GOODWE

Building Integrated PV Products Introduction

PV Building Materials BU





GOODWE

Stock Code 688390

4600+
Employees

800+
R&D Stuff

100+
International Employees



History

2010

Founded

2011

Team built

R&D Started

2012

GW4000-SS

Double A certification

3rd World Rank

2013

Top 10 Chinese Inverter Brand

2014

ES Series Launched

2015

Stock listed New Tech Section

Best PCS Bi-direction inverter Award

2016

TÜV Certified

2017

Best Employee 2017 Suzhou

Guangde Factory

2018

Germany subsidiary Founded

Top 7 - Wood Mackenzie

2019

HQ in Suzhou

2020

Stocked Listed Shanghai

GoodWe US

GoodWe Japan

Beijing office

GoodWe PV Building Material Business Unit

2021

Smart Energy Business Unit

3300 Million Investment at Guangde Factory

Stage 2 Guangde Factory

Top 500 companies in China Energy Sectorr

2022

Relaunch of GoodWe Brand

PV Building Material Solutions Launched



Production Capacity

GoodWe integrates the latest and most advanced process technology and automation solutions, with reliable quality, high efficiency and stability.

30GW
Inverter capacity

2.1GWh
Battery capacity

500MW
Planned annual production capacity of photoelectric building materials

2.7 million ㎡
Annual installation area

GOODWE

SOLARISE EVERY BUILDING



GOODWE

Zero-carbon Living



Zero-carbon Producing



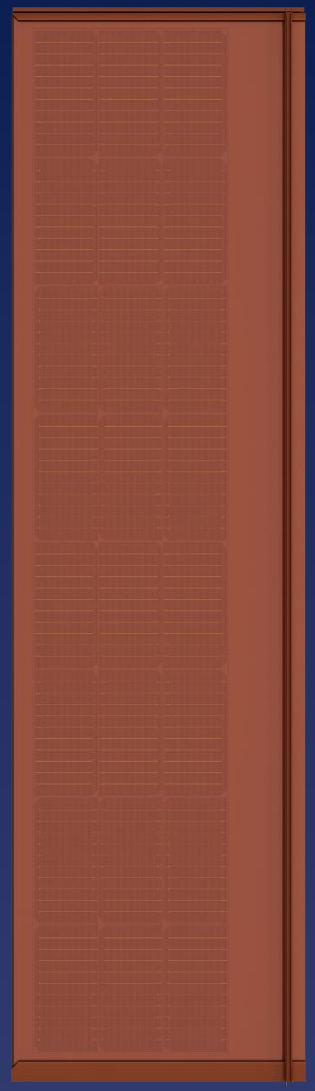
Zero-carbon Traveling



Sunshine Series



Ebony



Ochre

Sunshine Global

BMT-S2/024A (84W)
1556x420x23.5mm

Area	0.654m²
Weight	11.5kg
Mechanical Loads	5400Pa
Fire Test Rating	Class A
Windproof Rating	Wind resistance up to 14 guests
Hail Resistance Rating	4 (ANSI FM4473)
Dust Proof Rating	IP67
Max. Power	84W
Power Density	160-175W/m²

Certification Information

GOODWE PVBM

Certification obtained from TUV Nord

Listed in CEC approved product list

Fire resistance, wind resistance, rainfall test, load bearing test passed



TÜV NORD

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

GOODWE POWER SUPPLY TECHNOLOGY CO., LTD.
No. 208 Tongrui Rd., EDZ
Guangde, Anhui
P.R. China

is authorized to provide the product mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Type Tested

Valid from: 2021-11-15
Valid until: 2026-11-14

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC / EN 61215-1:2016; IEC / EN 61215-1-1:2016; IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018.
Registered No.:	44 780 21 406749 - 245
Manufacturer:	see Annex 1
Test Report No.:	492011845.001
File No.:	PVP08121/21P-01

TÜV NORD CERT GmbH
Certification Body
Consumer Products

Essen, 2021-11-15

Please also pay attention to the information stated overleaf.

TÜV NORD CERT GmbH Langemarckstr. 20 45141 Essen Fon +49 (0)201 825 5120 Fax +49 (0)201 825 3209 www.tuev-nord-cert.de prodcert@tuev-nord.de



TÜV NORD

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

GOODWE POWER SUPPLY TECHNOLOGY CO., LTD.
No. 208 Tongrui Rd., EDZ
Guangde, Anhui
P.R. China

is authorized to provide the product mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Building-Integrated Photovoltaic Modules

Type Tested

Valid from: 2021-12-22
Valid until: 2026-12-21

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 63092-1:2020
Registered No.:	44 780 21 406749 - 282
Manufacturer:	see Annex 1
Test Report No.:	492011895.001
File No.:	PVP08121/21P-03

TÜV NORD CERT GmbH
Certification Body
Consumer Products

Essen, 2021-12-22

Please also pay attention to the information stated overleaf.

TÜV NORD CERT GmbH Am TÜV 1 D-45307 Essen Fon +49 (0)201 825 5120 Fax +49 (0)201 825 3209 www.tuev-nord-cert.de prodcert@tuev-nord.de



TÜV NORD

Certificate
of conformity with the following
European Directives

Registered No.:
44 799 21 406749 - 135

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2021-09-16	PVP08121/21P-01	492011845.001	2021-11-15	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product:	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Type designation:	See Annex 1
Applicant:	GOODWE POWER SUPPLY TECHNOLOGY CO., LTD. No. 208 Tongrui Rd., EDZ Guangde, Anhui, P.R. China
Standard(s):	EN IEC 61730-1:2018; EN IEC 61730 EN IEC 61730-2:2018; EN IEC 61730

This Certificate of conformity is based on the evaluation of sa
assessment of the production and it does not permit the use
mark of the TÜV NORD CERT GmbH. The holder of this cert
with his EC-Declaration of Conformity.

Certification Body
Specialist Manager Consumer Products

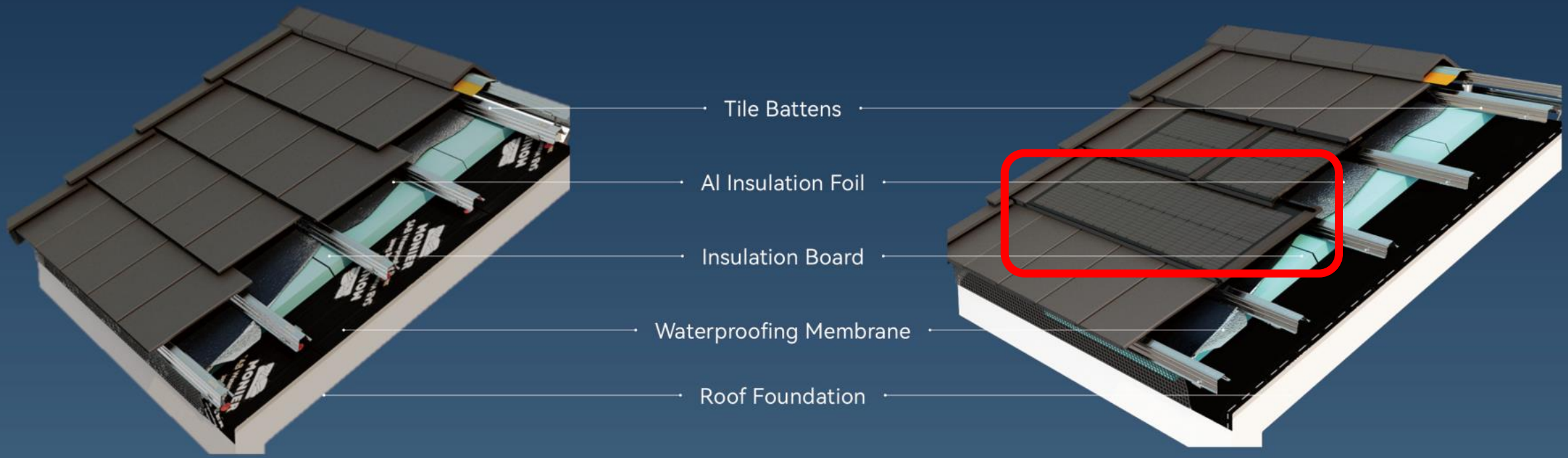
CE

Fon: +49 (5120
Fax: +49 (0)2 3209
Email: prodcert@tuev-nord.de

CE The CE marking may be affixed on the product if all relevant and effective Directives are complied with. CE

