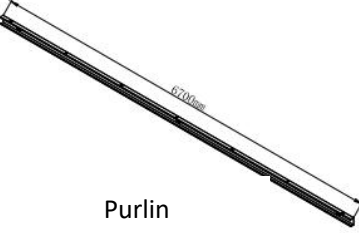
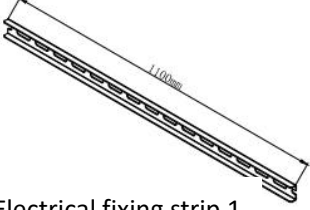
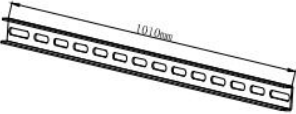

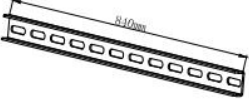
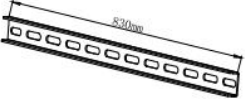
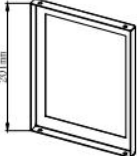
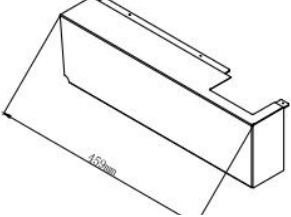


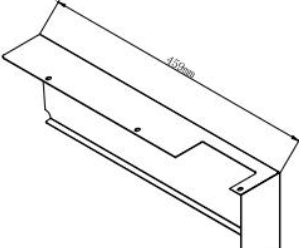
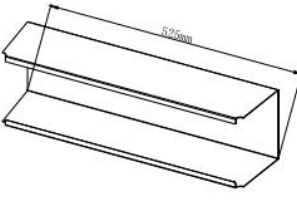
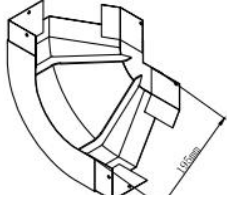
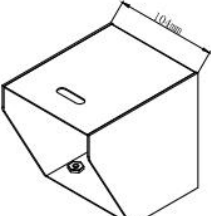
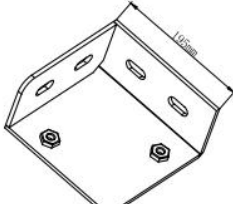
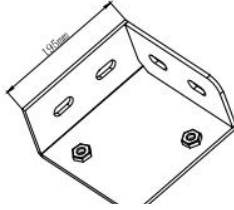
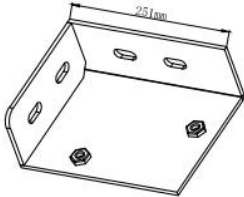
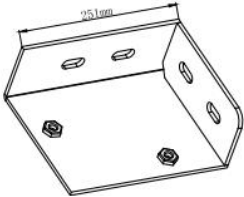
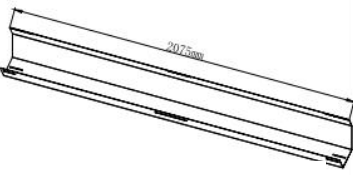
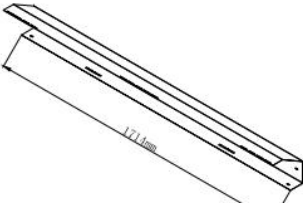
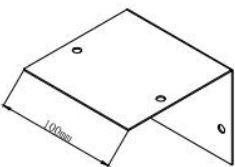


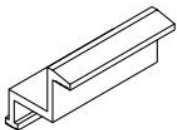
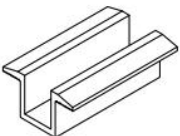
Figure 1: Dimensional drawing of anchor holes

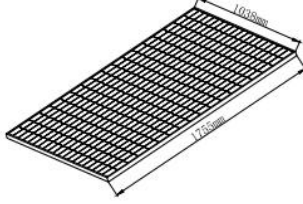
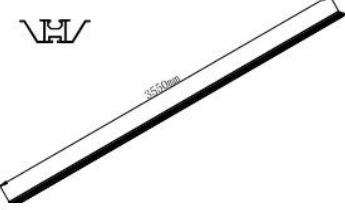
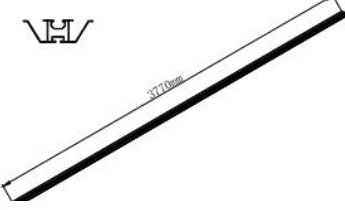
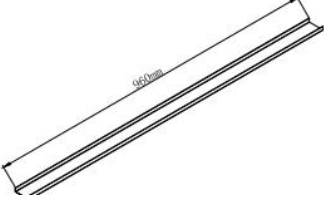

