



# **SOLAR ROOF TILES PRODUCTS AND INSTALLATION MANUAL**



## Building Integrated Photovoltaics



Traditional solar roof: ceramic+solar panel



BIPV Roof: Solar roof tiles



## Products Introduction—— Flat Solar Roof Tile

Structure: Double side glass  
Shape : Flat  
Demension (L) 1460\*(W)435\*(T)21mm  
: Qty/ m: 2 pcs/ m  
Power: 95Wp/pc  
Power/ m: 190Wp/m  
Weight: 12Kgs

**Above parameters have been approved by relevant experts**



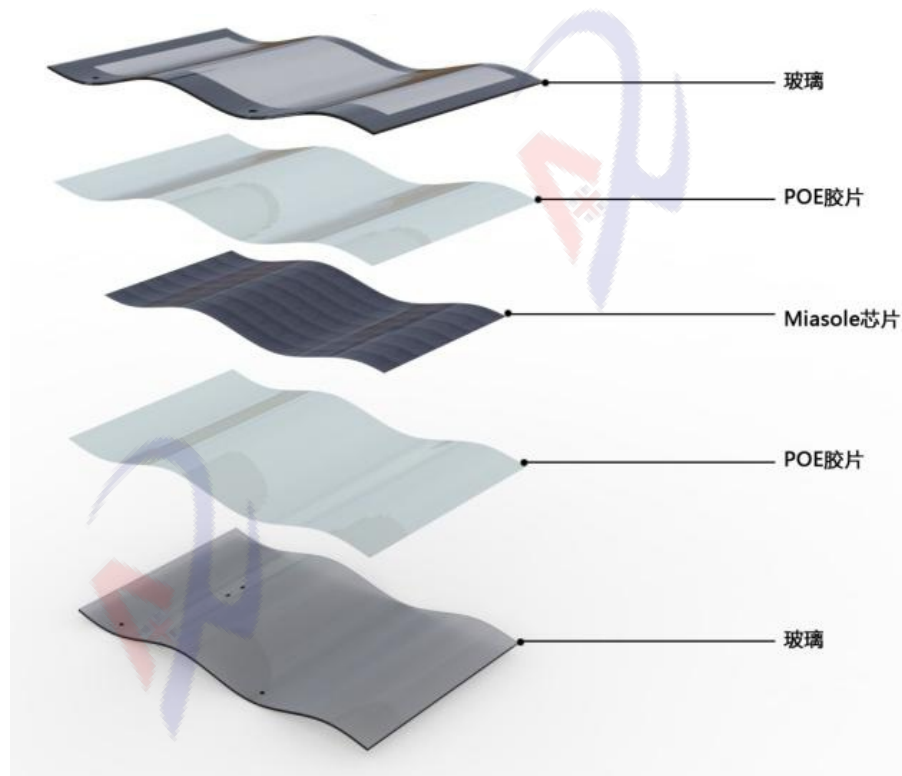
Model No.	HX-ST03
MaxPower/ pc[ W]	95W
MaxPower/ $\mu$ [ W]	190W
Voc[V]	31.06V
Isc[A]	3.96 A
Vpm[ V]	26.46 V
Ipm[A]	3.59 A
Size- L*W*H[ mm]	1460*435*21( $\pm$ 1) mm
Thickness[ mm]	7.5( $\pm$ 1)mm
Weight/ pc[ kg]	12 ( $\pm$ 0.5) kgs
Weight/ $\mu$ [ kg]	24 ( $\pm$ 0.5) kgs
Front Cover	Ultra Clear Tempered Glass
Back Cover	Ultra Clear Tempered Glass
Frame	Aluminium Alloy
Junction box	IP67 , MC4 connector
Color	Zero Carbon Black



# Products Introduction

Structure: Double side glass  
Shape: Curved, Height: 41mm  
Demension: (L) 709x (W) 500x (T) 7mm  
Qty/m<sup>2</sup>: 3.48pcs/m<sup>2</sup>  
Power: 30 Wp/pc  
Power/m<sup>2</sup>: 104Wp/m<sup>2</sup>  
Weight: 6.5Kgs

**Above parameters have been approved  
by relevant experts**

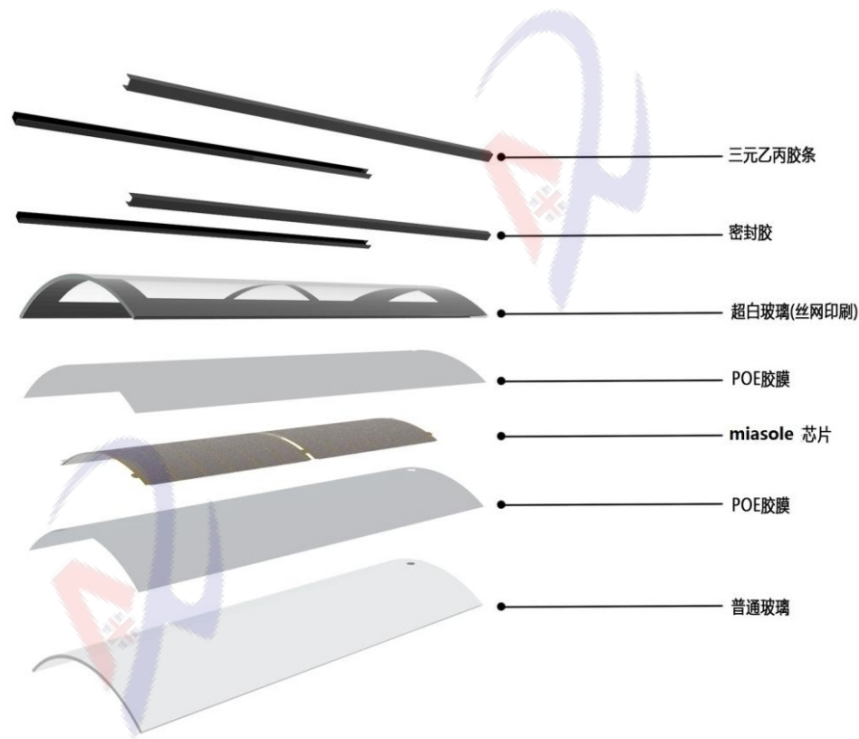
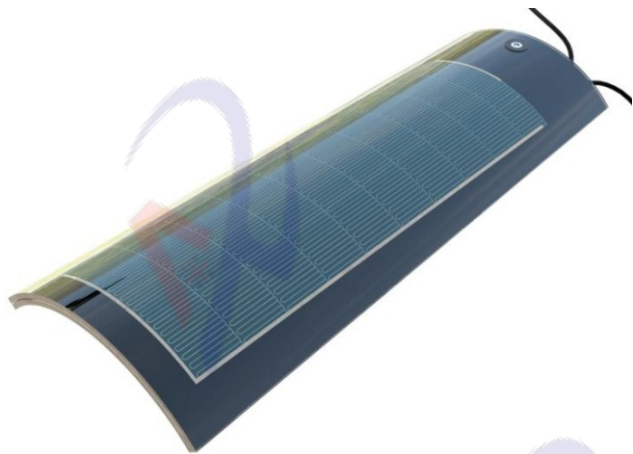