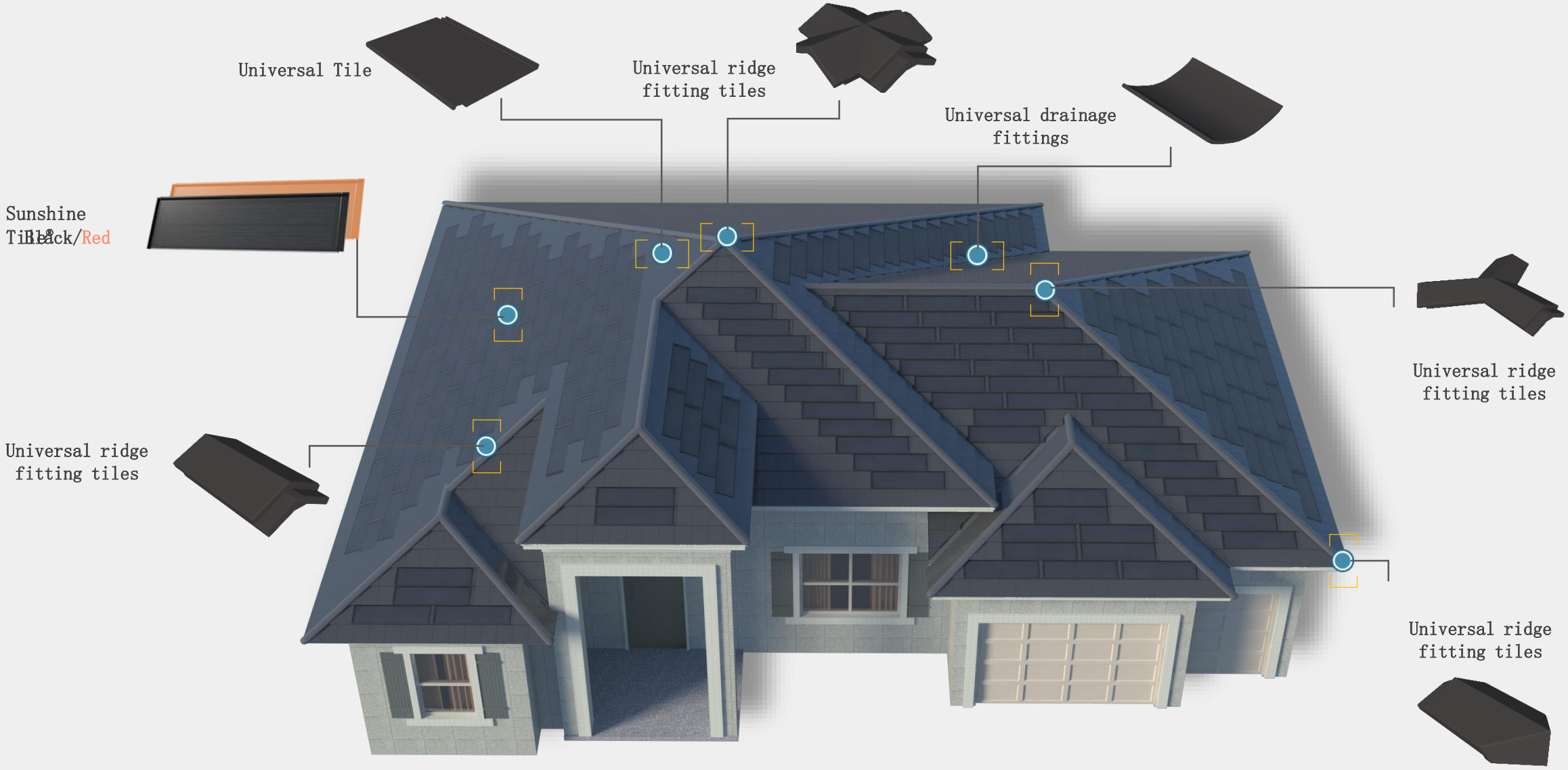
CLEAN ENERGY COUNCIL

Building Integrated



Pitched Roof System

GOODWE PVBM

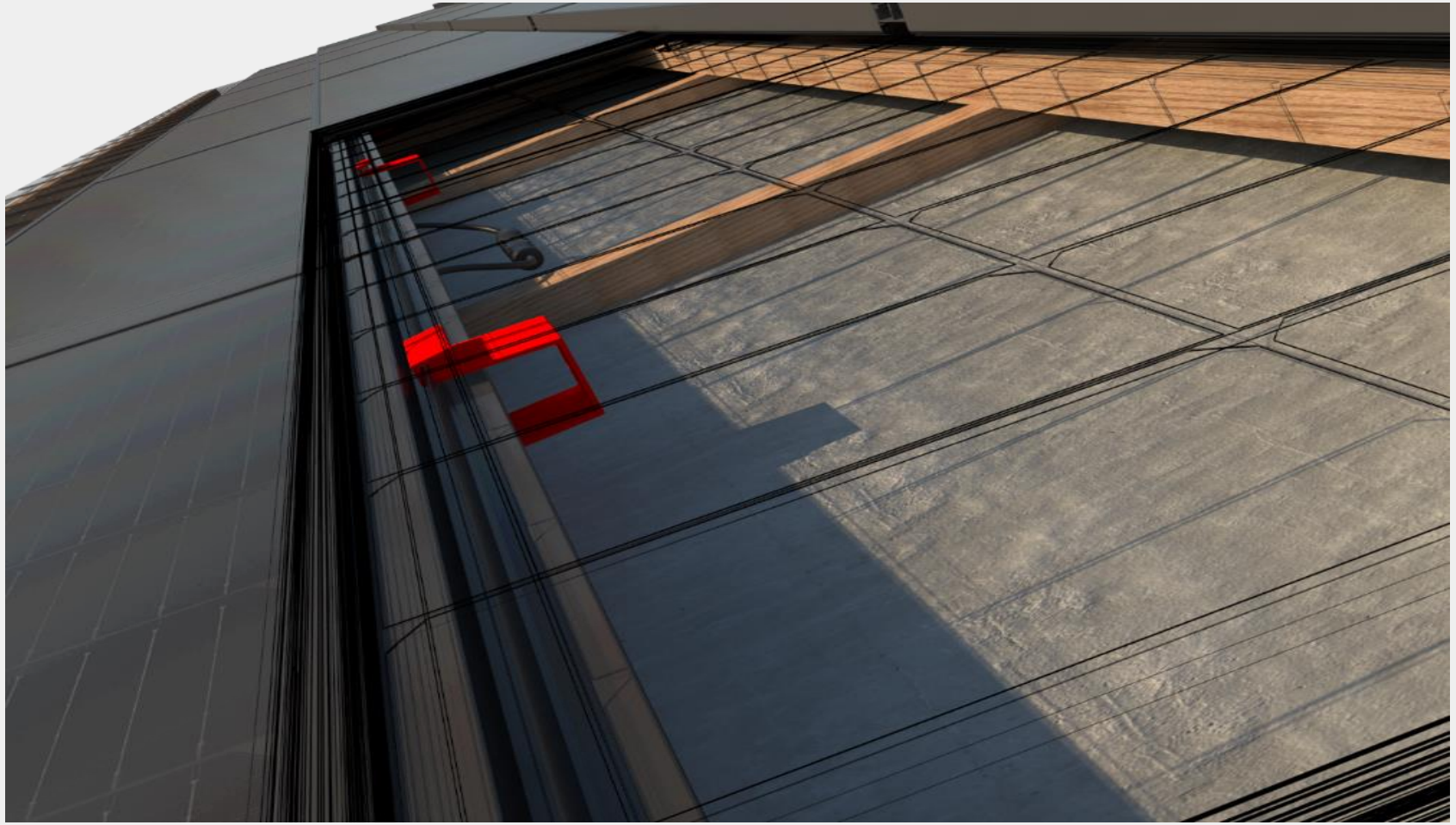


Fast Installation

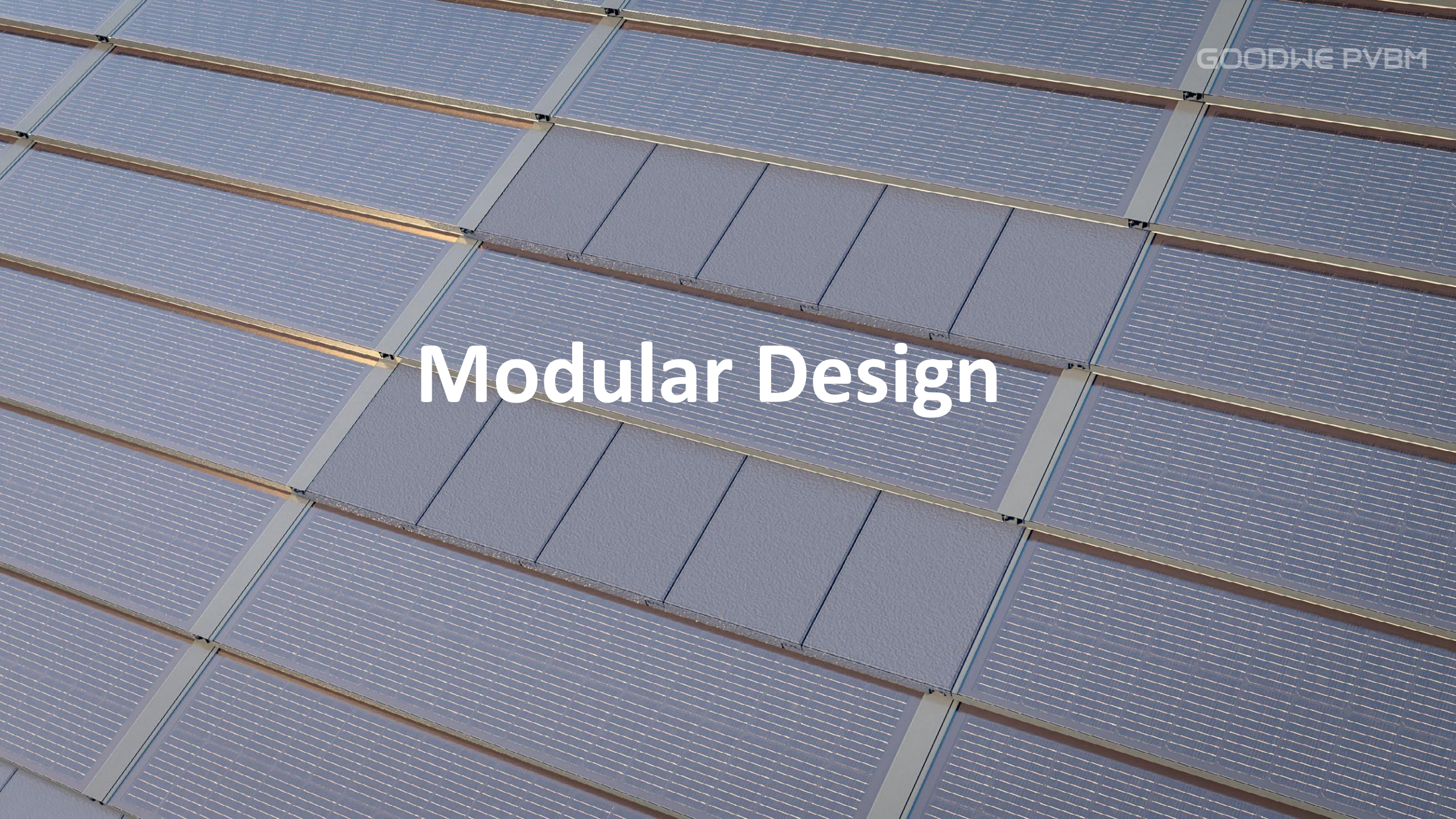


Core Tech & Competitiveness

GOODWE PVBM



Wind Resistance

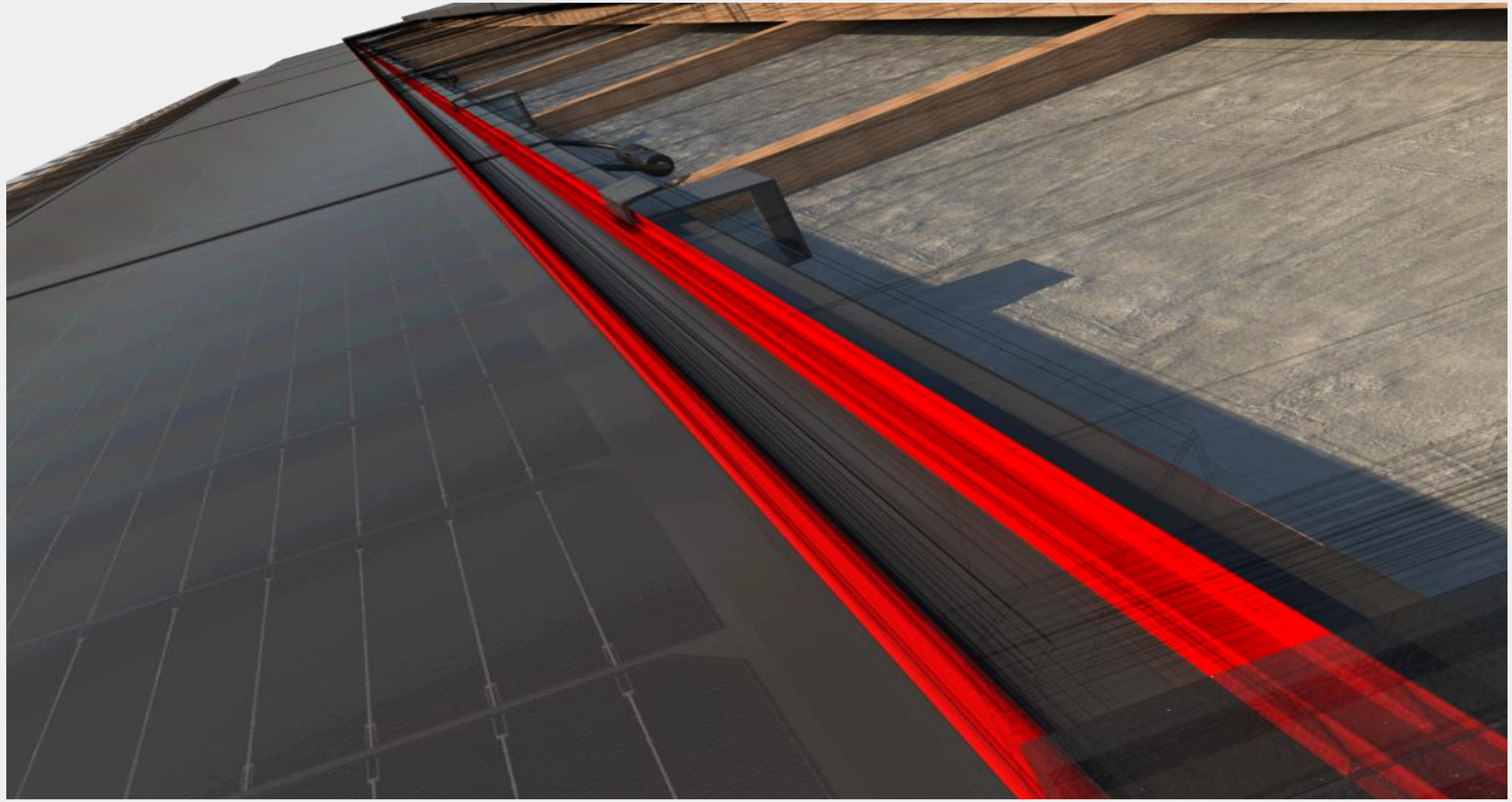


Modular Design

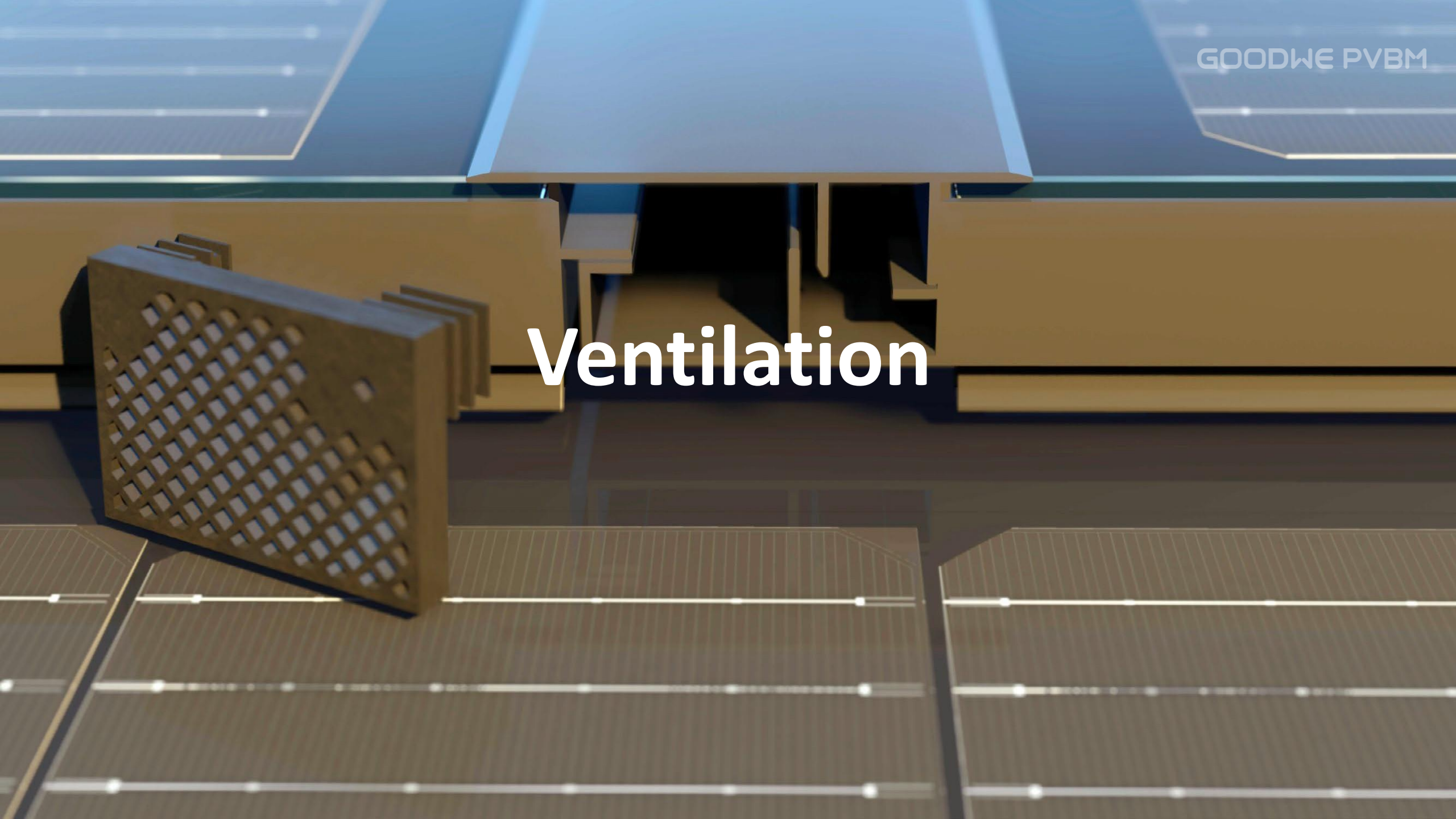
Structural Waterproof

Core Tech & Competitiveness

GOODWE PVBM



Waterproof


GOODWE PVBM
Ventilation

Fire Resistance



Green Building Materials Certification-Fire Resistance Test

GOODWE PVBM





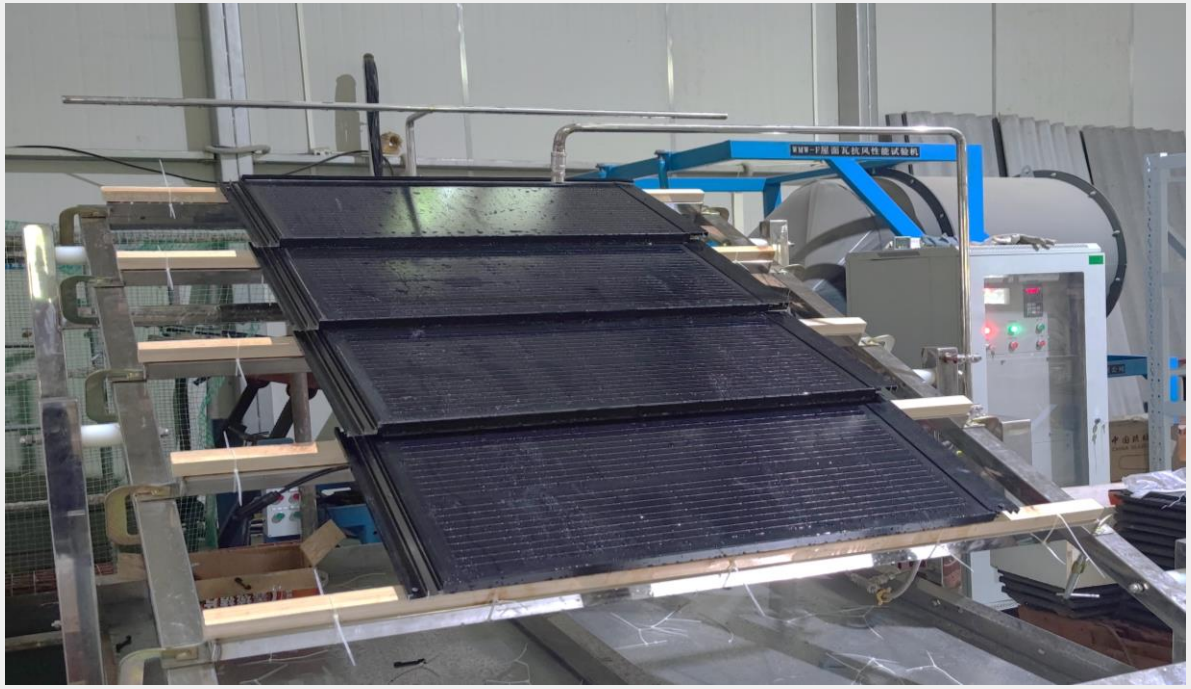
Fire Test （ Fire resistance class）

Burning block test	300*300*57mm 30min
Flames spread test	10min ＜1.82m

Green Building Materials Certification-Wind & Rain Resistance Test

GOODWE PVBM





Wind Resistance Test： Passed

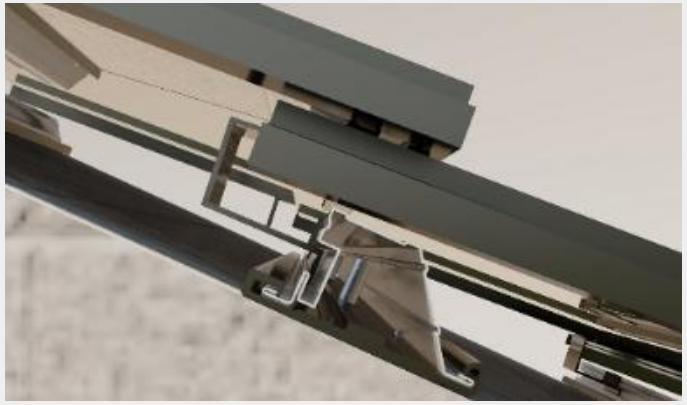
50m/s

Rainfall Test： Passed

9.5L/min

Core Tech & Competitiveness

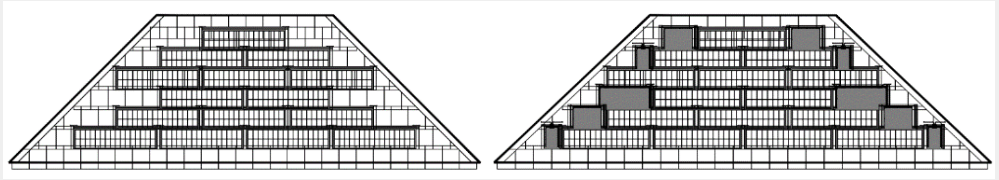
GOODWE PVBM



Specialized metal batten solutions

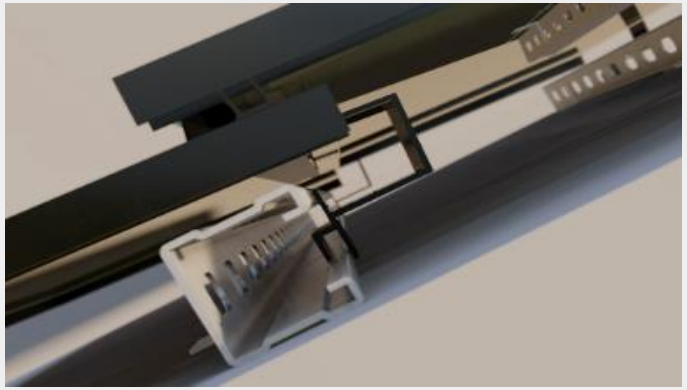


Brick red roof product development

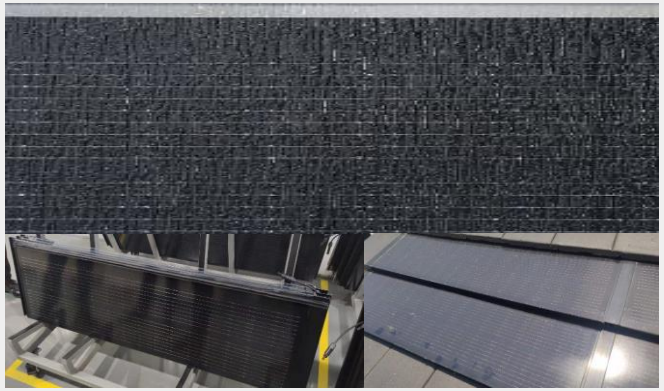


Single row solution

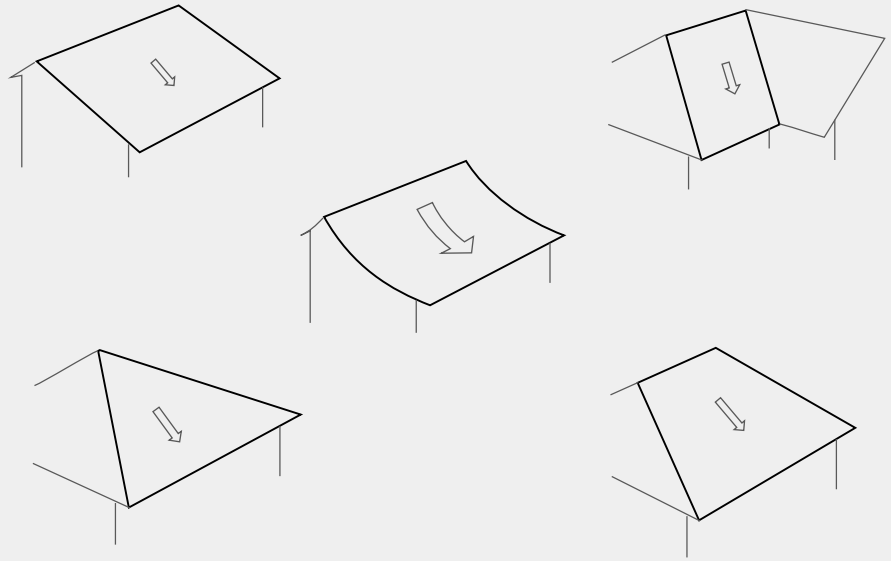
Dense Roofing Technology



Compatible metal batten solutions



Trial production of tree texture top products



Adaptation to diverse roof geometry

Sunshine Series Xichun Kindergarten

GOODWE PVBM





Guangde Anhui

Power generation: 104.8 kW
Photovoltaic area: 674m²
Annual power generation: 105MWh
Equivalent reduction in CO_2 emission: 1664Tons
Equivalent trees planted: 15124
Inverter: GW20KF-DT, GW100K-HT

The Xichun kindergarten project is a new construction project, and the roof photovoltaic system is designed and constructed simultaneously with the whole building. The building safety requirements of the kindergarten application scenario are of the highest level, and GoodWe PVBM can maintain the safety of the building roof, guarantee the beauty and stability of the campus environment from the source, providing a healthy and safe learning environment for the children.