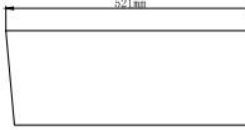
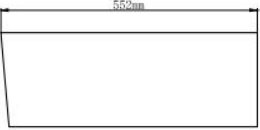
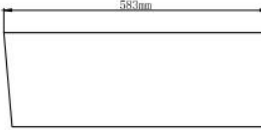
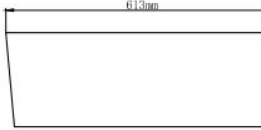
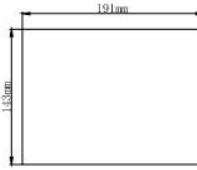
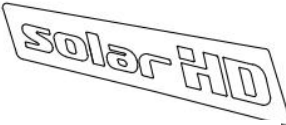

2. Confirmation before Installation

2.1 Confirmation of the parts number



 <p>Middle beam 1 piece/set</p>	 <p>Purlin 4 pieces/set</p>	 <p>Electrical fixing strip 1 1 piece/set</p>
 <p>Electrical fixing strip 2 1 piece/set</p>	 <p>Electrical fixing strip 3 1 piece/set</p>	 <p>Electrical fixing strip 4 1 piece/set</p>
 <p>Electrical fixing strip 5 1 piece/set</p>	 <p>Light box cover plate 5 pieces/set</p>	 <p>Cover plate 1 1 piece/set</p>

 <p>Cover plate 2 1 piece/set</p>	 <p>Cover plate 3 1 piece/set</p>	 <p>Decorative board of arc corner 4 pieces/set</p>
 <p>Front&rear panel 10 pieces/set</p>	 <p>Front gusset-left 1 piece/set</p>	 <p>Front gusset-right 1 piece/set</p>
 <p>Rear gusset-left 1 piece/set</p>	 <p>Rear gusset-right 1 piece/set</p>	 <p>Front&rear cladding 6 pieces/set</p>
 <p>Side cladding 4 pieces/set</p>	 <p>Side plate 2 pieces/set</p>	 <p>Upper cladding board 1 24 pieces/set</p>
 <p>Upper cladding board 2 4 pieces/set</p>	 <p>End clamp 8 pieces/set</p>	 <p>End clamp 20 pieces/set</p>

 <p>PV module 12 pieces/set</p>	 <p>W-type waterproof bracket 2 pieces/set</p>	 <p>W-type waterproof bracket 5 pieces/set</p>
 <p>U-type waterproof bracket 6 pieces/set</p>	 <p>Frosted acrylic board 1 2 pieces/set</p>	 <p>Frosted acrylic board 2 2 pieces/set</p>
 <p>Frosted acrylic board 3 2 pieces/set</p>	 <p>Frosted acrylic board 4 2 pieces/set</p>	 <p>Frosted acrylic board 5 2 pieces/set</p>
 <p>Frosted acrylic board 6 5 pieces/set</p>	 <p>Logo acrylic board 1 1 piece/set</p>	 <p>Logo acrylic board 2 1 piece/set</p>