# Products Introduction

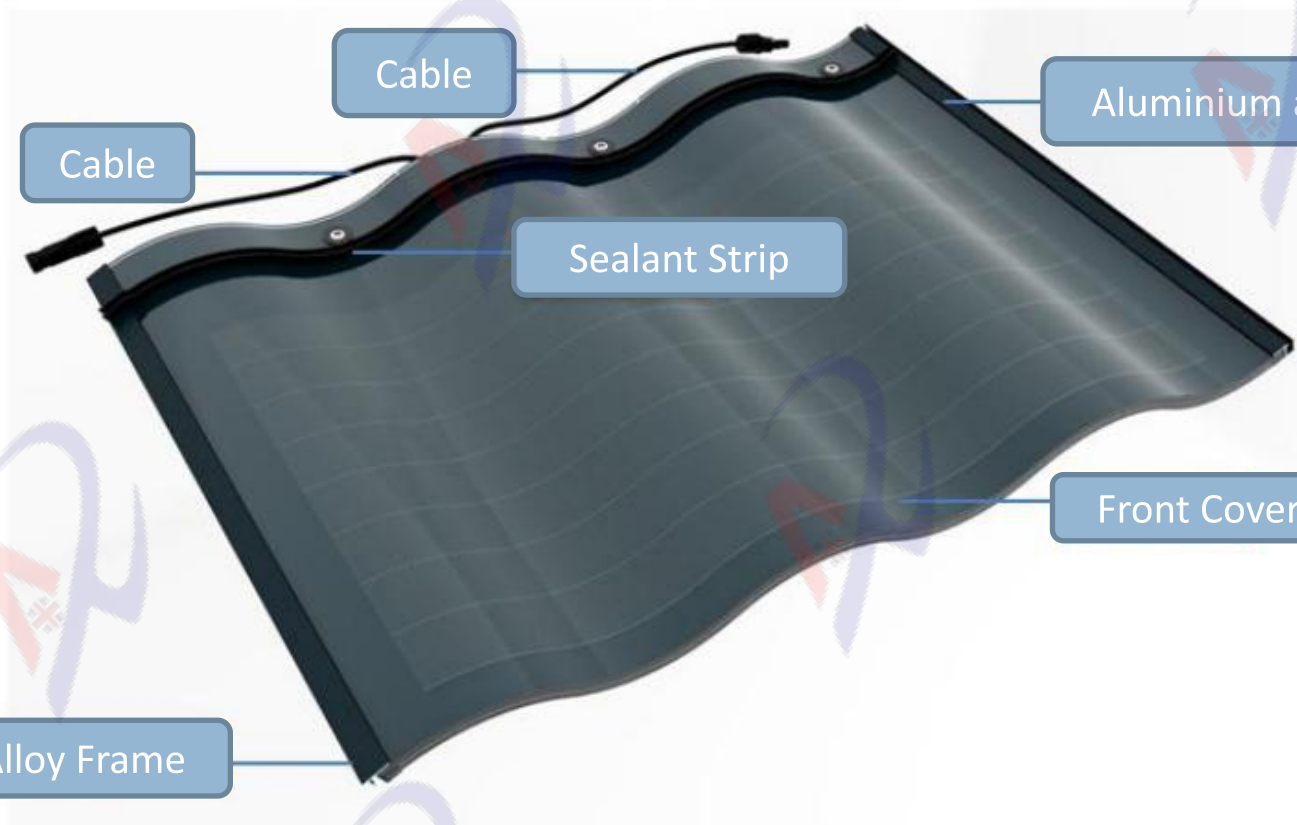
Structure: Double side glass  
Shape: Arched, Height: 70mm  
Demension: (L)720\*(W)224\*(T)7mm  
Qty/m<sup>2</sup>: 5.28pcs/m<sup>2</sup>  
Power: 11.5 Wp/pc  
Power/m<sup>2</sup>: 63 Wp/m<sup>2</sup>  
Weight: 4.5Kgs

**Above parameters have been approved by relevant experts**



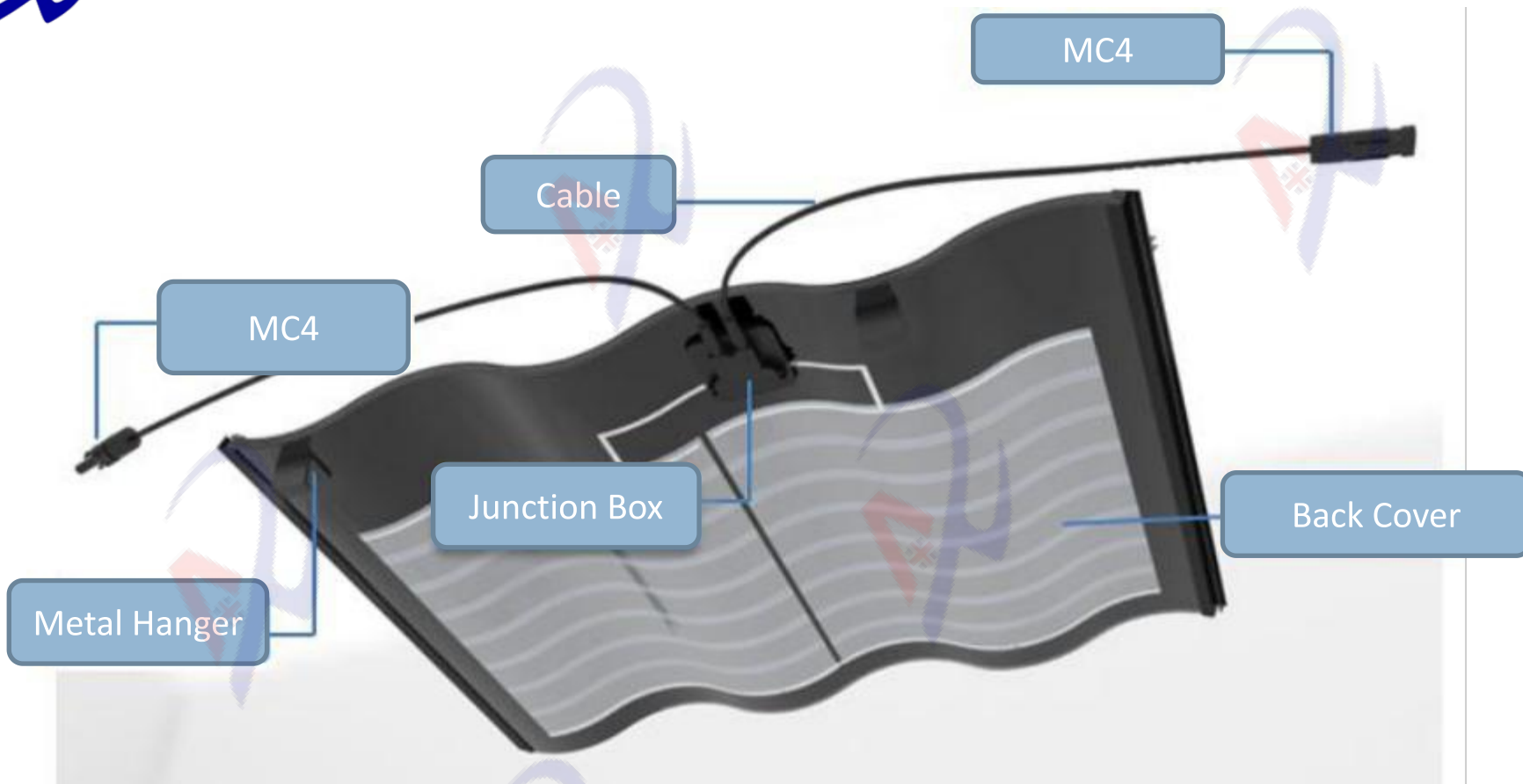


## Product Details





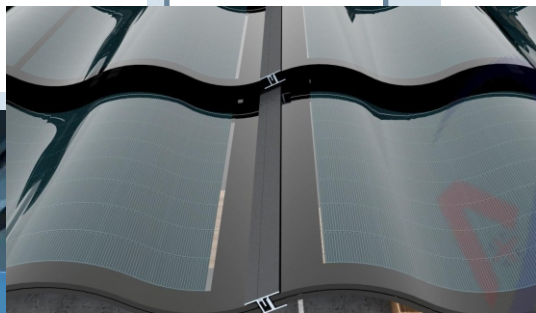
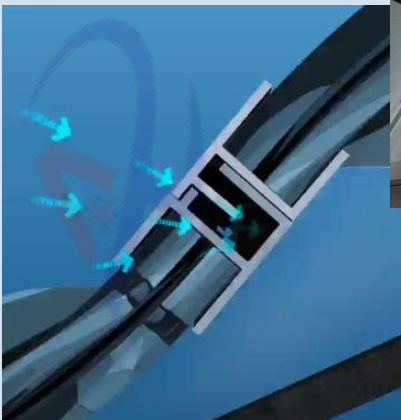
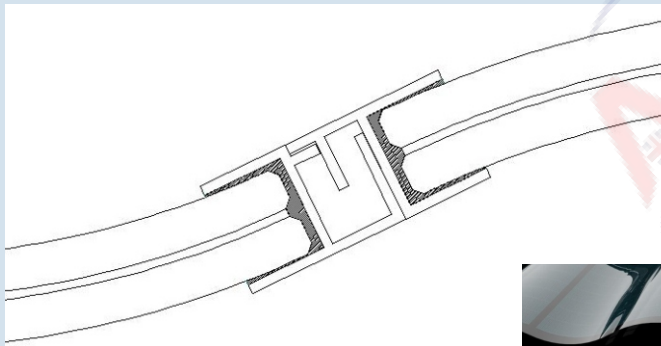
## Product Details



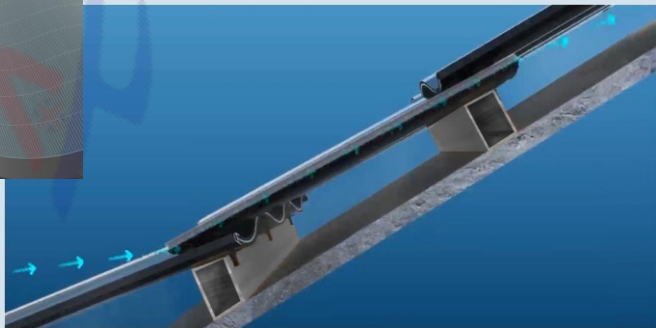
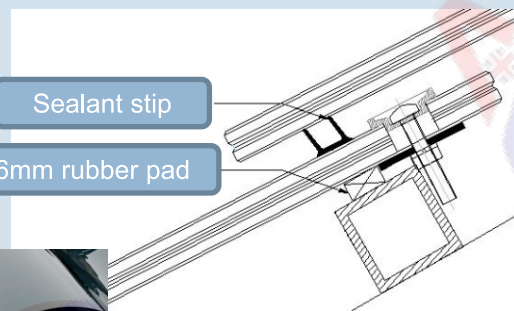


## Creative Water-proof Structure Design

Latitudinal joint structure



Longitudinal joint structure





## Products Test and Approved

### Double 85 Test:

Under the condition of temperature 85°C and humidity 85%, it has achieved perfect performance.