Sunshine Series Oxygen Land·Agriculture Farm Hotel

GOODWE PVBM





Chongming Shanghai

Power generation: 91.8kW
Photovoltaic area: 532m²
Annual power generation: 97MWh
Equivalent reduction in CO_2 emission: 1538Tons
Equivalent trees planted: 13983
Inverter: GW10KT-DT, GW80K-MT

Oxygen Land·Agriculture Farm Hotel actively contribute to carbon neutrality and is committed to building a high-end green hotel. The project has a large volume and tight construction schedule. GoodWe's PVBM products are friendly to install, safe, integrated and efficient in Power generation, meeting the hotel's electricity demand, business requirements and comfortable experience, devoting to the zero-carbon eco-hotel.

Sunshine Series The Richard's Villa in Brisbane

GOODWE PVBM





Queensland, Australia

Power generation: 2.1kW
Photovoltaic area: 16.4 m^2
Annual power generation: 3400kWh
Equivalent reduction in CO_2 emission: 53.2Tons
Equivalent trees planted: 479

With a 30% increase in electricity prices in Australia from July 2023, Mr. Richard, the householder, chose GoodWe's BIPV solution in order to cope with rising energy bills. Due to the limited roof area, as well as being located next to the main road, the size and aesthetics of the PV product were required, and the Sunshine tiles perfectly complemented and met the safety and sustainability of the villa.

Sunshine Series Dongli Ecological Garden

GOODWE PVBM





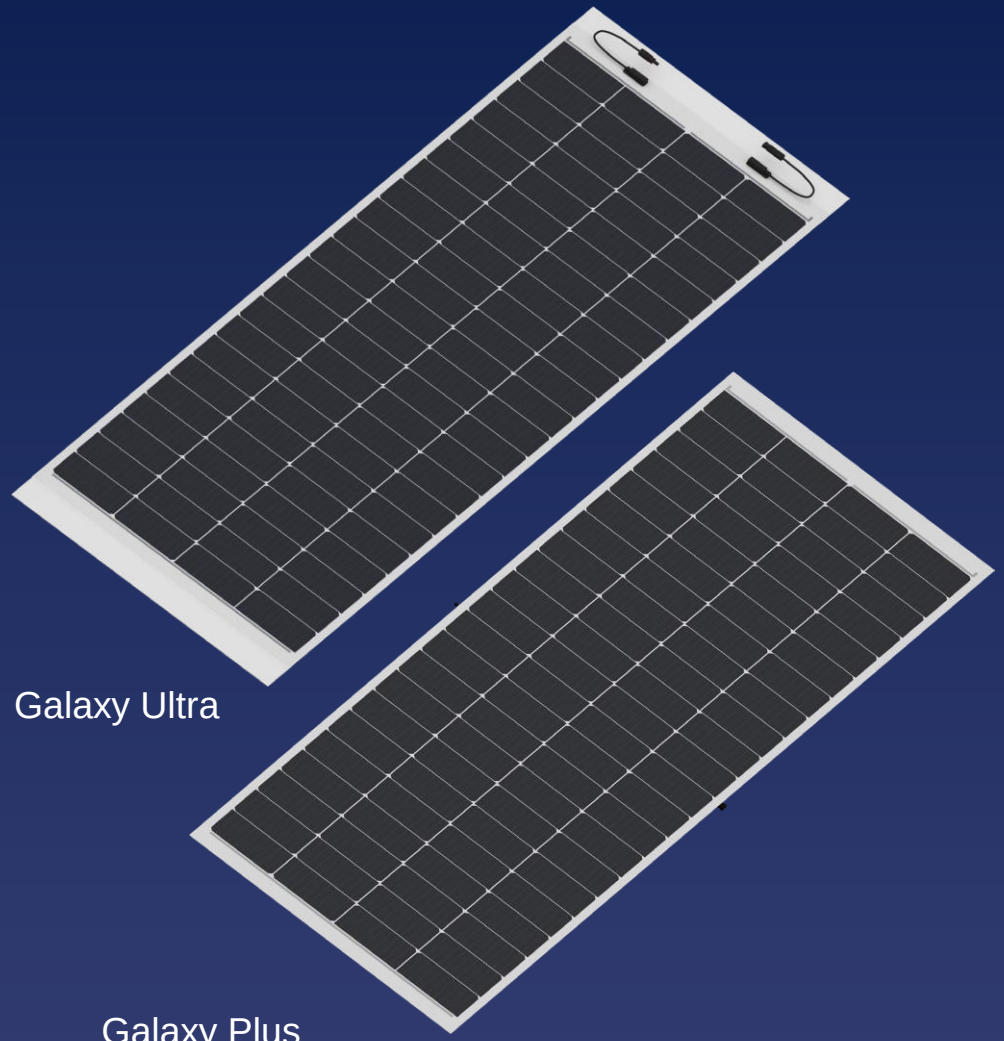
Fengxian Shanghai

Power generation: 4.2kW
Photovoltaic area: 30m²
Annual power generation: 4500kWh
Equivalent reduction in CO_2 emission: 70.4Tons
Equivalent trees planted: 639
Inverter: GW5000D-NS

The unique brick-red Sunrise tiles of GoodWe PVBM meet the design ingenuity of the architect and maintain a high degree of consistency with the appearance of the ecological park. GoodWe's integrated power solution guarantees efficient power generation and safe electricity consumption for ecological buildings, where not only can you enjoy the elegance and romance of a farming estate, but also can be wisely connected to ecology and truly integrate into nature.