2.2 Confirmation of the installation accessories quantity

Designation	Specification	Material	Qty/ Set	Unit	Remark
LED waterproof light strip	12V 5630,super bright, glue dripping waterproof, 5m		2	m	
Switching power supply	Mingwei S-75W-12V/12V 6.25A		1	piece	
LED light strip connector			5	pair	
Electrical insulation type	5m		1	roll	
Textured paper	300mm*18m		1	roll	
Glass cement	Black, outdoor glue		8	tube	
Two-core wire	0.75m ² , outer door, 10m		1	roll	
Cable ties	3*200		100	piece	
ST4.2 self tapping screw	ST4.2*10	Stainless steel	120	piece	
M3 screw	M3*8	Stainless steel	28	piece	
ST6.3 self drilling screw	ST6.3*19	Stainless steel	32	piece	
Bolt	M8*25 T bolt	Stainless steel	30	set	1 flat+1 spring+1 nut
Bolt	M8*30 inner hex	Stainless steel	20	set	1 spring+1 slider
Bolt	M8*35 inner hex	Stainless steel	8	set	1 flat+1 spring+1 slider
Bolt	M16 nut, spring, large flat	Stainless steel	16	set	
Bolt	M12*35 outer hex	Stainless steel	48	set	2 flat+1 spring+1 nut
Bolt	M12*45 outer hex	Stainless steel	12	set	1 flat+1 spring
Bolt	M12*150 outer hex	Stainless steel	6	set	1 flat+1 spring
Bolt	M12*150 outer hex	Stainless steel	6	set	2 flat+1 spring+1 nut
Bolt	M12*140 outer hex	Stainless steel	12	set	2 flat+1 spring+1 nut
Bolt	M12*130 outer hex	Stainless steel	16	set	2 flat+1 spring+1 nut

		steel			
Bolt	M6*30 inner hex	Stainless steel	28	set	
Bolt	M12*170 outer hex	Stainless steel	10	set	1 flat+1 nut (thread 50mm)

2.3 Required Tools of Installation

- ① Two 10-inch adjustable spanner.
- ② One Phillips screwdriver.
- ③ One no.5 hexagon socket wrench.
- ④ One set of socket wrench.
- ⑤ A handgun drill or a high-power electric screw gun.
- ⑥ Two or three 3-4mm drill bits.
- ⑦ One glass glue gun, one knife.
- ⑧ One polishing machine and several polishing sheets.

II. Installation Steps

1. Column installation

Firstly, install the column at the front and rear corners. The screws and nuts are pre-installed and do not need to be tightened.

Note: M16 spring washer nuts are needed in this step.

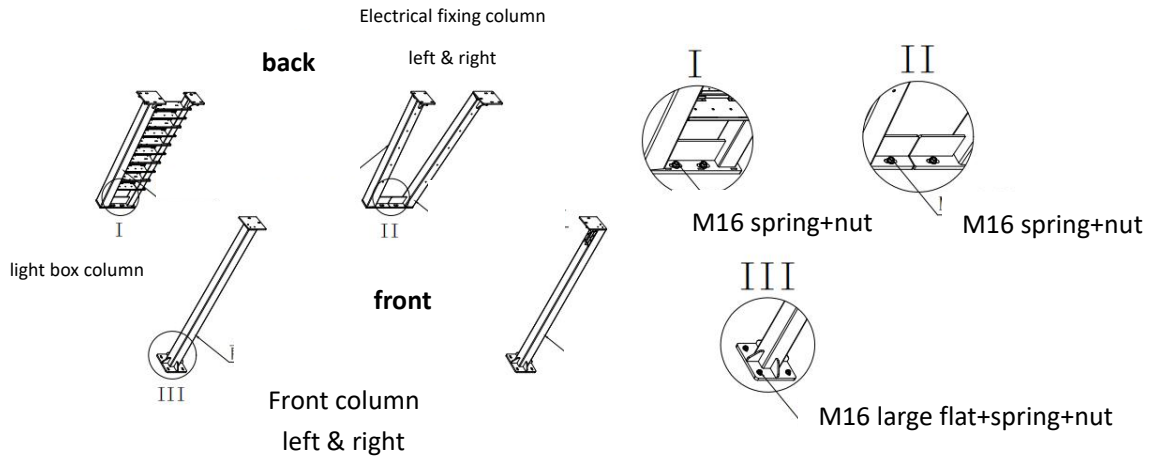


Figure 2: Schematic diagram of column installation

2. Side beam installation

Pre-install the left and right side beams on the front and rear uprights respectively, and pre-tighten them with bolts without tightening.

Note: M12*150 bolt set and M12*140 bolt set are used in this step.