### TC200 Test:

Under the condition of temperature between -40°C and 85°C, it has passed the test for tolerance to extreme temperature.

### HF Test:

Under both conditions of temperature between 25°C and 85°C with the humidity 85% and temperature between -40°C and 25°C with humidity 0%, it has achieved great performance.

### Hail Resistance Test:

It has passed hail resistance test.

Also we have got TUV certificate for our products.



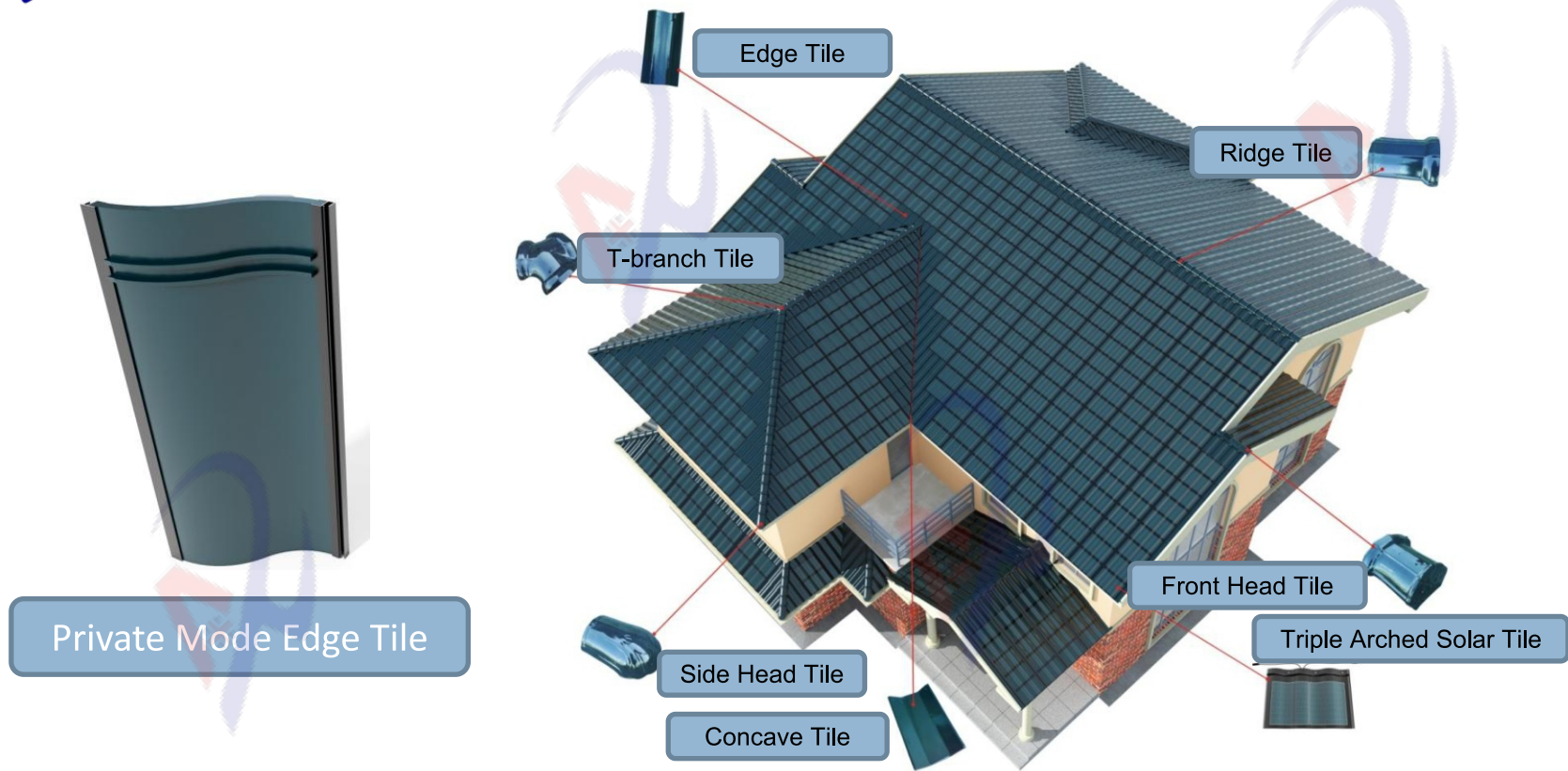
Crash Test



Falling Ball Test

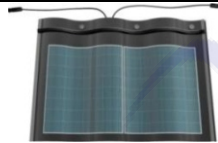




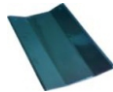


## Solution For Solar Roof System





## List of All kinds Tile for Solar Tile Roof System

Triple Arched Solar Tile	Demension	
	500mm (L) *710mm (W) *40mm (H)	
Edge Tile	Demension	
	500mm (L) *245mm (W) *40mm (H)	
Ridge Tile	Demension	
	280mm (L) *200mm (W) *65mm (H)	
T-branch tile	Demension	
	150mm (L) *200mm (W) *65mm (H)	
Front Head Tile	Demension	
	250mm (L) *200mm (W) *65mm (H)	
Concave Tile	Demension	
	390mm (L) *230mm (W) *45mm (H)	
Side Head Tile	Demension	
	300mm (L) *185mm (W) *65mm (H)	