Galaxy Series

Designed for Lightweight Roofing



Galaxy Ultra

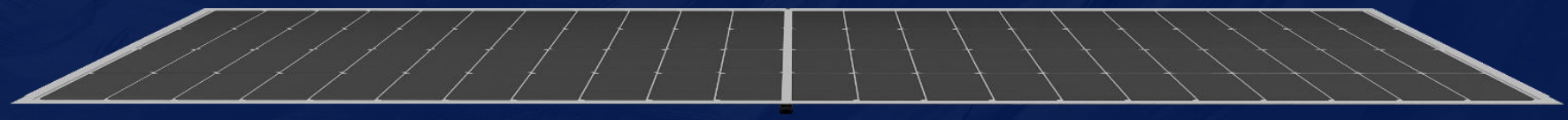
Galaxy Plus

	Galaxy Ultra BMT-G3/088A	Galaxy Plus BMT-G4/088A
Size	2319×777×4mm	2116×777×4mm
Weight Density	6kg	5.6kg
Front Sheet	√	×
Reinforcement Layer	1.6mm glass	1.6mm glass
TPO	√	×
Junction Box	Front	Back
Max. Power	315W	335W
Power Density	174W/㎡	204W/㎡
Install Method	Hot Welding/ Adhesive Gluing	Clamp Fixing/ Adhesive Gluing
Hail Resistance Class	25mm 23m/s	

GOODWE PVBM

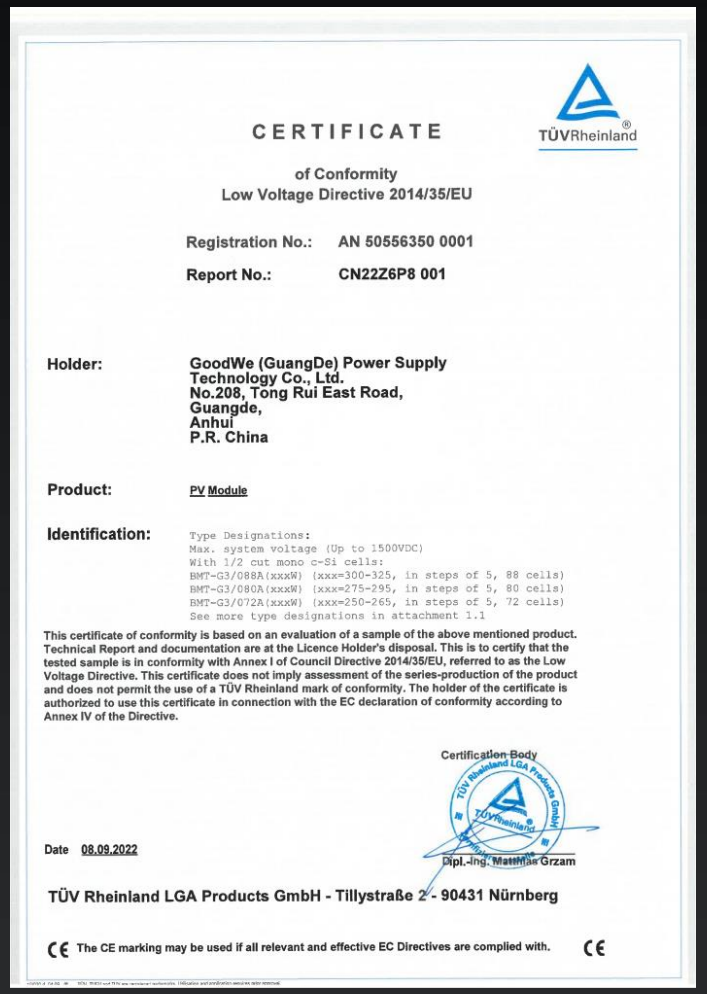
Light

Stable



Certificates

GOODWE



CERTIFICATE

TÜVRheinland

of Conformity
Low Voltage Directive 2014/35/EU

Registration No.: AN 50556350 0001

Report No.: CN22Z6P8 001

Holder: GoodWe (GuangDe) Power Supply Technology Co., Ltd.
No.208, Tong Rui East Road,
Guangde,
Anhui
P.R. China

Product: PV Module

Identification:
Type Designations:
Max. system voltage (Up to 1500VDC)
With 1/2 cut mono c-Si cells:
BMT-G3/088A(xxxW) (xxx=300-325, in steps of 5, 88 cells)
BMT-G3/080A(xxxW) (xxx=275-295, in steps of 5, 80 cells)
BMT-G3/072A(xxxW) (xxx=250-265, in steps of 5, 72 cells)
See more type designations in attachment 1.1

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive 2014/35/EU, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex IV of the Directive.

Certification Body
TÜV Rheinland LGA Products GmbH
Dipl.-Ing. Matthias Grzam

Date 08.09.2022

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE



TÜV NORD

Certificate
of conformity with the following
European Directives

Registered No.:
44 799 21 406749 - 135

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2021-09-16	PVP08121/21P-01	492011845.001	2021-11-15	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Type designation: See Annex 1

Applicant: GOODWE POWER SUPPLY TECHNOLOGY CO., LTD.
No. 208 Tongrui Rd., EDZ
Guangde, Anhui, P.R. China

Standard(s): EN IEC 61730-1:2018; EN IEC 61730
EN IEC 61730-2:2018; EN IEC 61730

This Certificate of conformity is based on the evaluation of sa
assessment of the production and it does not permit the use
mark of the TÜV NORD CERT GmbH. The holder of this cert
with his EC-Declaration of Conformity.

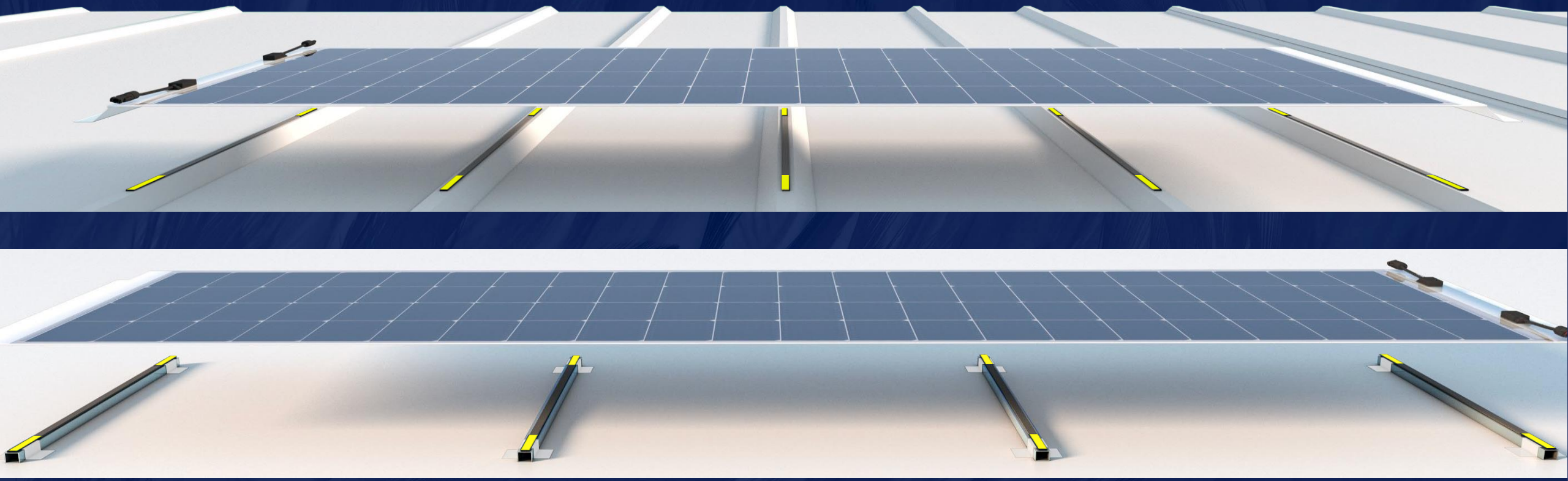
Certification Body
Specialist Manager Consumer Products

Fax: +49 (0)
Email: prodcert

CE The CE marking may be affixed on the product if all relevant and effective Directives are complied with. CE