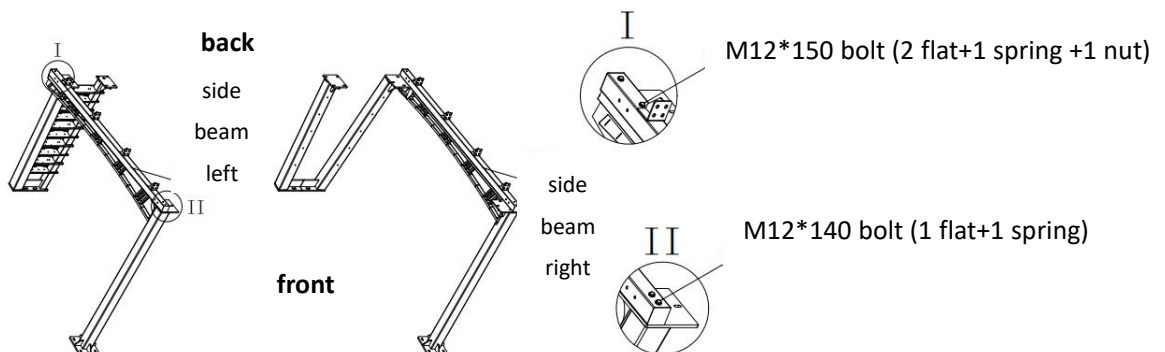


Figure 3: Schematic diagram of side beam installation

3. Installation of front and rear beams

Pre-tighten the front beam and the rear beam on the column with the front and rear corner plates respectively, and then measure the diagonal dimension of the rectangular frame formed by the side beam and the front and rear beams. After the difference between the two values does not exceed 10mm, lock all the bolt sets tightly, including the column bolts. (The spare part may not be installed, depending on the situation on site.)

Note: M12*140 bolt set, M12*130 bolt set, and M12*45 bolt set are needed in this step.

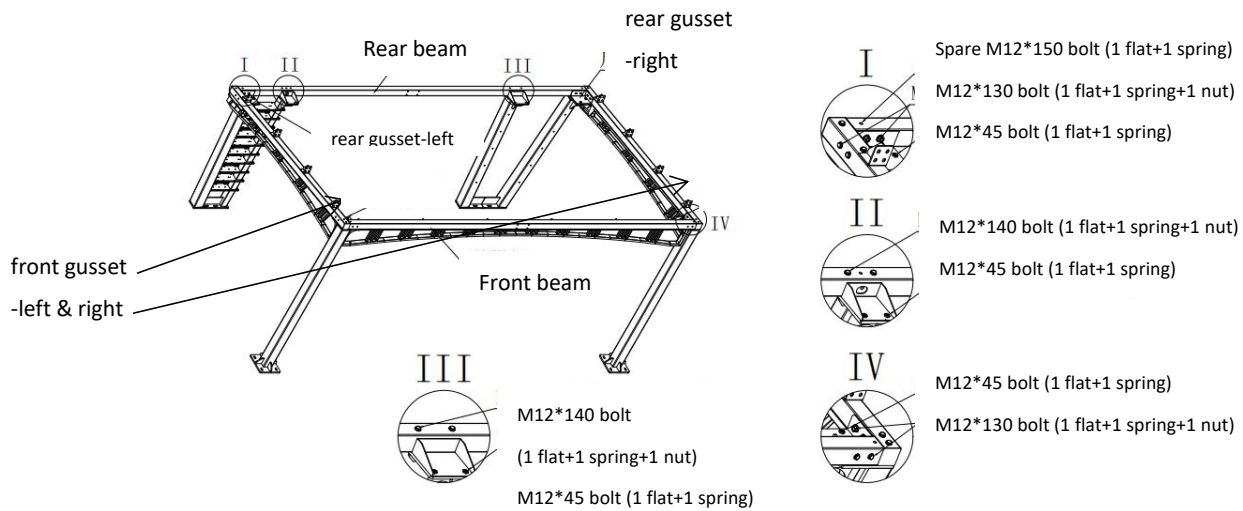


Figure 4: Installation diagram of front and rear beams

4. Installation of intermediate beams, purlins & electrical fixing strips

Fix the intermediate beam, purlin and electrical fixing strip to the corresponding position respectively, and control the left and right relative size of the purlin (246mm, see picture).

Note: M12*170 bolt set, M12*150 bolt set, and M12*35 bolt set are needed in this step.