## Part of our Project Case

Product:  
Curved Tiles

Installed Capacity:  
15KW





## Part of our Project Case

Product:  
Curved Tiles

Installed Capacity:  
15KW

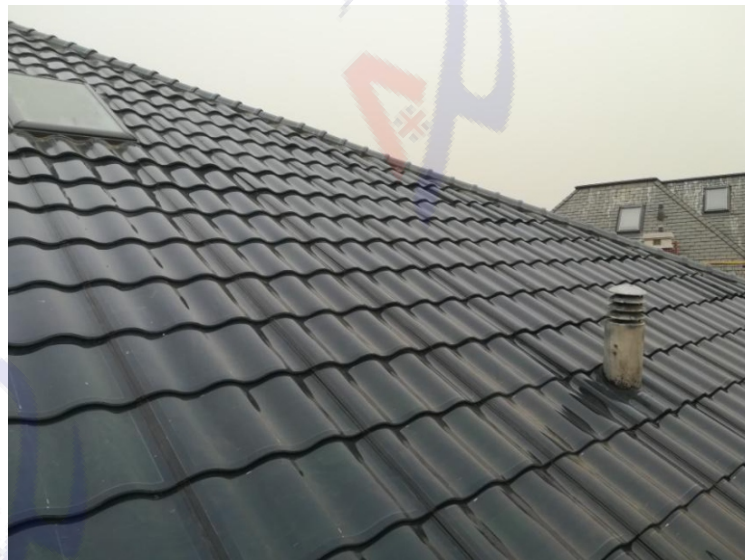




## Part of our Project Case

Product:  
Curved Tiles

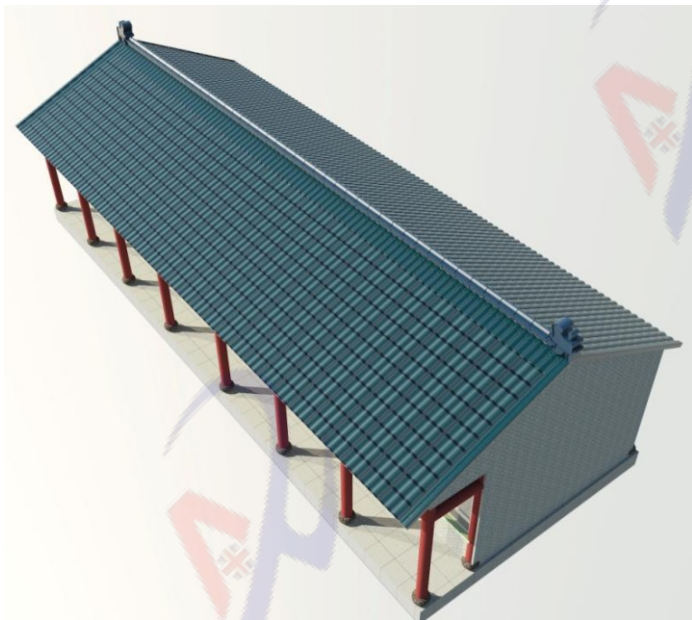
Installed Capacity:  
15KW





## The Solar Roof Tiles Solution

The south face: Solar Roof Tiles



The north face: Traditional Tiles





## Comparision Before and After the Installation



**Before Installation**

Product: Curved Tiles

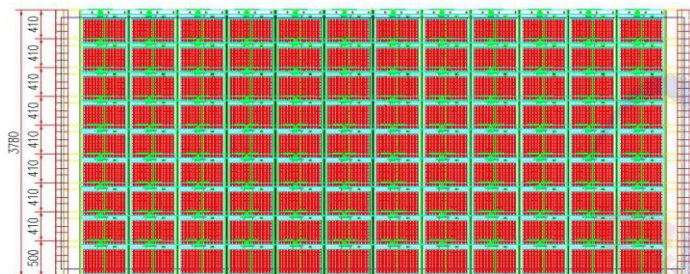
Installed Capacity: 10KW



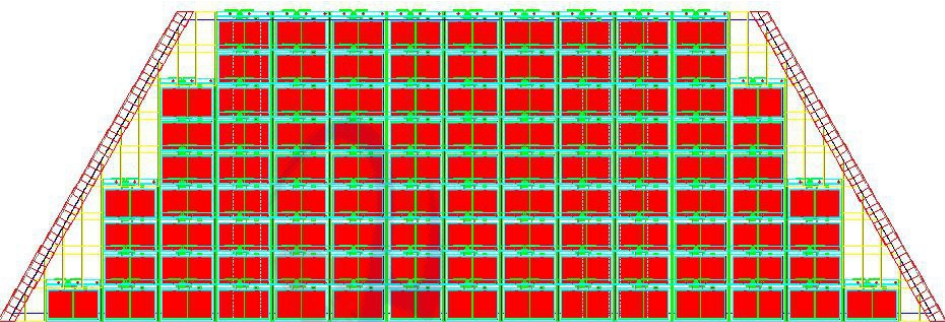
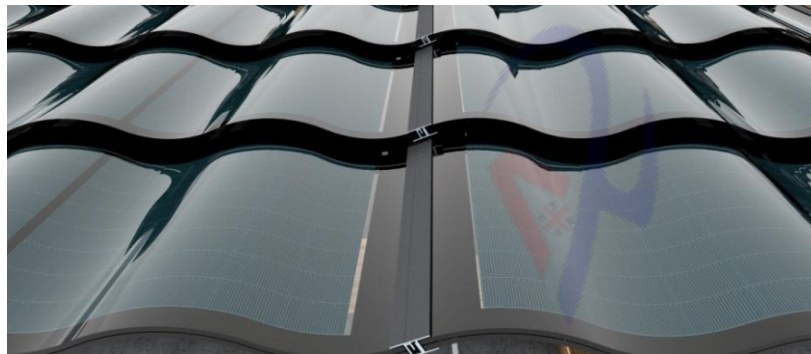
**After Installation**



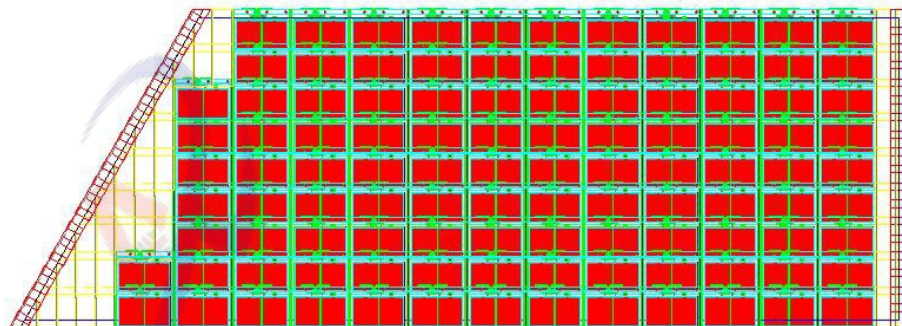
## Layout Diagram



**108pcs**



**105pcs**



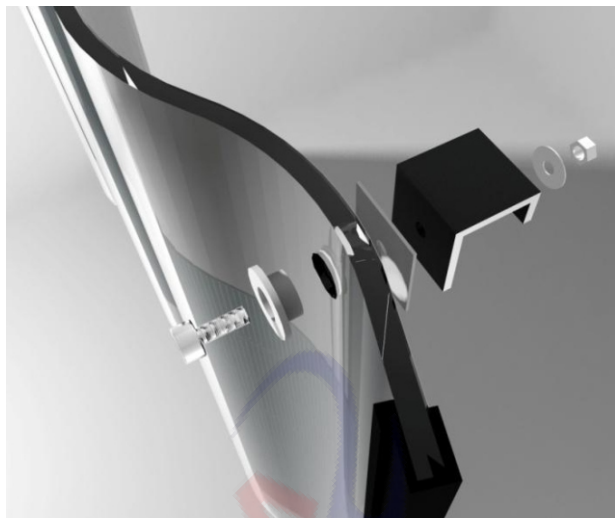
**108pcs**

You provide the drawing of roof, we can afford the layout for you.

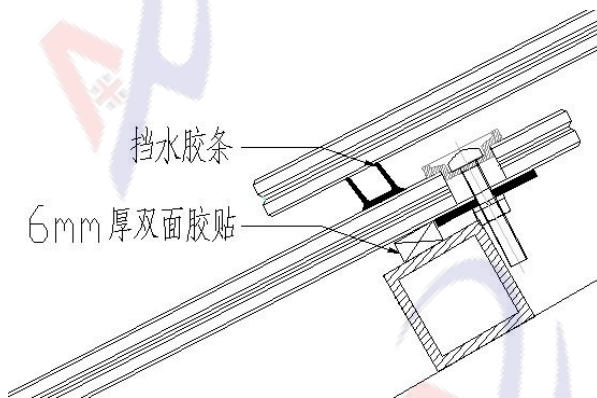


## Installation Constructure

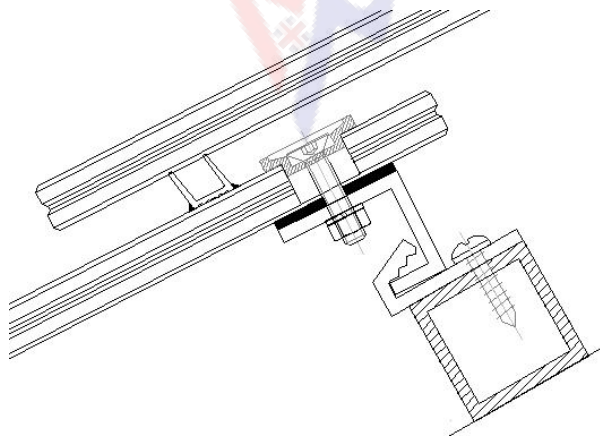
The installation system of our products can resist the 15 grade typhoon



The hook installation indication



The first case:  
Angle of roof: 15°-40°

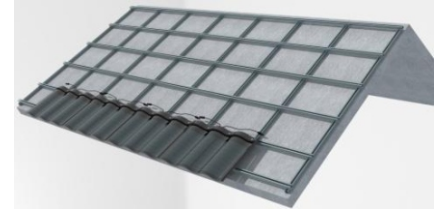
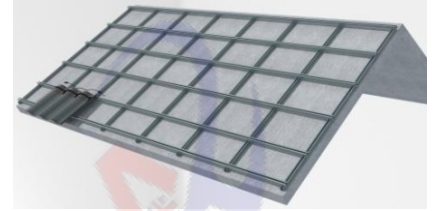
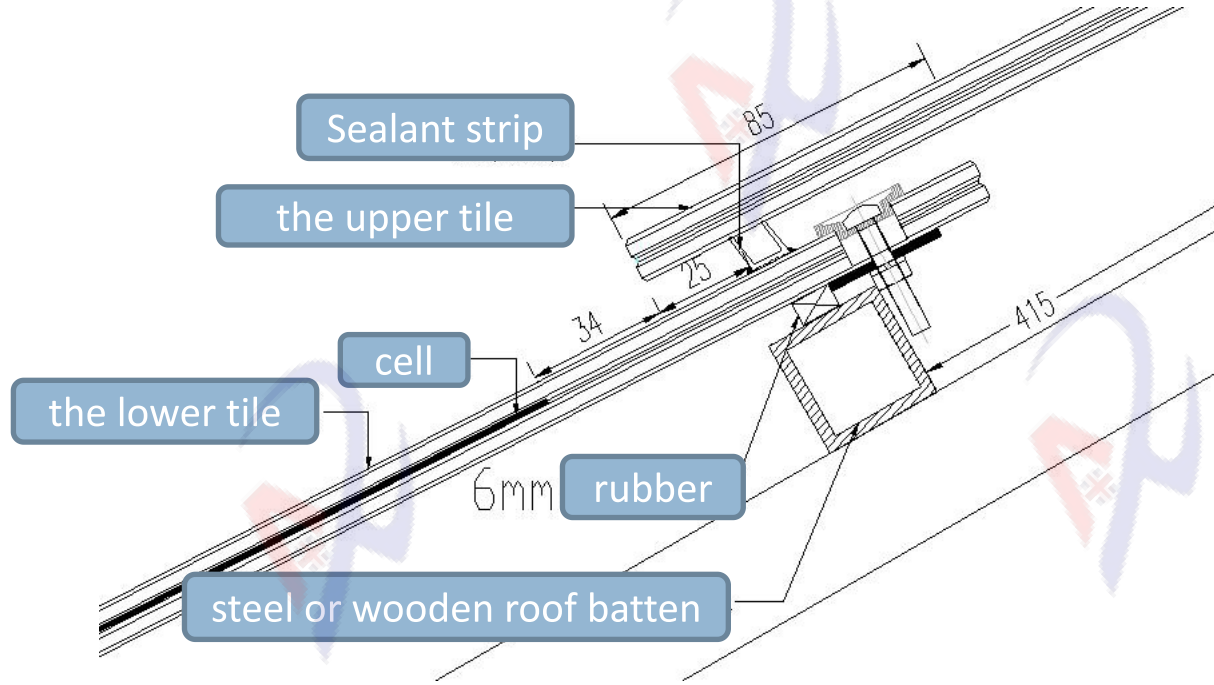