CLEAN ENERGY COUNCIL

GOODWE PVBM

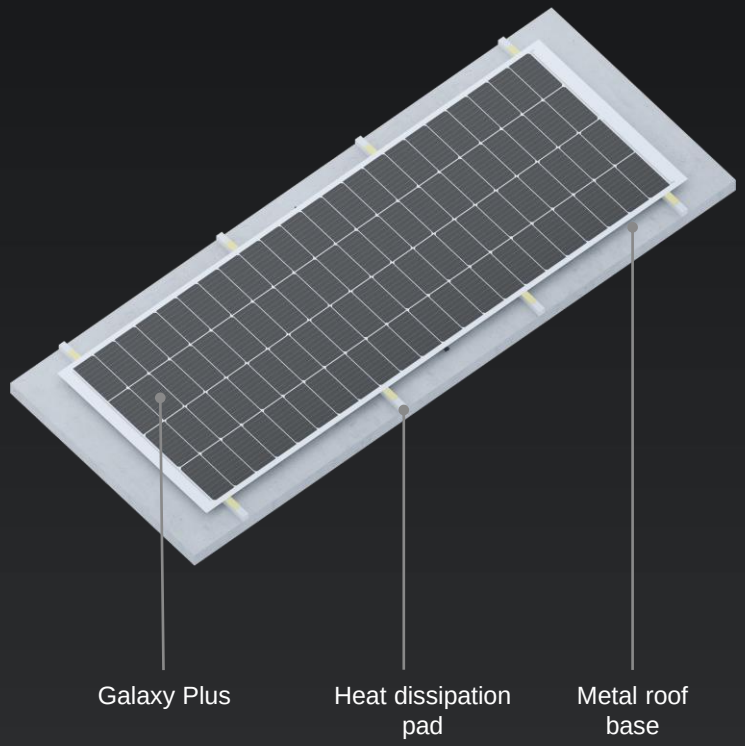


Ventilation

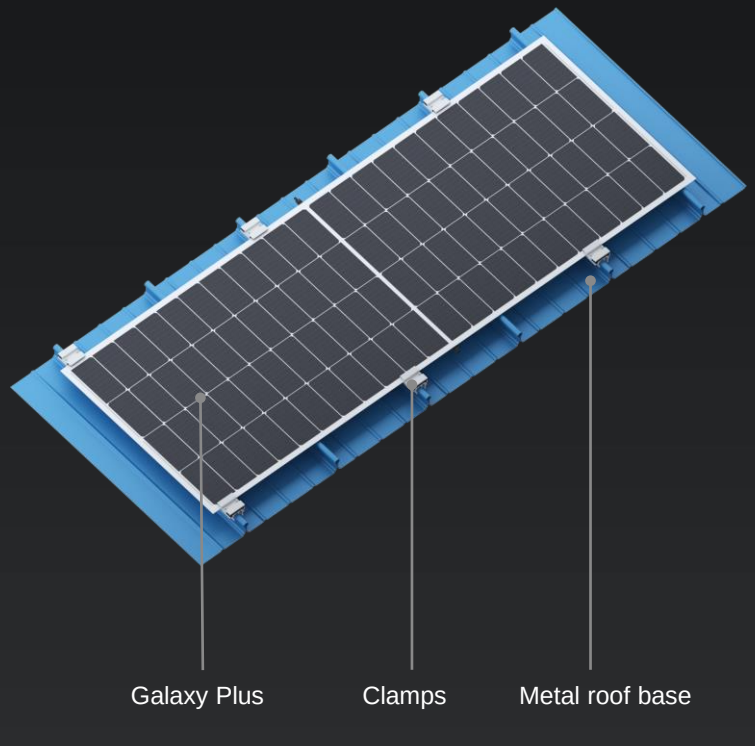
Industrial Roof Solution

GOODWE

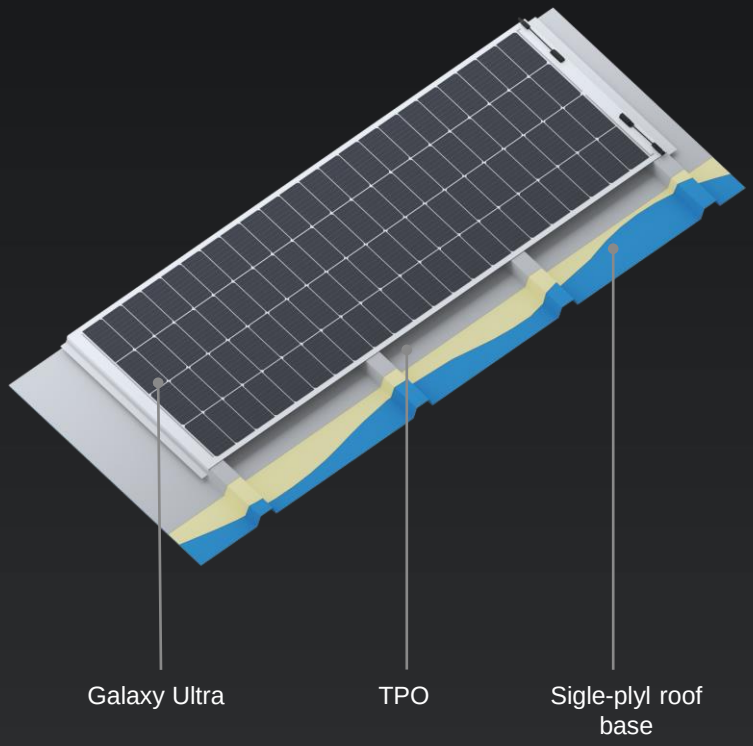
Adhesive Gluing



Clamps Fixing



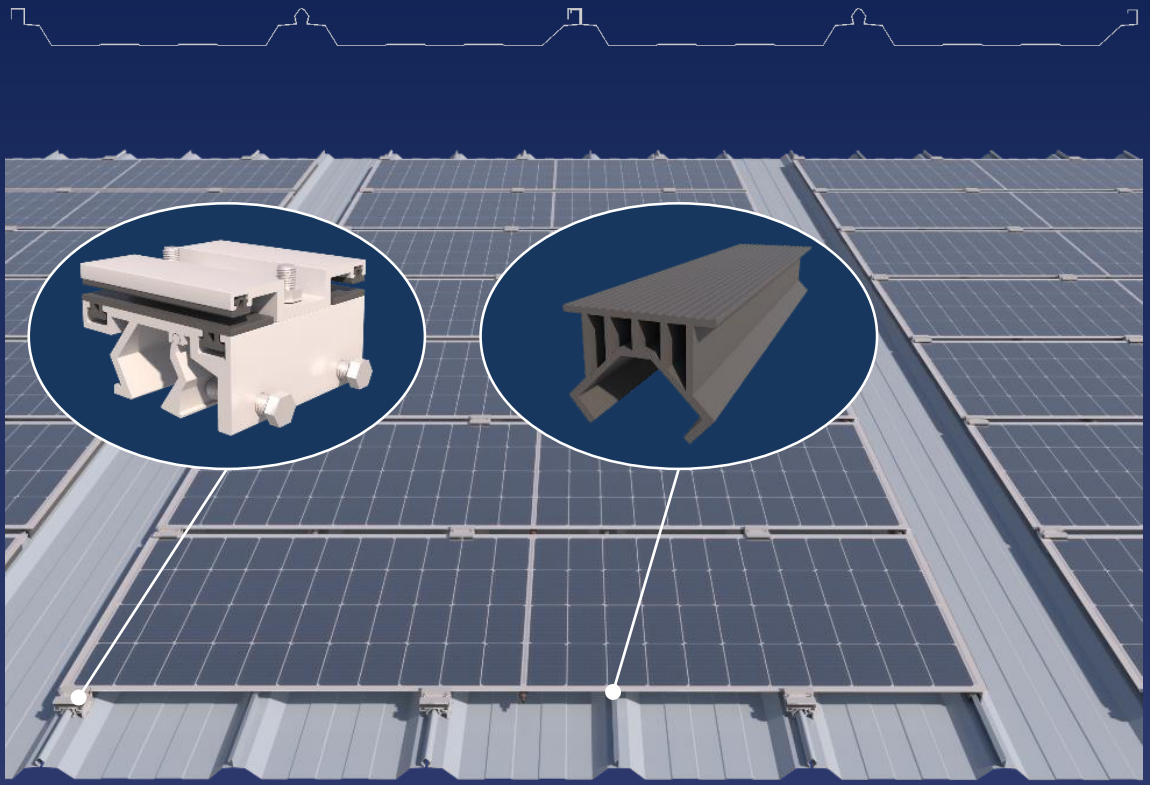
TPO Hot Air Welding



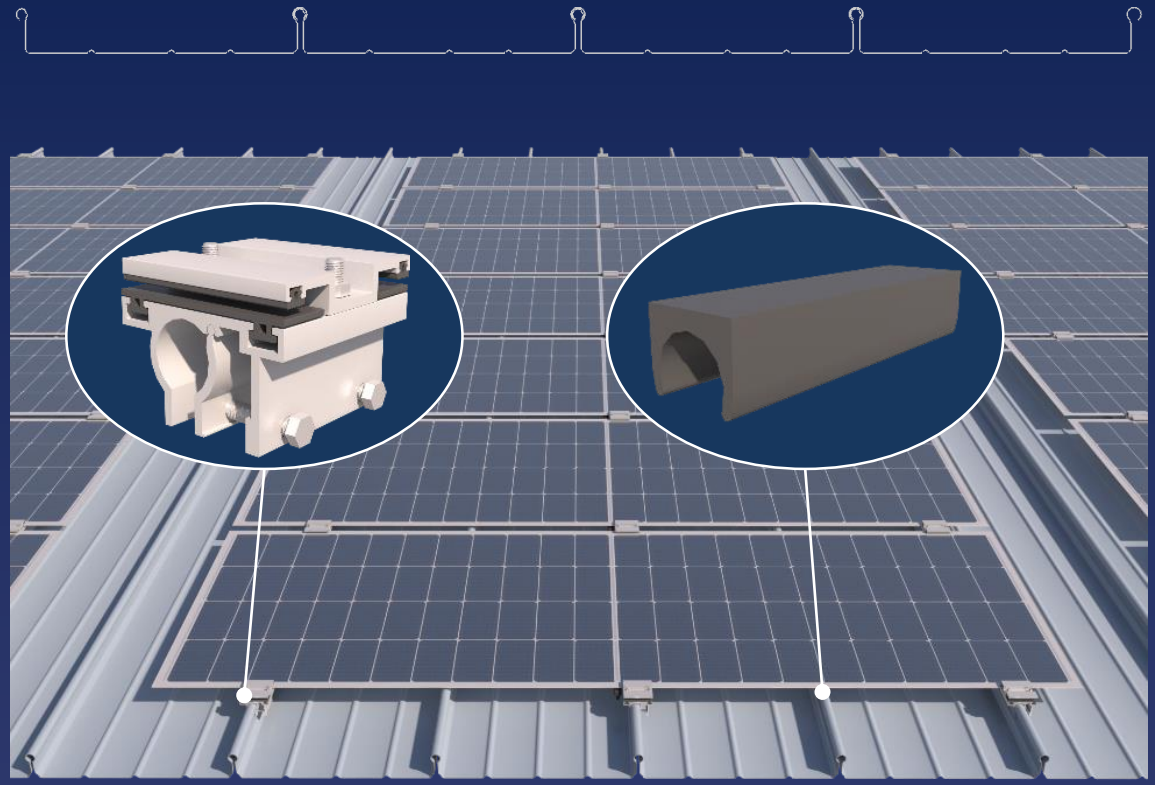
Metal Roof-Clamp solution

Scenario 1 : Newly built factory building, waterproofing is not considered repeatedly.

Scenario 2 : Renovated factory building, replace ordinary color steel tiles.



Angle ridge type



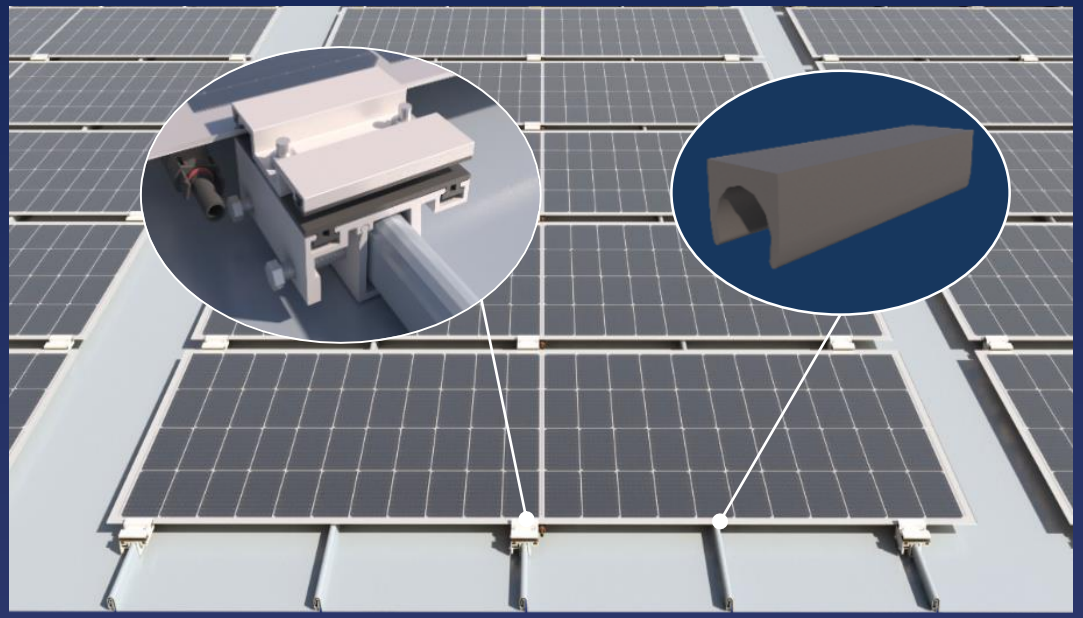
Standing seam type

Metal Roof-Clamp solution

Scenario 1 : Newly built factory building, waterproofing is not considered repeatedly.

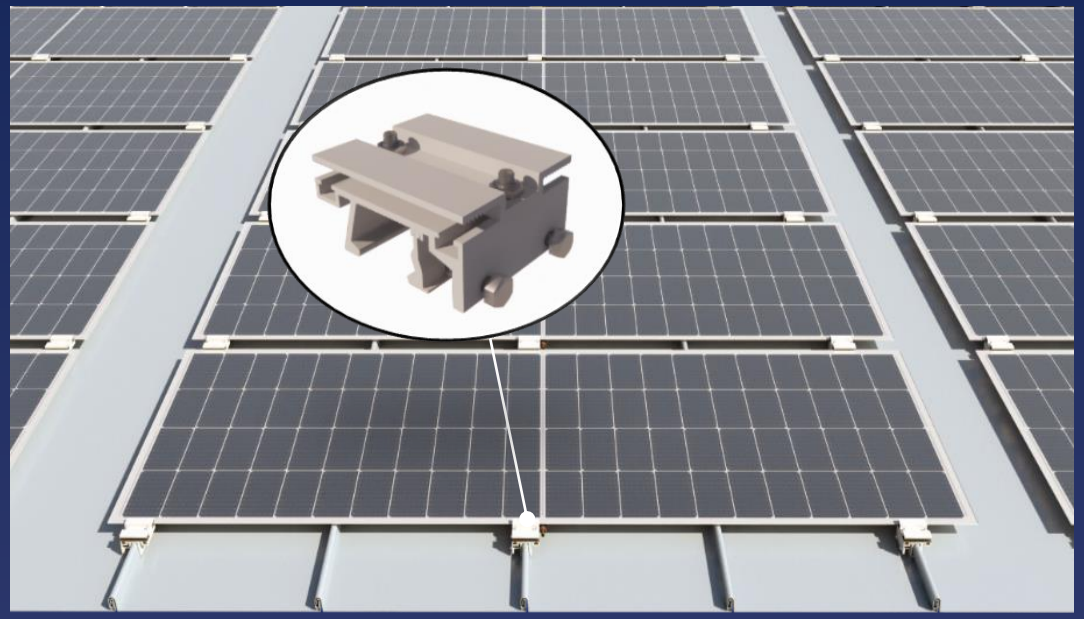
Scenario 2 : Renovated factory building, replace ordinary color steel tiles.





Low standing seam type

For all kinds of popular color steel



General clamps

Galaxy Series KEYMATE Mechatronics C&I Lightweight Roofing

GOODWE PVBM





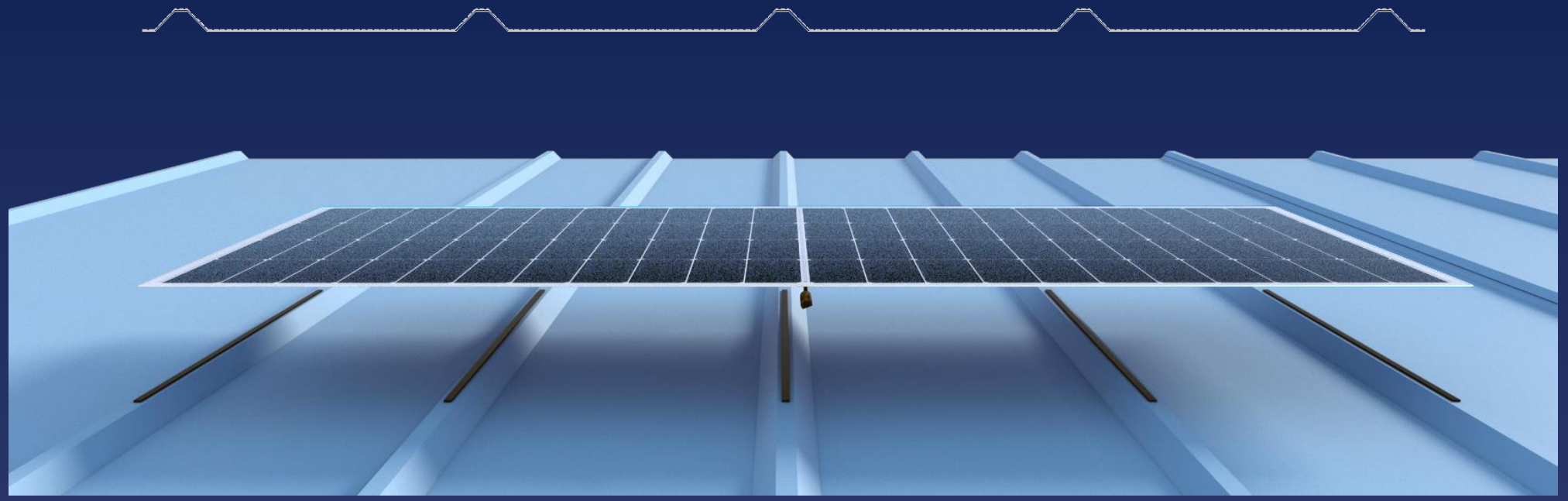
Guangde Anhui

Power generation: 1.14MW
Photovoltaic area: 5602.2m²
Annual power generation: 1140MWh
Equivalent reduction in CO_2 emission: 18099Tons
Equivalent trees planted: 164536
Inverter: GW25K-MT, GW60KS-MT*16

In commercial and industrial scenarios, roofs require higher load-bearing, waterproofing, and reliability. Galaxy lightweight products are ultra-light and ultra-thin, with reinforced ultra-thin glass and excellent waterproofing, creating a zero-carbon production overall solution. This project uses a clamp-fixed installation, which is sturdy and stable, and the most reliable lightweight roofing solution, helping to create a smart park.

Metal Roof-Gluing Solution

Scenario 3： New/renovated factory buildings, waterproofing is not considered.



NOTE:

The interval between two courses of silicone glue should not be greater than 450mm, the distance from the edge of the glass to the nearest color steel crest ≤ 100mm.