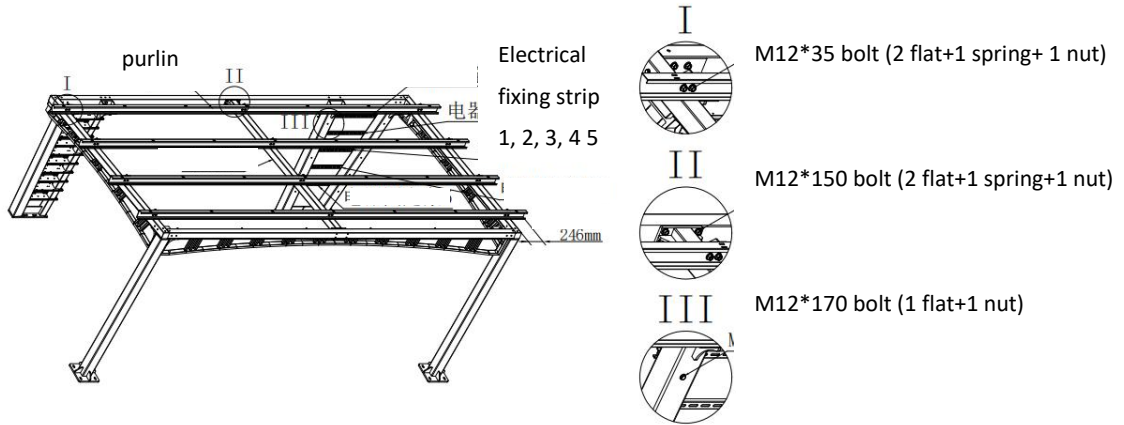


Figure 5: Schematic diagram of the installation of intermediate beams, purlins and electrical fixing strips

5. Installation of W sink, front and rear decorative plate

Fix the W sink and the front and rear decorative panels to the corresponding positions, and pay attention to the relative position and size of each part (see the figure for the size).

Note: M8*25 T-bolt set are needed in this step.

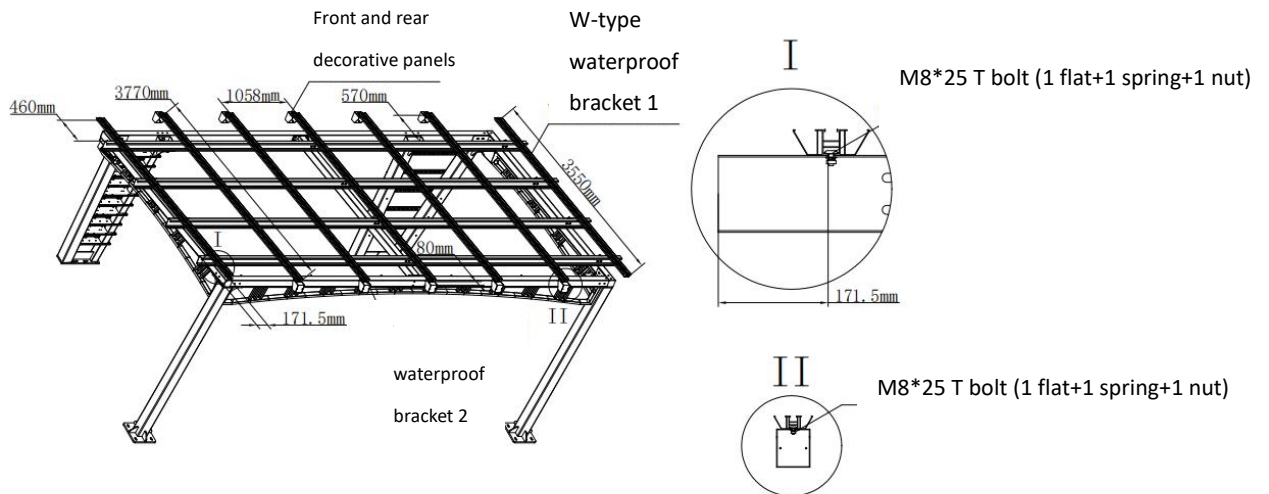


Figure 6: Schematic diagram of the installation of the W sink and the front and rear decorative panels

6. Installation of photovoltaic modules and cover plates

- Fix the PV module to the W sink, pay attention to the relative position and size (see the picture for the size).
- Place the cover plates 1, 2, and 3 at the corresponding positions of the rear column. Except that the cover plates 1 and 2 need to be connected with M3*8 screws, the cover plate and

the rear column are connected by glass glue.

- In addition, solidify the switching power supply with glass glue to the corresponding position, and wear the light box circuit (see the figure for the position of the switching power supply).