The second case:  
Angle of roof: 40°-75°



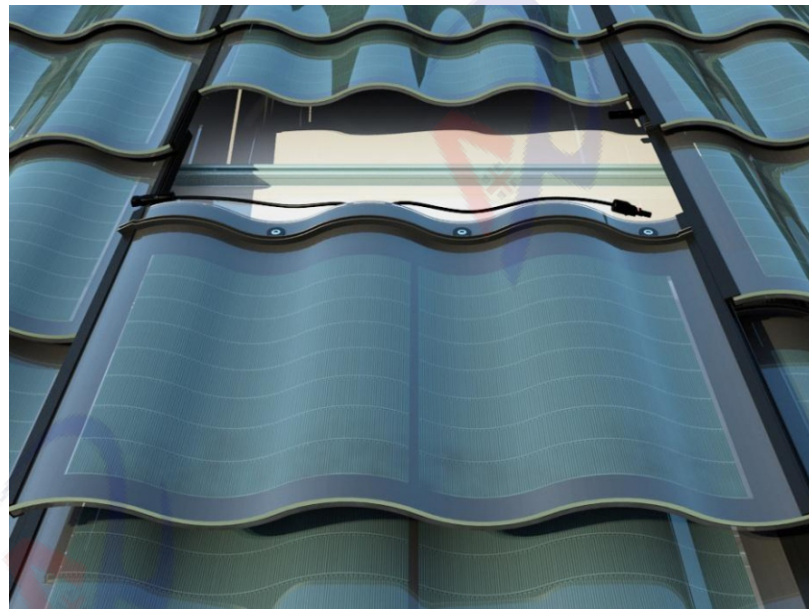
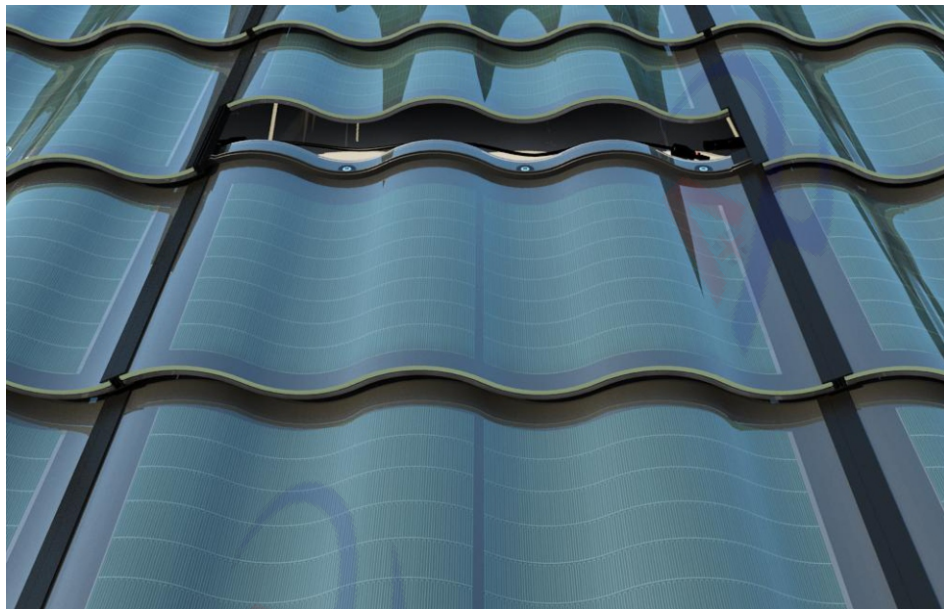
## The Sequece of Installation

Sequence of Installation:  
From left to right, from the lower edge to the top.