Diverse Scenarios-Gluing solution

GOODWE PVBM

Container House Roof

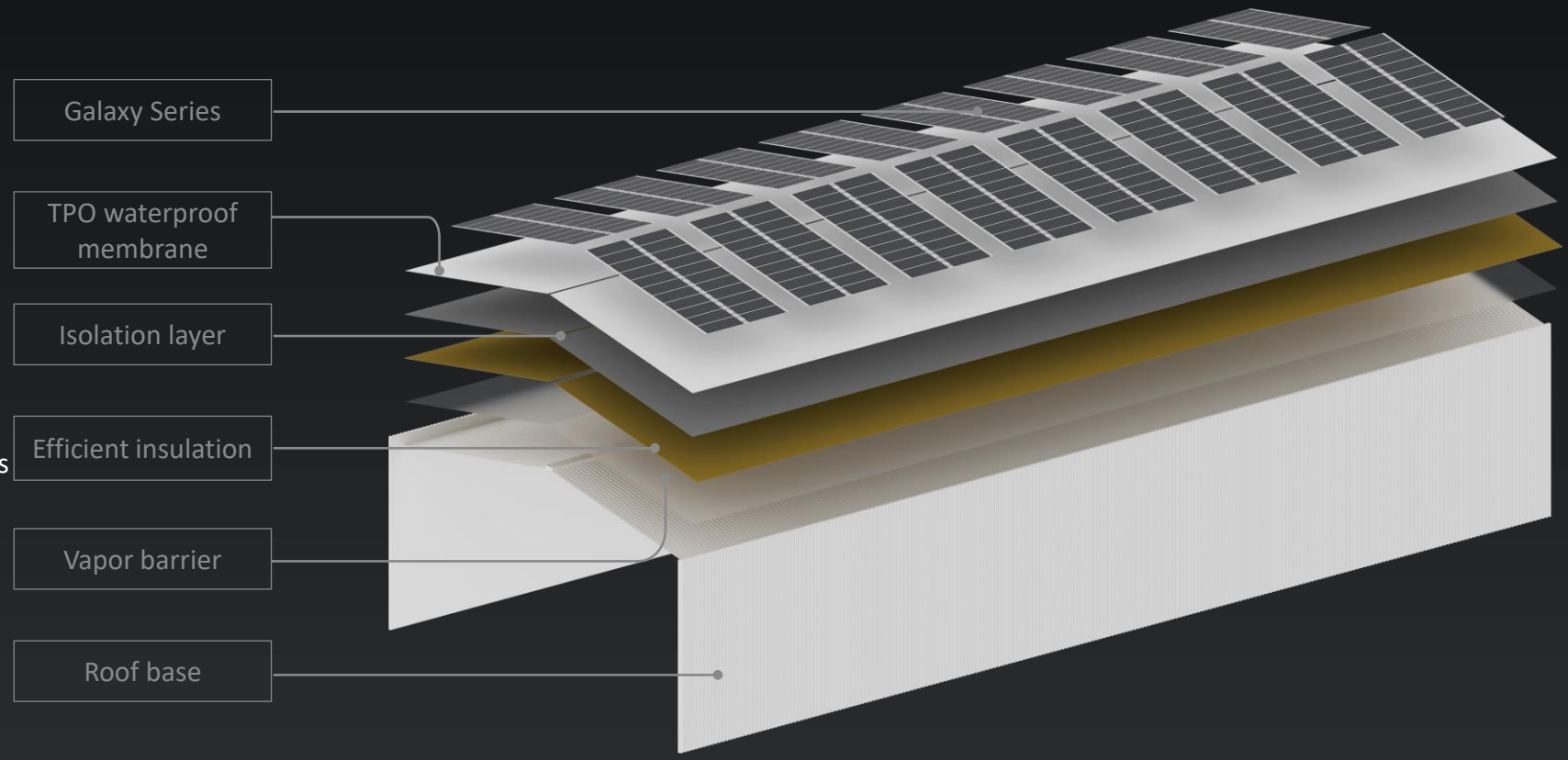



GOODWE PVBM
Solar Car Park

Industrial Roof Solution

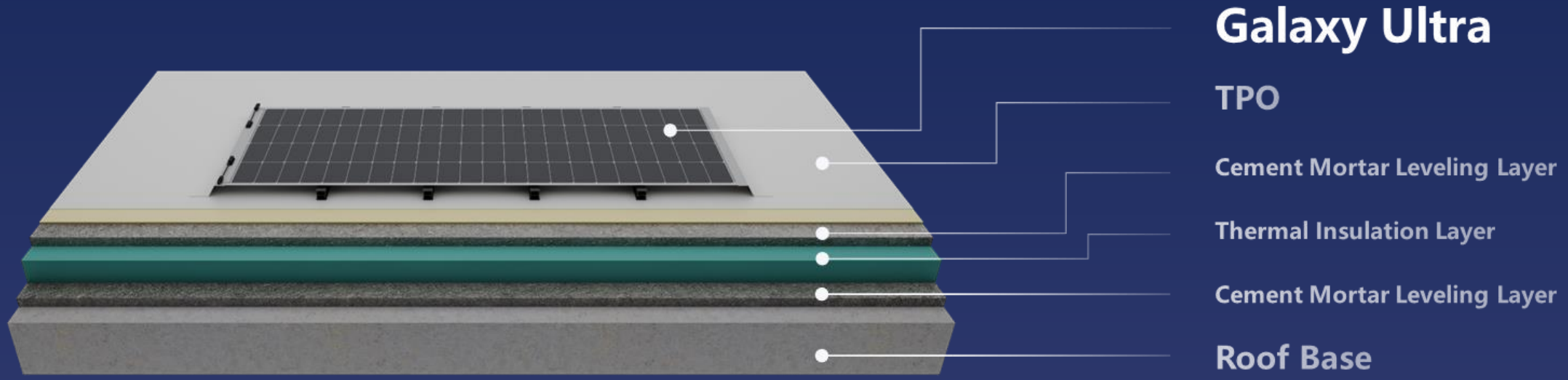
GOODWE

- 6kg/m²
  Lightweight PV building materials
- TPO fusion waterproof
- Higher strength
  Strengthened ultra-thin glass
- Multi-scenario application
  Various installation methods
- Flat and self-cleaning
  high reliability
- Quick installation
  Labor and material saving



Single-ply Roof-Hot Welding Solution

Scenario 5：New/reconstructed building, deash the original concrete roof + TPO.



Galaxy Series Guangde Smart Low-carbon Demonstration Park

GOODWE PVBM





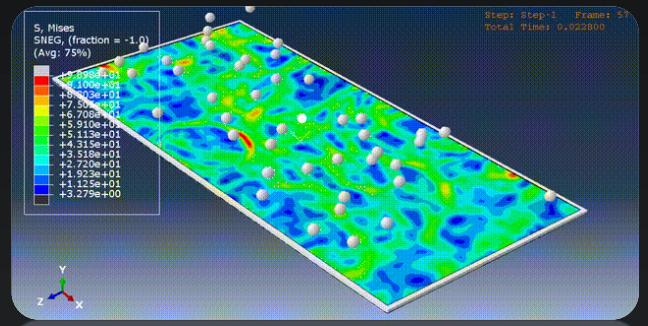
Guangde Anhui

Power generation: 216.2kW
Photovoltaic area: 1391 m^2
Annual power generation: 220MWh
Equivalent reduction in CO_2 emission: 3432Tons
Equivalent trees planted: 31198
Inverter: GW50K-ETC

Under the strategic vision of creating a new era of smart energy, Goodwe has turned its Guangde factory into a "Smart Low Carbon Industrial Park". The Galaxy Light weight PV Building Material is specially designed for light weight roofing and is the mostreliable light weight PV building material with the advantages of light weight,impact resistance,beautiful appearance and easy installation by hot air welding, enabling safe zero-carbon production.

Core technologies

Hail resistant

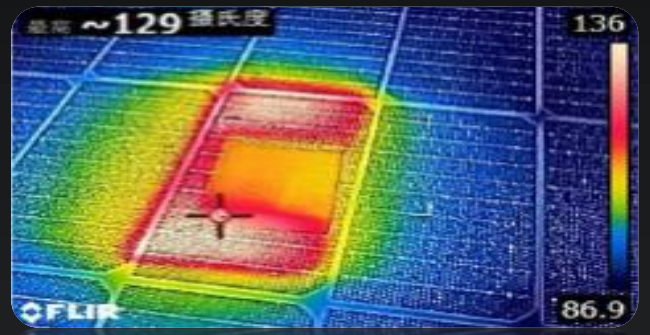


IEC 61215:2016

- ❑ Required puck diameter value 25mm ±2%, speed 23m/s ±5%
- ❑ Repeat test with 11 areas selected for testing, power reduction ≤ 5% after testing

- Galaxy product: Power reduction ≤0.59% after test

Hotspot resistant



IEC 61215-2:2016 MQT 09

- ❑ Three cells with the highest leakage current and the one with the lowest leakage current
- ❑ Expose the worst shaded area to steady state conditions in sequence, power reduction ≤ 5% after testing

- Galaxy product: Power reduction ≤ 0.53% after test

High load capacity



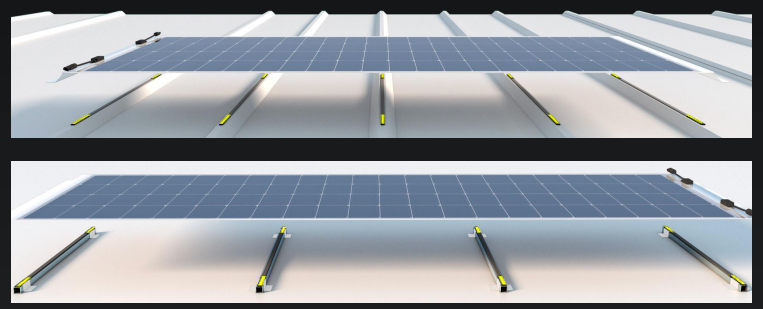
IEC 61215-2:2016

- ❑ Frontal pressure in increasing increments, 3 cycles of pressure per application
- ❑ Hold for 1 hour after frontal pressure, power reduction ≤ 5% after testing

- Galaxy product: Power reduction ≤ 0.15% after test

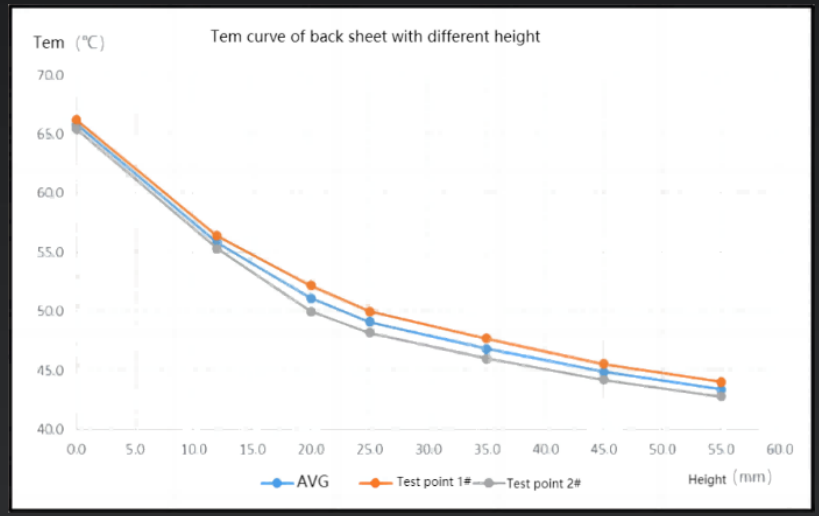
Core technologies

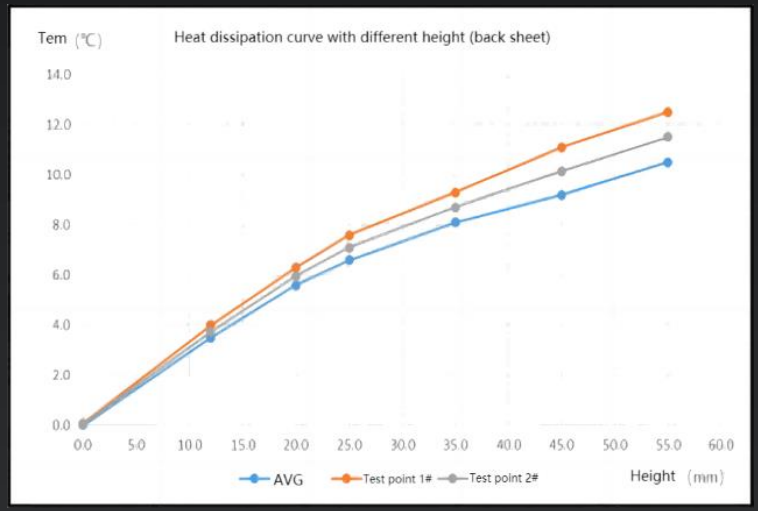
Ventilation-Temperature testing



Galaxy temperature test with different height (℃)								
Height	Ambient Tem	TPO Tem	Test point 1#		Test point 2#		AVG	
			Front	Back	Front	Back	Front	Back
55mm	33.0	48.8	52.3	44.1	51.1	42.8	51.7	43.4
45mm	33.0	48.9	53.2	45.6	51.4	44.2	52.3	44.9
35mm	33.0	48.7	54.1	47.7	52.3	46.0	53.2	46.9
25mm	33.0	48.3	55.2	50.0	53.2	48.2	54.2	49.1
20mm	33.0	48.4	56.4	52.2	54.1	50.0	55.2	51.1
12mm	33.0	48.5	58.7	56.4	57.5	55.3	58.1	55.9
0mm	33.0	48.8	65.3	66.2	64.5	65.4	64.9	65.8

- Backsheet temperature decreases with increasing height of the ventilation strip in a certain interval
- Heat dissipation effect increases with increasing height of the ventilation strip in a certain interval.





Test result from Guangdong Institute of Product Quality Supervision and Inspection

Galaxy Series Lightweight PV Roofing for Rock's Church, Brisbane, Australia

GOODWE PVBM





Queensland, Australia

Power generation: 8.8kW
Photovoltaic area: 50.5 m²
Annual power generation: 15MWh
Equivalent reduction in CO_2 emission: 214.8Tons
Equivalent trees planted: 1934
Inverter: GW10KT-DT

The roof of Rock's church consists of aging tiles that had been repaired for leakage issues, making the roof even more fragile. Therefore, the installation of PV products needed to ensure the integrity of the original roofing substrate. Galaxy Series were highly suited to the project's needs, being extremely thin and lightweight, keeping the original roof intact during installation, and offering high reliability, making them the perfect choice for this roofing project.

Galaxy Series Global production site for architectural aluminum for Alspec in Australia

GOODWE PVBM



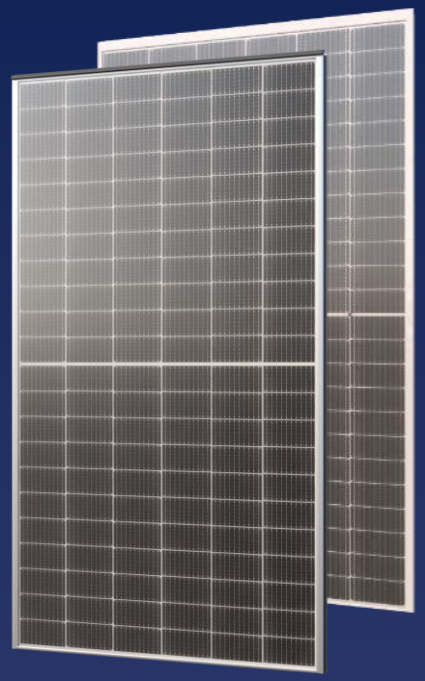


NSW, Australia

Power generation: 100.8kW
Photovoltaic area: 536.8 ㎡
Annual power generation: 150MWh
Equivalent reduction in CO_2 emission: 2319Tons
Equivalent trees planted: 20894
Inverter: GW110K-HT

In response to the global carbon neutrality goal, GoodWe has landed the first overseas industrial and commercial lightweight photovoltaic roofing project, cooperating with Alspec, a building materials company, to lay ultra-light, ultra-thin, impact-resistant Galaxy products on color steel tile roofs, realizing the fusion of BIPV at the social level with the technological level, and building an intelligent, sustainable and highly reliable production base to help zero-carbon production.

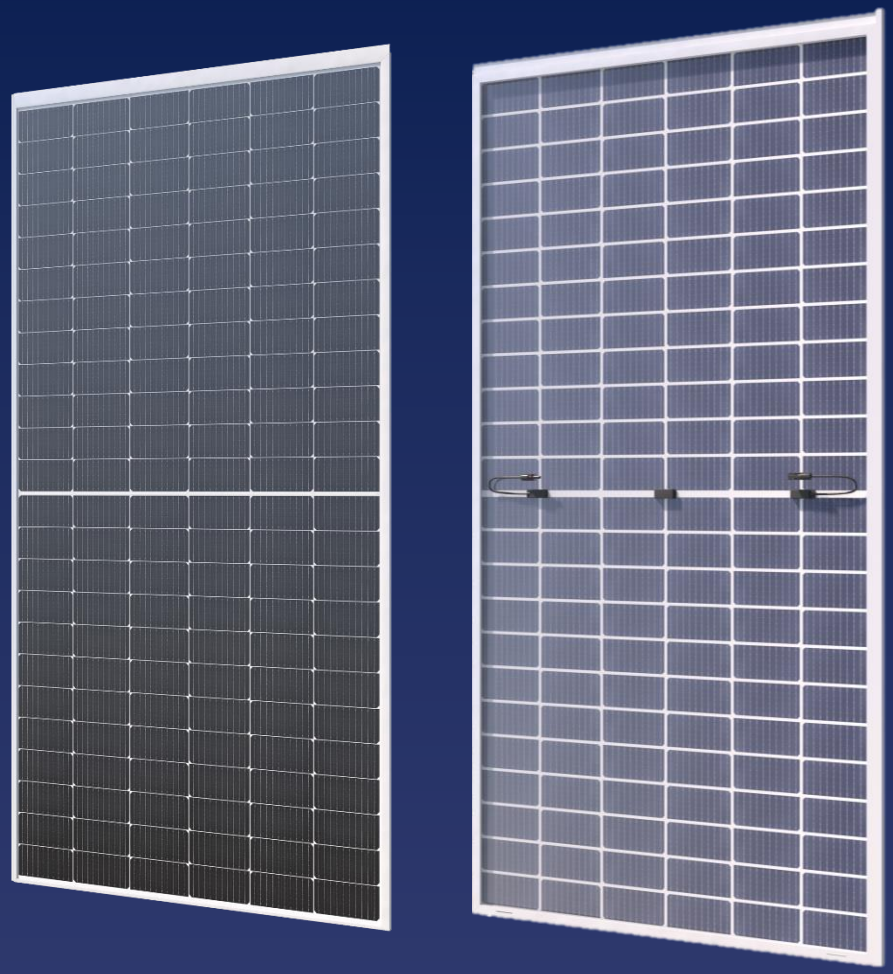
Polaris Series



- Highly cost-effective
- Ventilation
- Safe
- Easy maintenance
- Waterproof

Product Name	Polaris Series	
Product Model	BMT-P2/132A	BMT-P2/144A
Max. Power	505W	550W
Clamp Fixing Size(mm)	2142±2(L)* 1165±1(W)* 30±1(H)	2327±2(L)*1165±2(W)*29.6±1(H)
Hoop Fixing Size(mm)	2142±2(L)* 1160±1(W)* 30±1(H)	2327±2(L)*1160±2(W)*29.6±1(H)
Weight(kg)	30±0.5	32±0.5
Cell Quantity	132(22×6)	144(24×6)
Voc (V)	45.67	49.84
Isc (A)	14.15	14.18
Conversion efficiency	20.4%	
Fire Class	A	
Size of cell(mm)	182	
Structure	Double glass	
Installation method	Hoop fixing/Clamp fixing	

Certification





TÜV NORD

Certificate
of conformity with the following
European Directives

Registered No.:
44 799 23 406749 - 127

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2023-02-10	PVP01027/23P-01	49201845.004	2023-05-29	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Type designation: See Annex 1

Applicant: GoodWe (GuangDe) Power Supply Technology Co., Ltd.
No.208, Tong Rui East Road, Guangde, Anhui, P.R. China

Standard(s): EN IEC 61730-1:2018; EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018; EN IEC 61730-2:2018/AC:2018-06

This Certificate of conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.