Note: M8*35 inner hex bolt set and M3*8 screws are needed in this step.

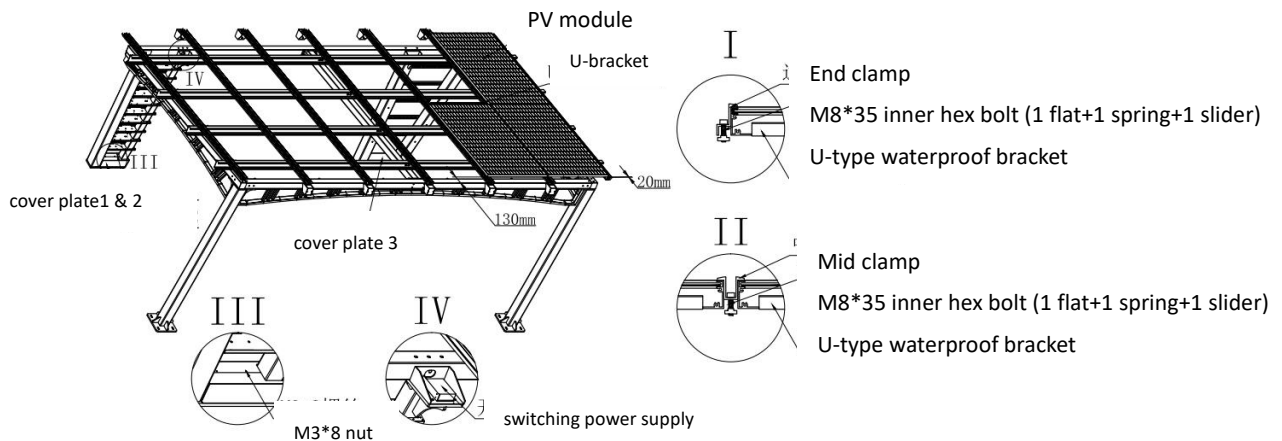


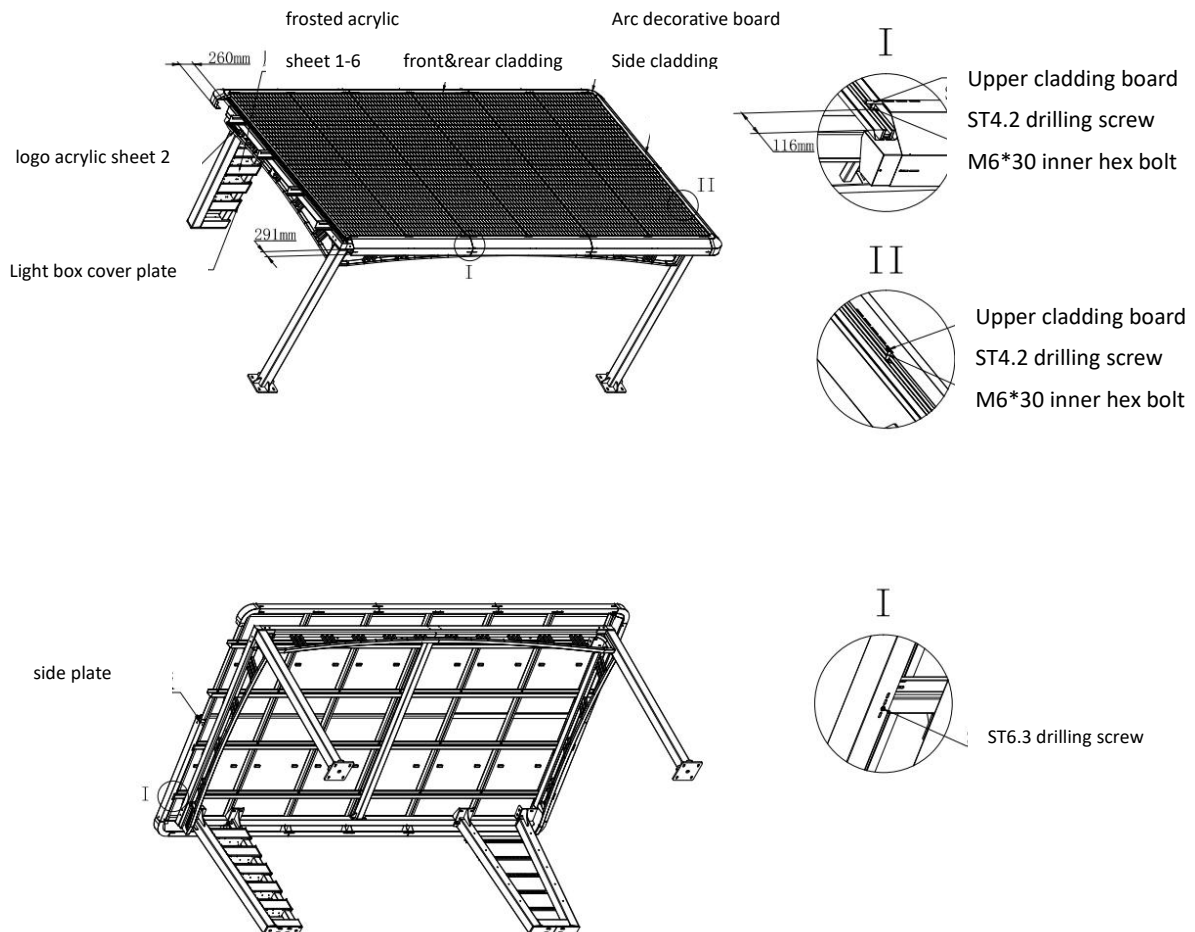
Figure 7: Schematic diagram of the installation of photovoltaic modules and cover plates