## Installation-Replacement

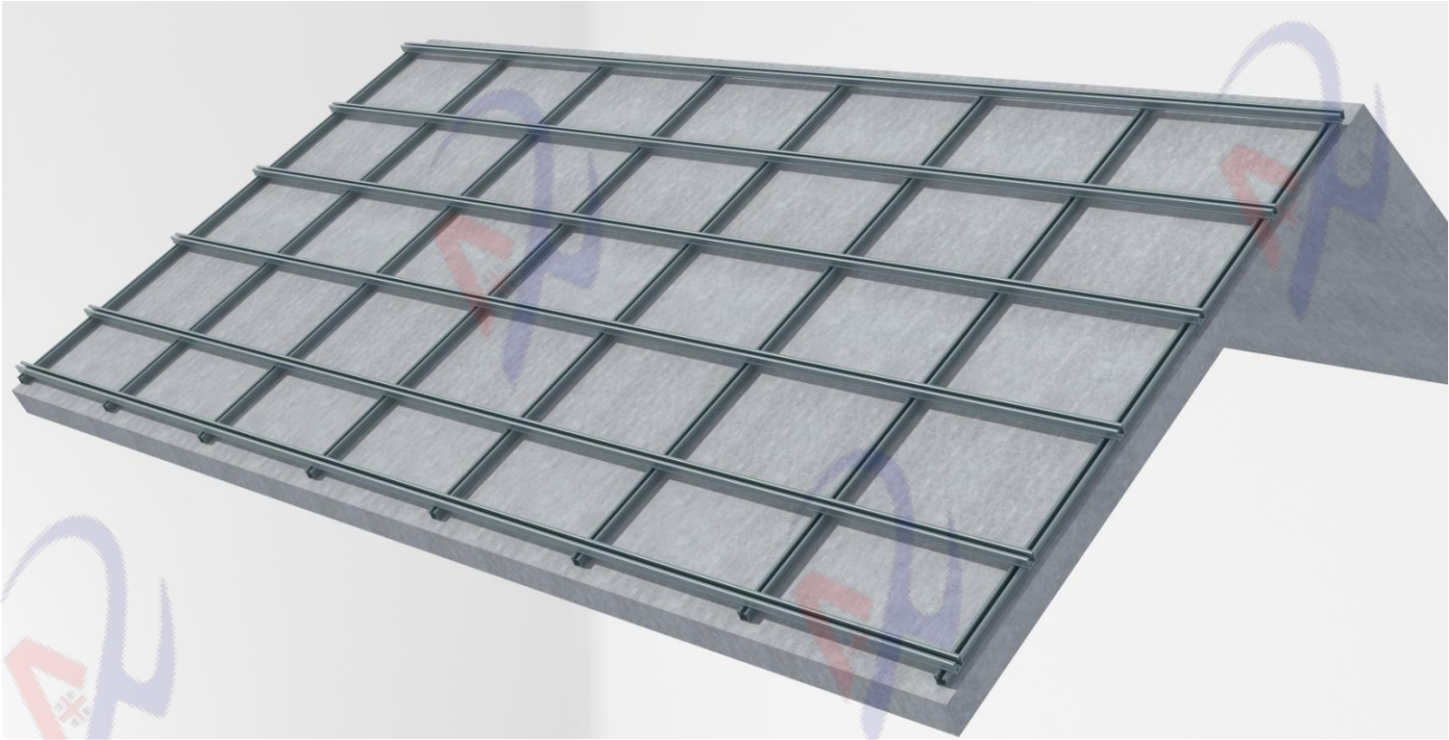


push up the upper one of the replaced tile

take off the replaced tile



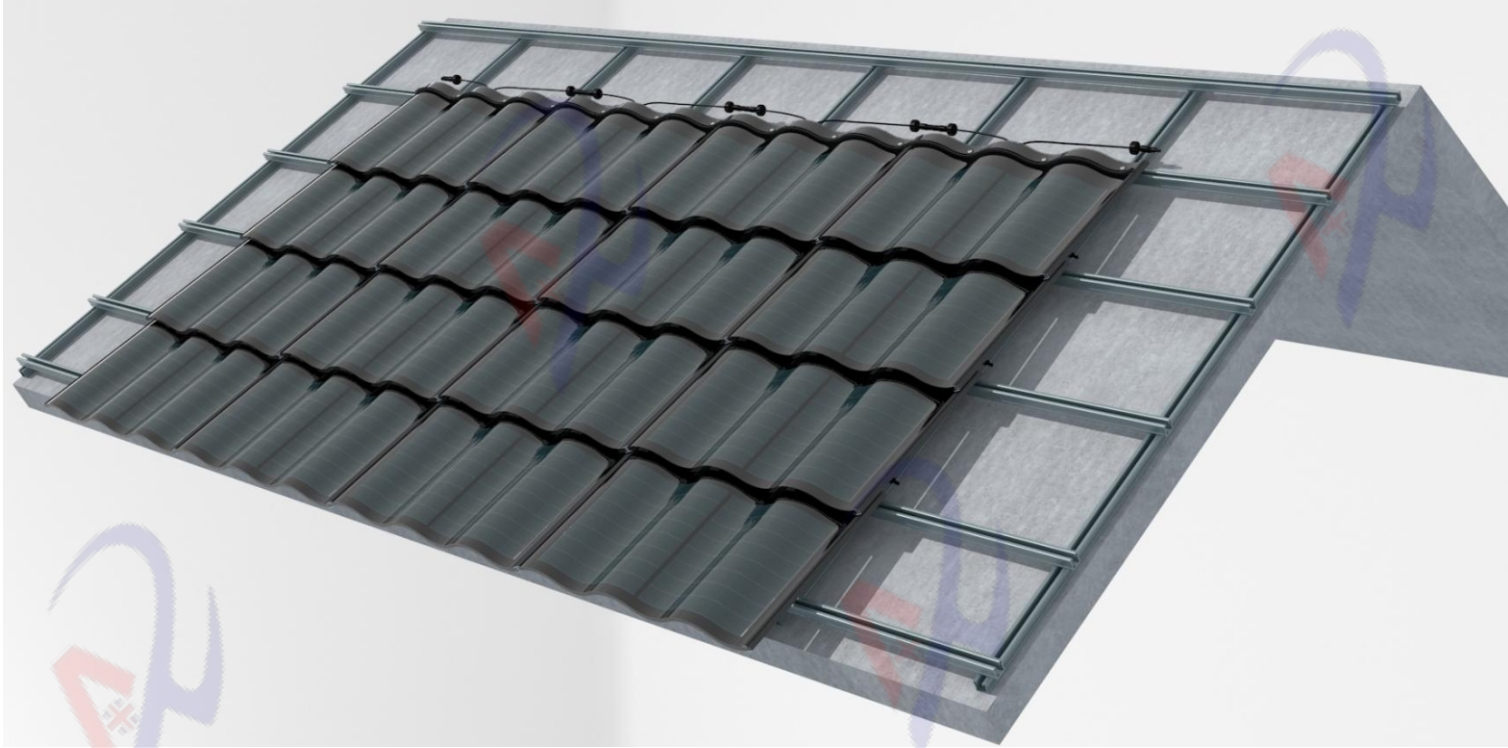
## Installation Steps of Concrete Roof



**Step 1: Surveying and setting out , fix the frame**



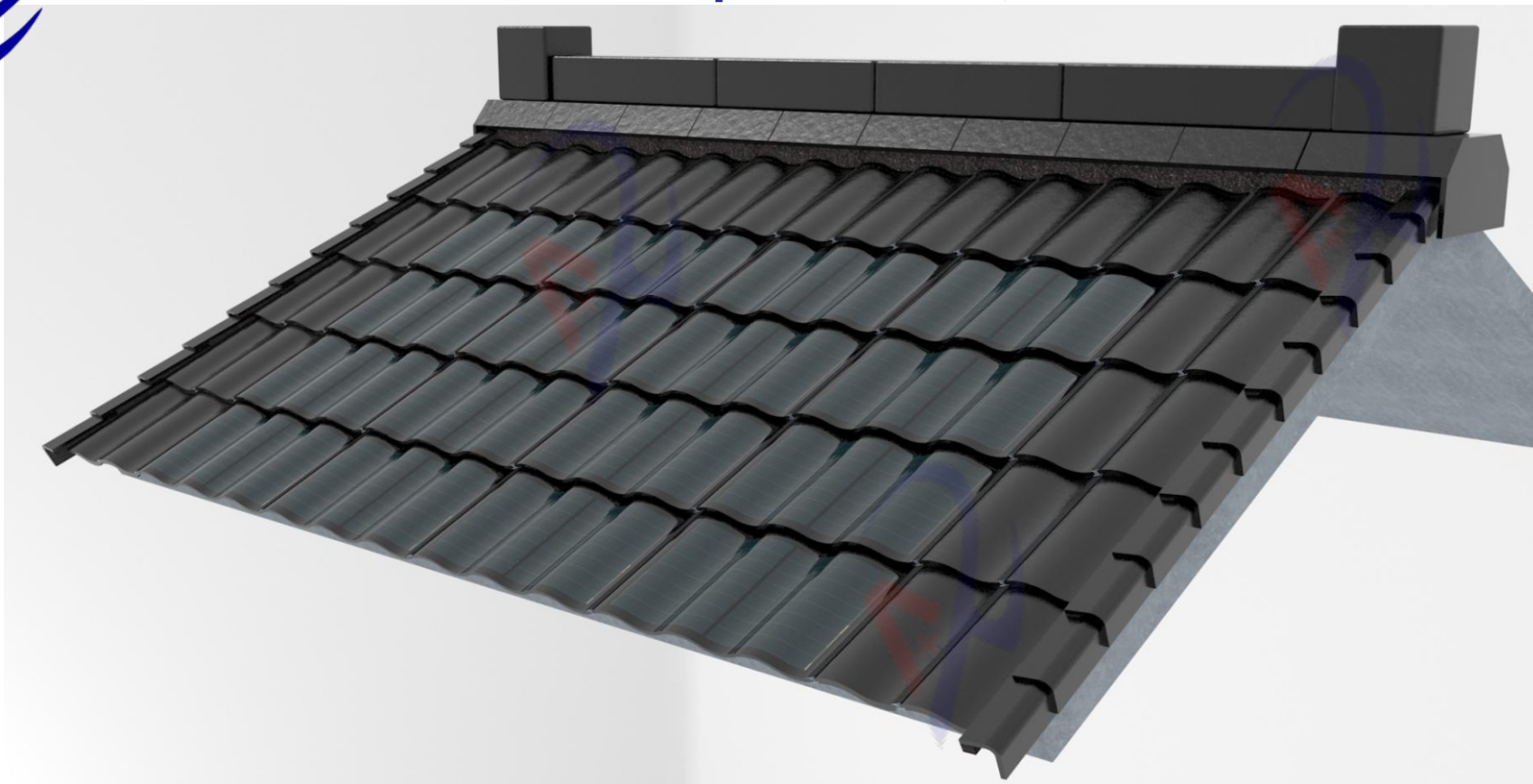
## Installation Steps of Concrete Roof



**Step 2: Lay the tiles, put the first row over the lower roof edge about 50-70mm**



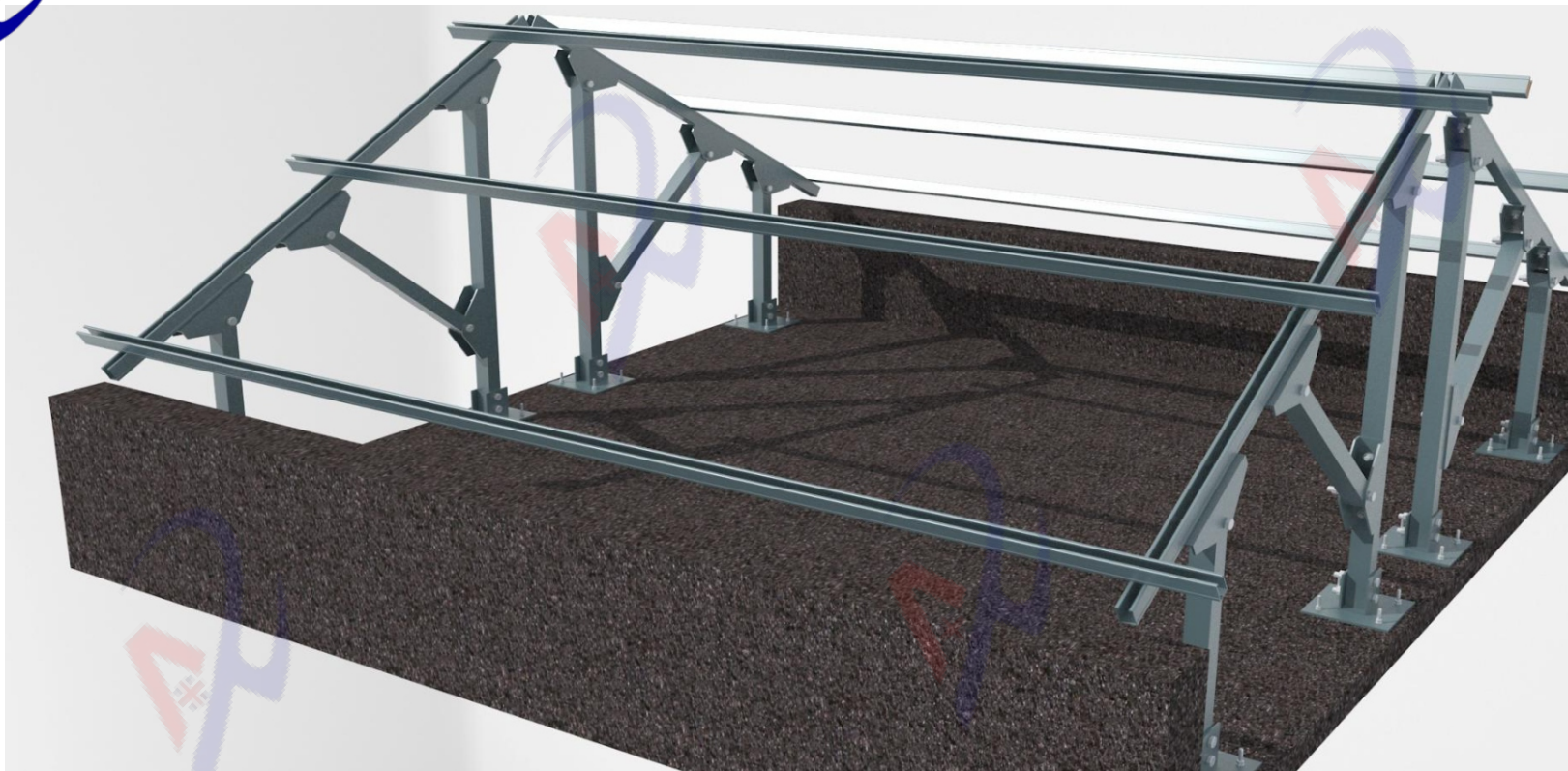