Certification Body
Specialist Manager Consumer Products

TÜV NORD CERT GmbH
Am TÜV 1
D-45307 Essen
P.O.Box 10 32 61
D-45032 Essen
Fon: +49 (0)201 825-5120
Fax: +49 (0)201 825-3209
Email: prodcert@tuev-nord.de

CE The CE marking may be affixed on the product if all relevant and effective Directives are complied with. CE



TÜV NORD

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

GoodWe (GuangDe) Power Supply Technology Co., Ltd.
No.208, Tong Rui East Road, Guangde,
Anhui
P.R. China

is authorized to provide the product mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

TÜV NORD CERT GmbH Type Tested

Valid from: 2023-05-19
Valid until: 2026-11-14

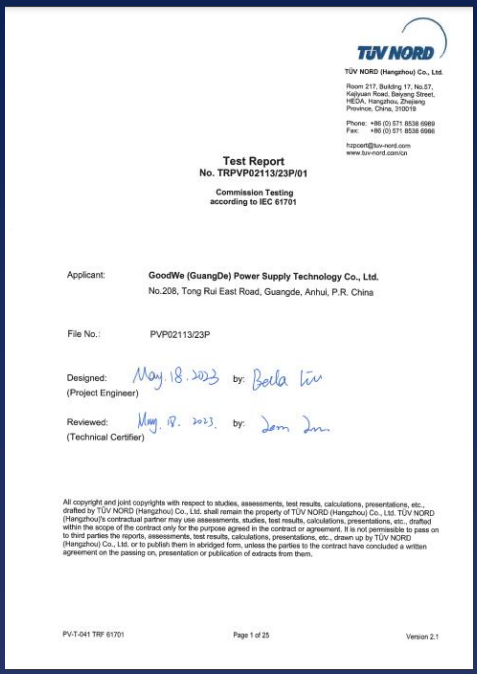
Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC / EN 61215-1:2016; IEC / EN 61215-1-1:2016; IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018.
Registered No.:	44 780 21 406749 - 245R3M3
Manufacturer:	see Annex 1
Test Report No.:	49201845.004
File No.:	PVP01027/23P-01

TÜV NORD CERT GmbH
Certification Body
Consumer Products

Essen, 2023-05-19

Please also pay attention to the information stated overleaf.

TÜV NORD CERT GmbH Am TÜV 1 Fon +49 (0)201 825 5120 D-45307 Essen Fax +49 (0)201 825 3209 www.tuev-nord-cert.de prodcert@tuev-nord.de



TÜV NORD

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hzpcert@tuv-nord.com
www.tuv-nord.com/cn

Test Report
No. TRPVP02113/23P/01

Commission Testing
according to IEC 61701

Applicant: GoodWe (GuangDe) Power Supply Technology Co., Ltd.
No.208, Tong Rui East Road, Guangde, Anhui, P.R. China

File No.: PVP02113/23P

Designed: May. 18. 2023 by: Bella Liu
(Project Engineer)

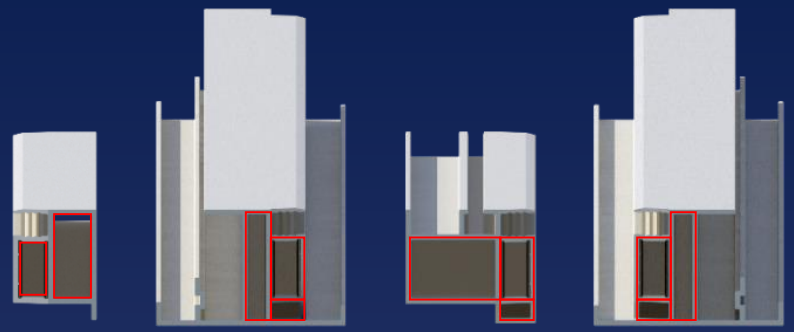
Reviewed: May. 19. 2023. by: Sam Sun
(Technical Certifier)

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CE
TUV
COMMISSION TESTING（IEC 61701)
CEC

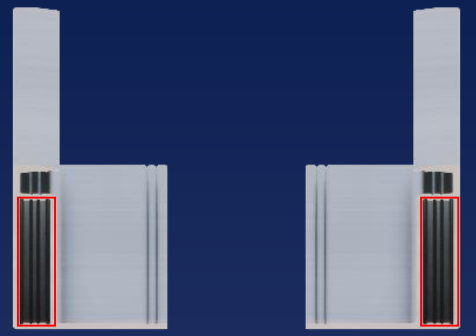
Reinforced Structural Safety

Chamber reinforcement design



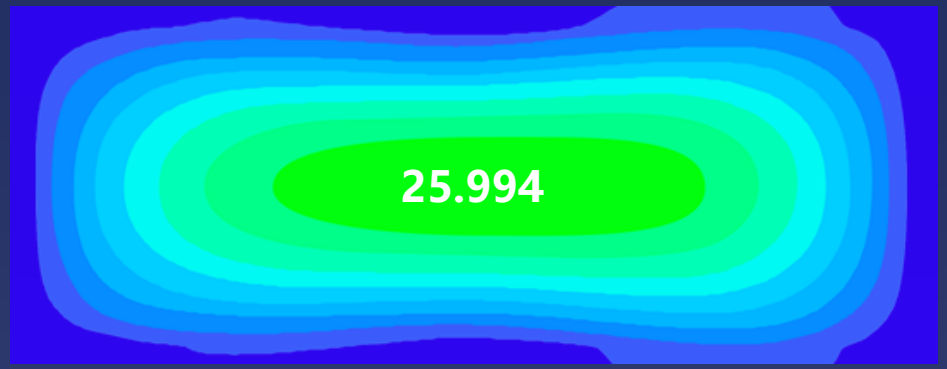
Polaris series

VS

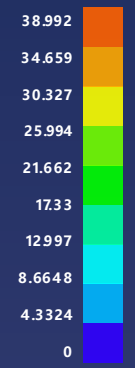


Conventional PV module

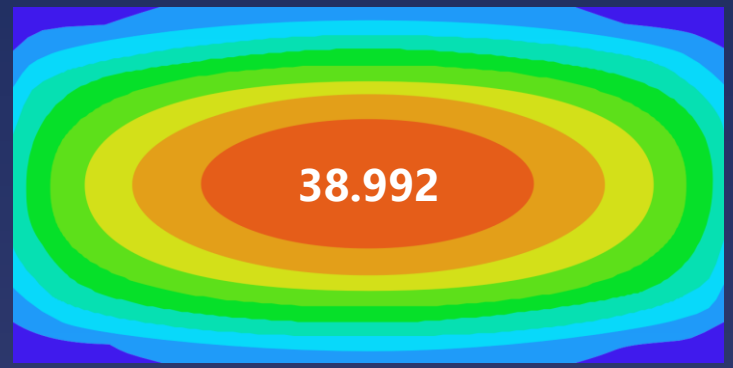
Mechanical load
Front- 5400Pa
Back- 2400pa



Polaris series



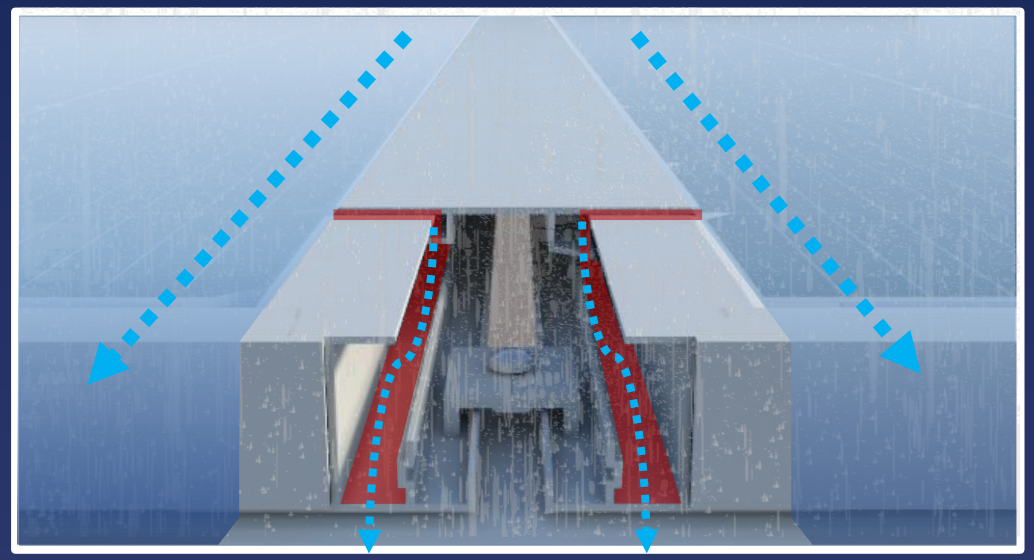
Structural deformation (mm)