7. Installation of decorative package board, light box

- Insert the connecting plate 2 of the cover board into the front and rear ends of the W sink first. The W sinks with 3550mm on both sides do not need to be installed. Use M6*30 inner hex bolts to tighten them. Pay attention to the dimensions (see the picture for the dimensions).
- Fix the front decorative cladding plate on one side to the front and rear cladding plates, fix the upper part with cladding 2, and then fix the single-sided arc cladding plate, then determine the relative size (see the figure for the dimensions).
- Install the cladding boards one by one. The cladding board connecting plate 1 on both sides are fixed in the same way as the cladding board connecting plate 2, and the position is determined by the position of the waist hole of the side cladding board.
- The lower part of the side cladding plate is fixed to the purlin with the ST6.3 drilling screw. If it is difficult to drill the ST6.3 screw, you can pre-drill the holes with a drill bit of 3-4mm diameter before tightening.

- After the light box part is connected with the light strip and cable tie, install the frosted acrylic board of each part. If the acrylic board is loose, you can paste a layer of sponge glue on the inner plate first, and fix the light box cover plate with M3*8 screws.
- Fix the side beam and the inner side of the front beam with ST6.3 drilling screws. The fixing method is the same as the fixing method of the side cladding plate and purlin. If it is difficult to drill the ST6.3 screw, you can pre-drill the hole with a drill bit of 3-4mm diameter.
- Attach the logo acrylic plates on both sides with glass glue, and the installation is complete.

Note: M6*30 inner hex bolt, ST6.3 drilling screws, ST4.2 drilling screws, and M3*8 screws are needed in this step.



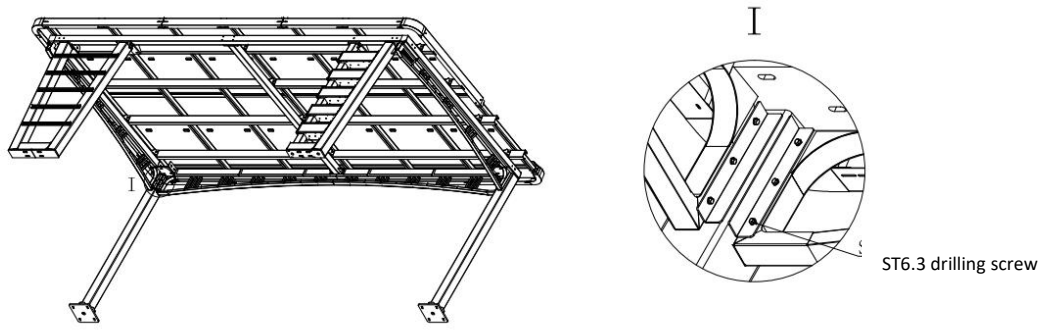


Figure 8: Schematic diagram of decorative package board and light box

Committed to a greener future

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