## Installation Steps of Concrete Roof



**Step 3: Install the edge tile and ridge tile**



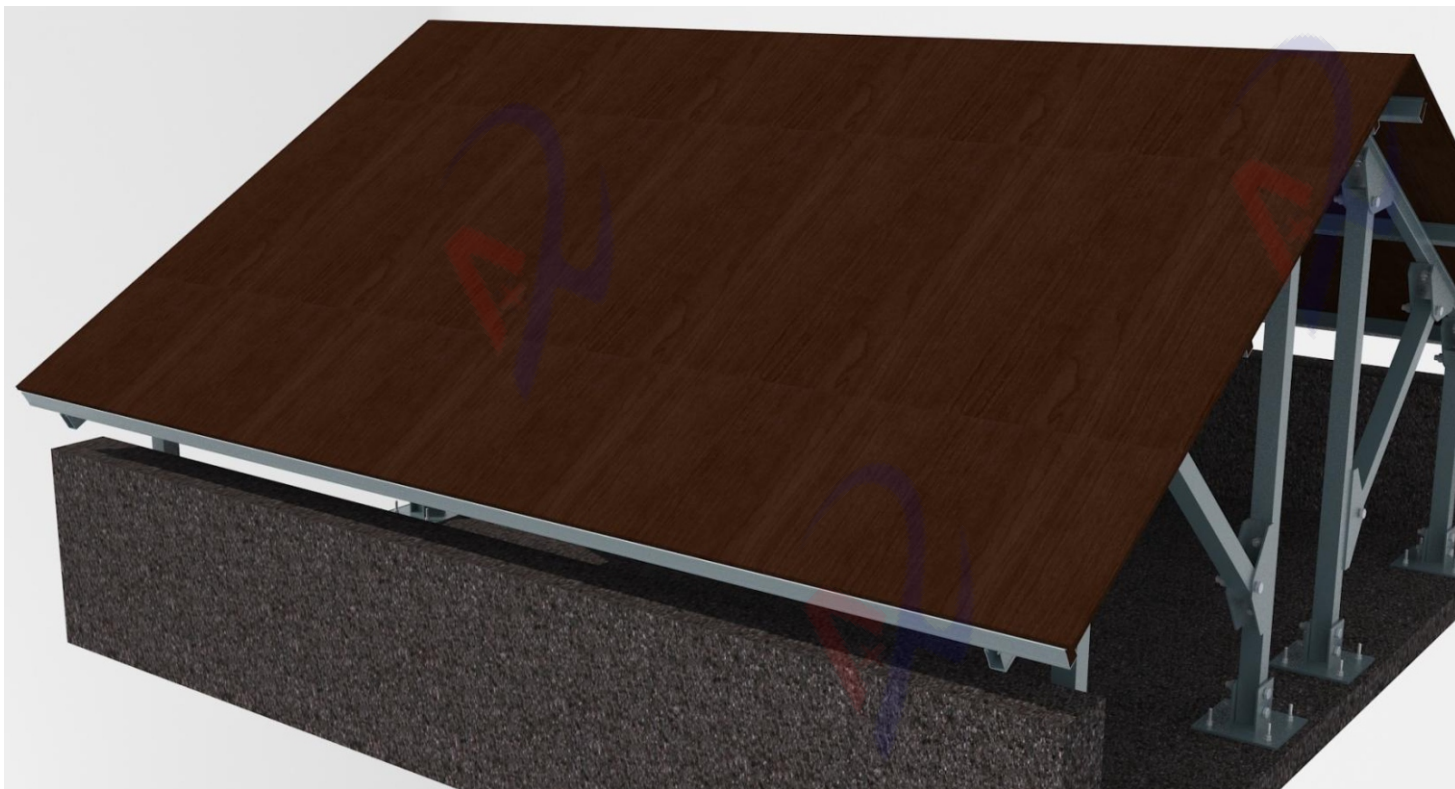
## Installation Steps of Steel Structure Roof



**Step 1: Set up the Steel Skeleton**



## Installation Steps of Steel Structure Roof



**Step 2: Paving the wooden board**



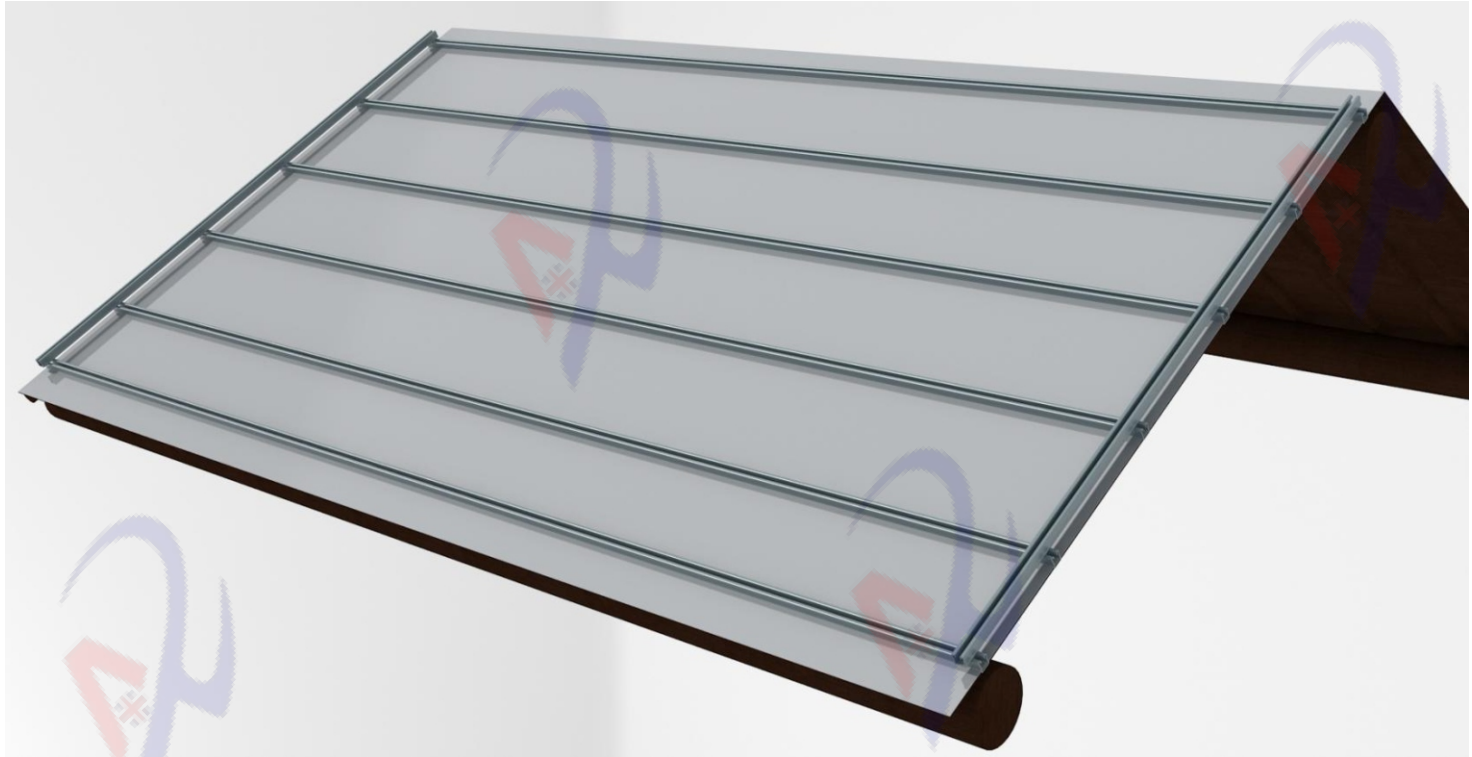
## Installation Steps of Steel Structure Roof



**Step 3: Cover the steel sheet roof on the wooden board**



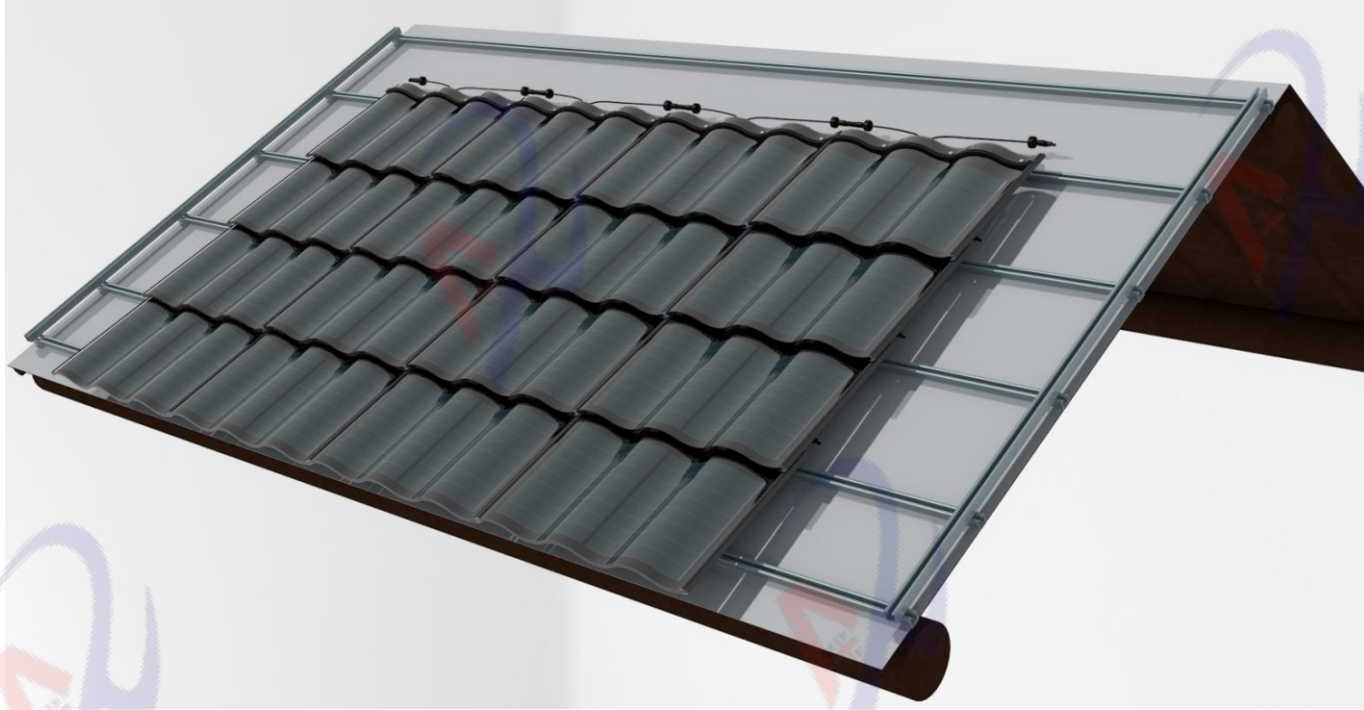
## Installation Steps of Steel Structure Roof



**Step 4: Fix the steel frame**



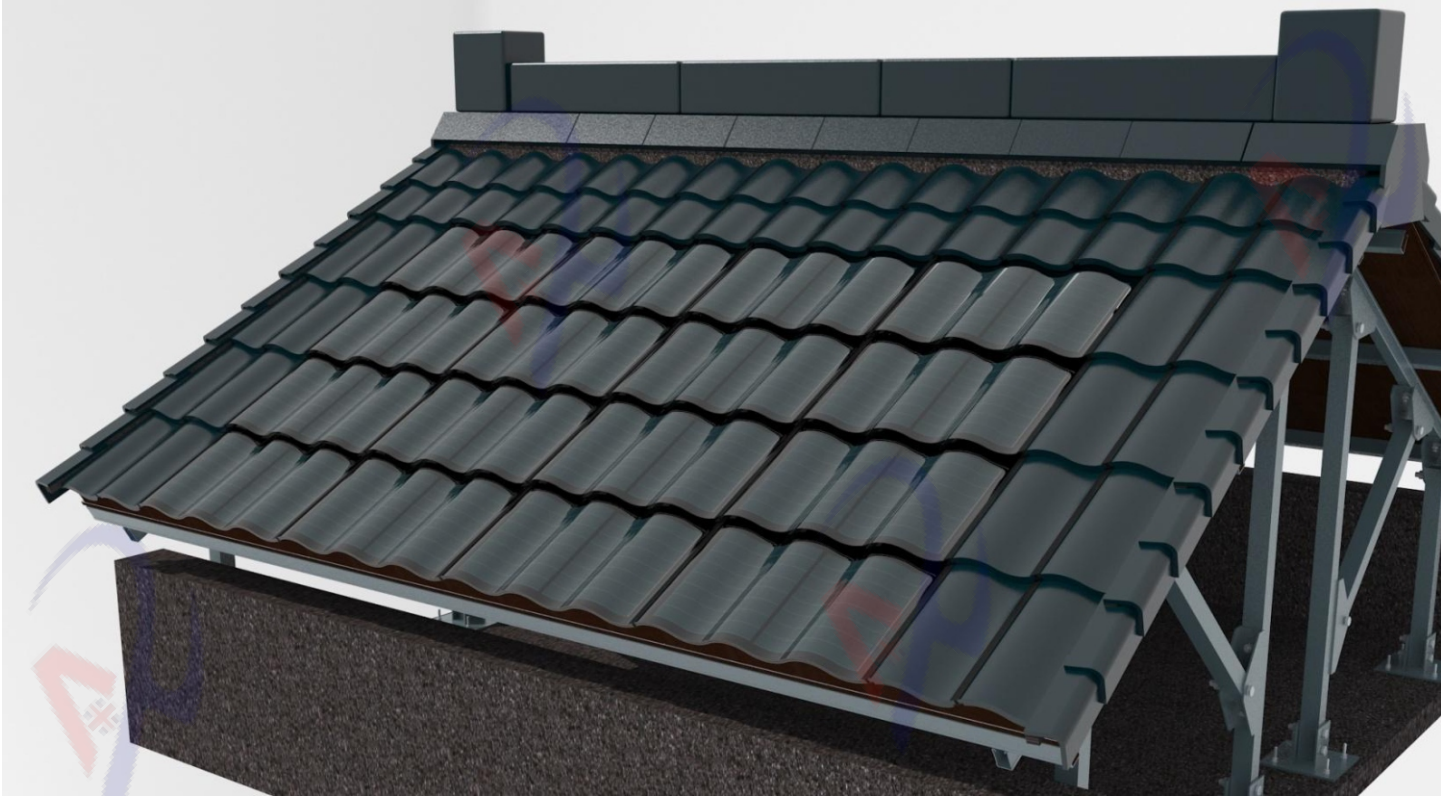
## Installation Steps of Steel Structure Roof



**Step 5: Lay the tiles, put the first row over the lower roof edge about 50-70mm**



## Installation Steps of Steel Structure Roof



**Step 6: Install the edge tile and ridge tile**