Conventional PV module

Structural Waterproofing

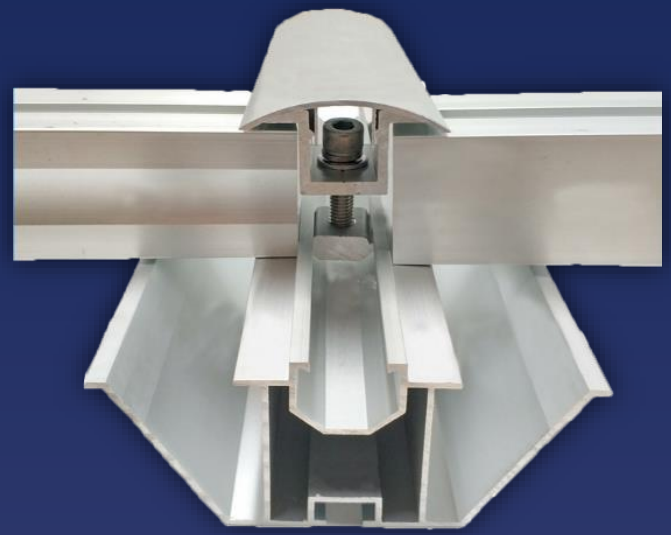
Single tile dispersion drainage



Polaris series

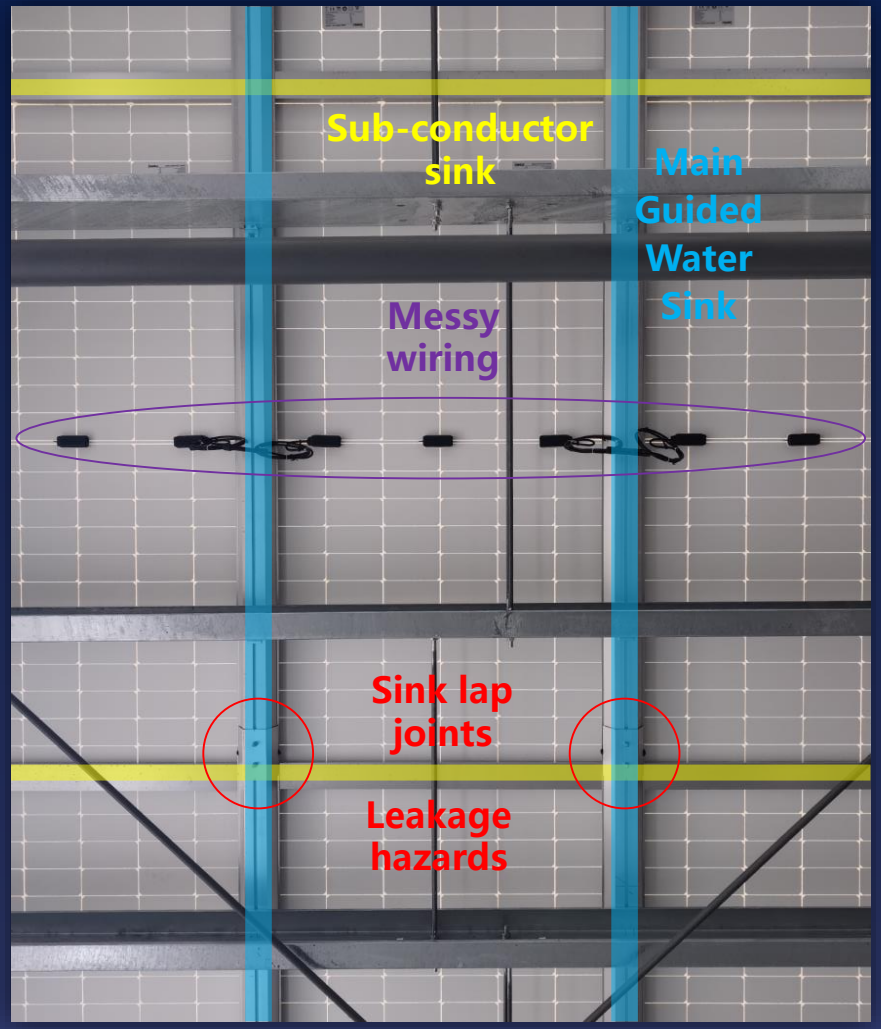
VS

Confluent centralized drainage



Conventional module

Comparison of Details



VS



Conventional PV module

Polaris series

Full range of solar storage and charging system products



Polaris Tile



Hybrid Energy Storage Inverter

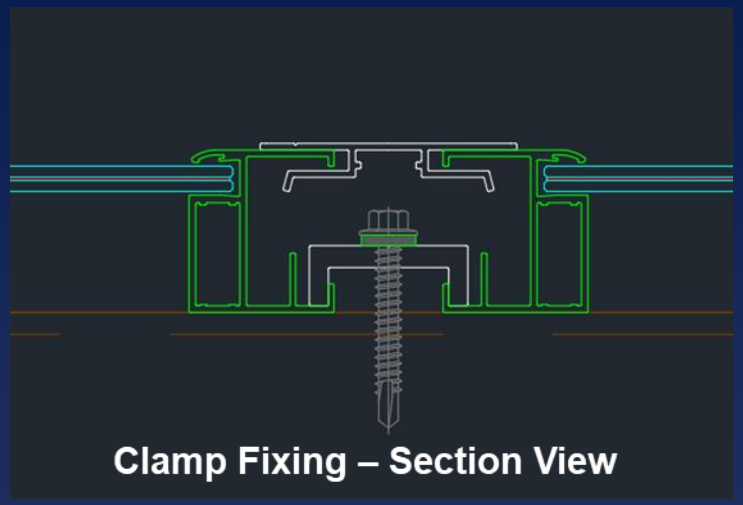


Lithium-ion battery



EV charger

Installation Methods-Clamp Fixing





Step 1



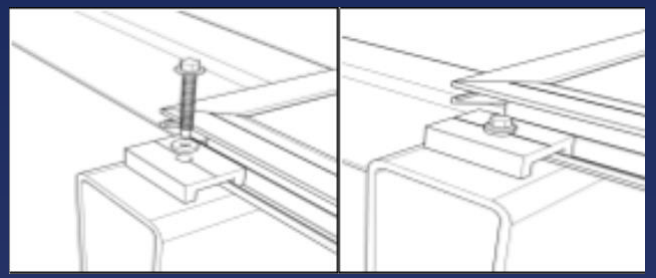
Step 2



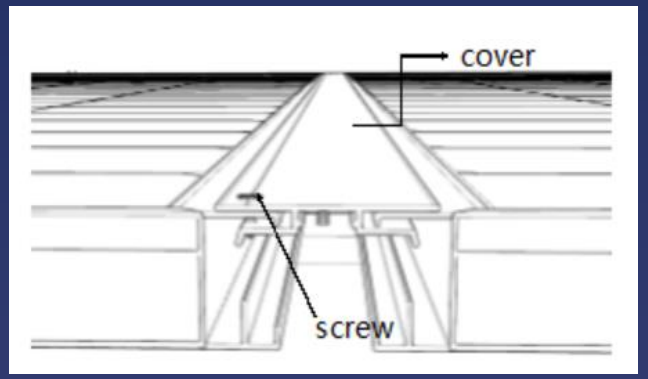
Step 3

Accessories - Clamp Fixing

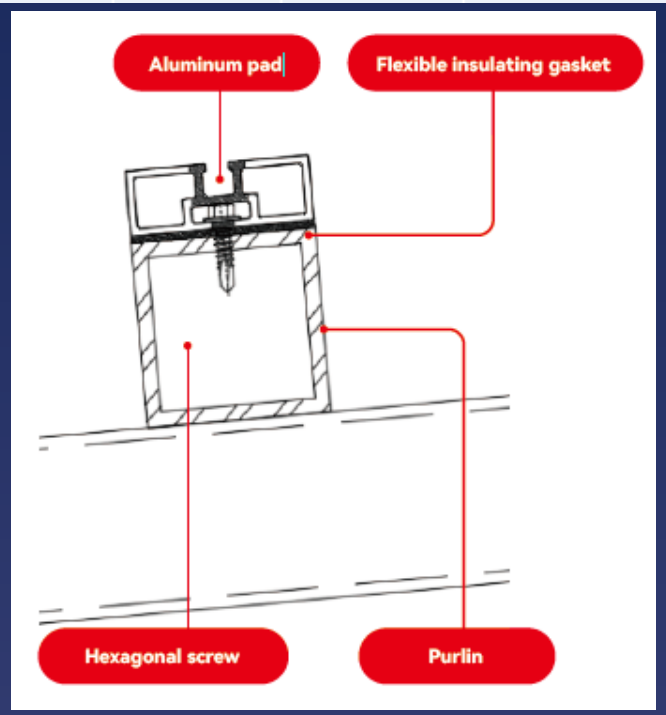
ACCESSORIES									
Mounting Clamp	Cross Self-drilling Crews	Plug1	Plug2	Aluminum Pad	Insulating Gasket	Hexagonal Screw	Bolt Set	Water-proof Cover	Limiting hook
									



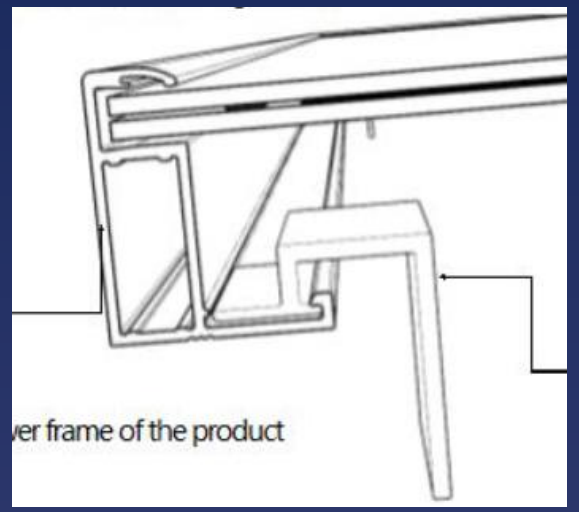
Mounting Clamp



Waterproof cover

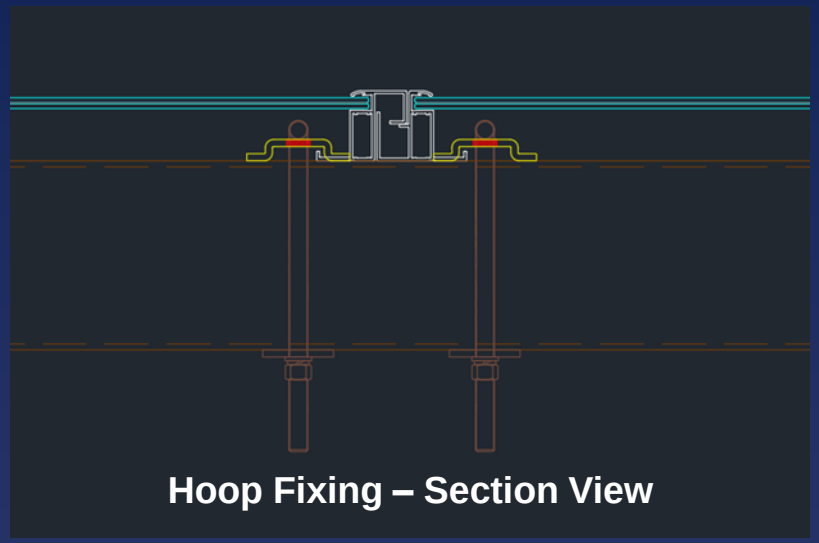


Aluminum pad

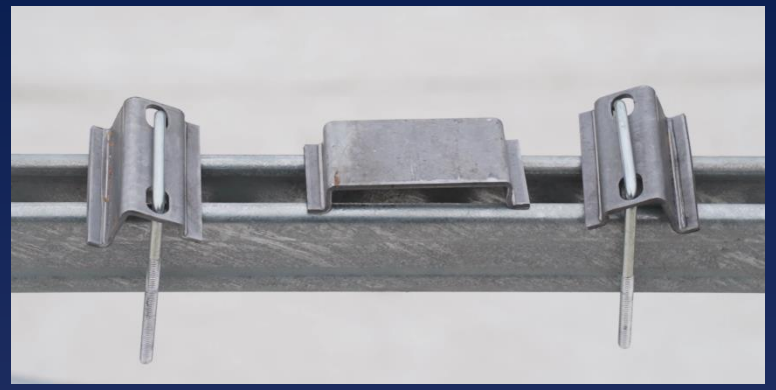


Limiting hook

Installation Methods-Hoop Fixing



Hoop Fixing – Section View



Step 1



Step 2

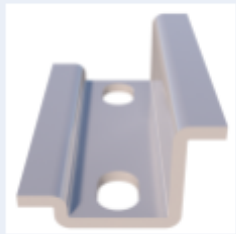


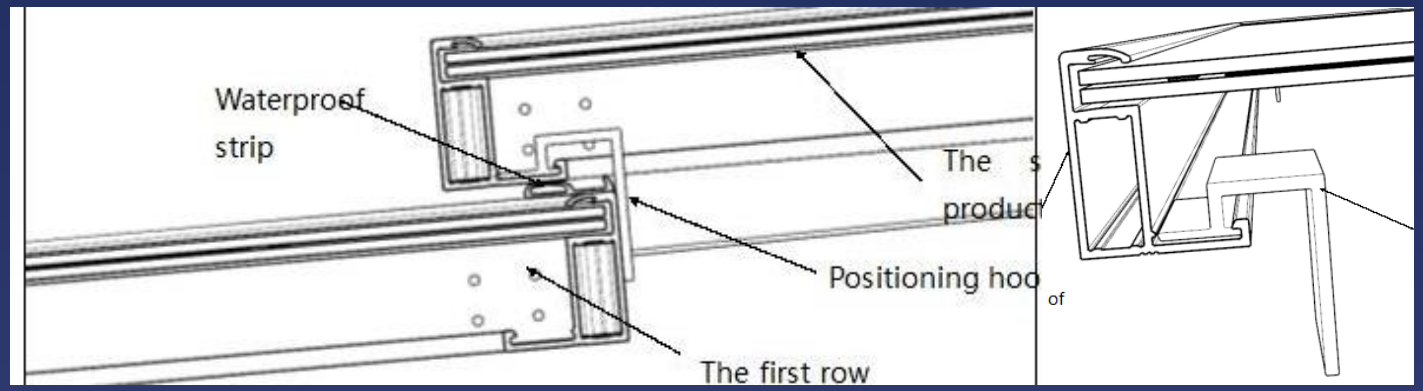
Step 3

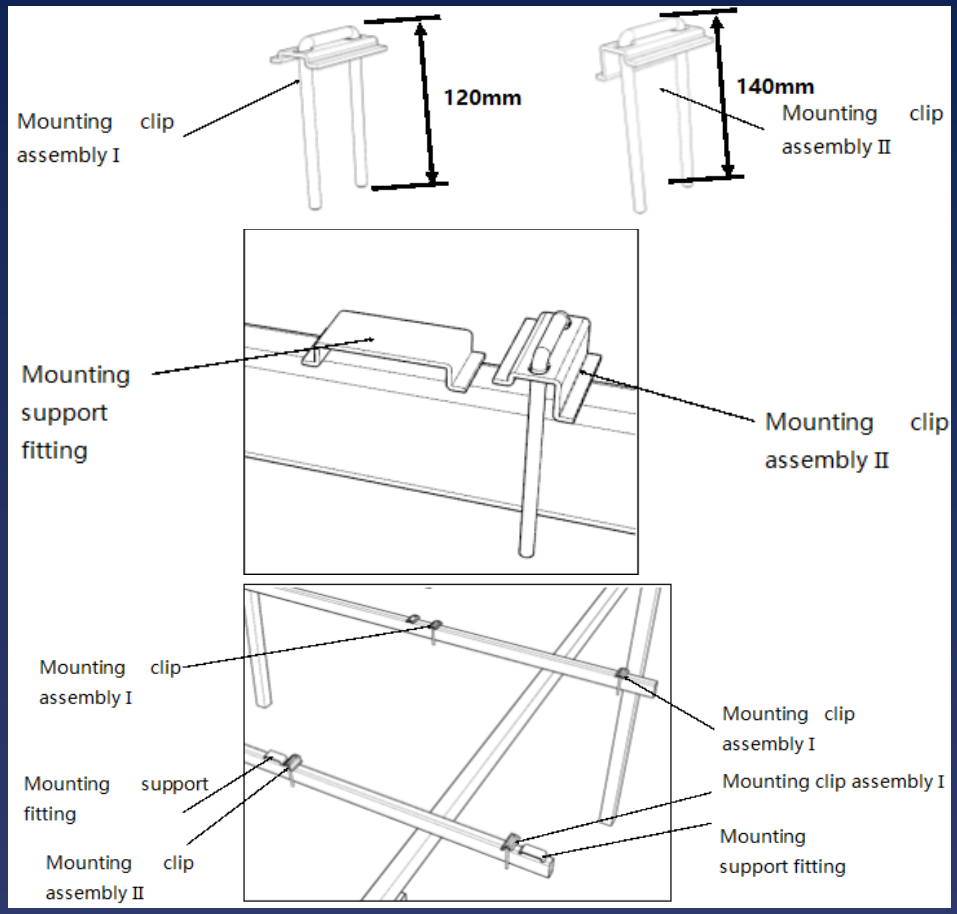


Step 4

Accessories - Hoop Fixing

Accessories					
Mounting support fitting	Mounting clip I	Mounting clip II	U-bolt and clamp assembly	positioning hook	Waterproof strip
					







GOODWE
光电建材

Application Scenario—Highway Service Areas



Application Scenario—Charging Stations



Application Scenario—Parking Lot

Polaris Series (550W) Smart Park Sun Shed

GOODWE PVBM





Guangde Anhui

Power generation: 52.3kW
Photovoltaic area: 256.5m^2
Annual power generation: 52MWh
Equivalent reduction in CO_2 emission: 830Tons
Equivalent trees planted: 7548
Inverter: GW50KS-MT

BMT-P2/144A (550W) is a new solution of the Polaris series, designed for “smart buildings”, providing new scenarios for smart industrial parks. This project installed 95 pieces of Polaris Series BMT-P2/144A (550W) products, the unique hoop installation method effectively shorten the construction period, and maintain flatness and beauty of the building, the project achieved structural waterproof, strong impact resistance, wind uncovering, effective self-cleaning, and guaranteed the maintenance and operation.

Polaris Series (365W) Huaining Government PV Storage and Charging Carport

GOODWE PVBM





Anqing Anhui

Power generation: 117kW
Photovoltaic area: 631.8m²
Annual power generation: 119MWh
Equivalent reduction in CO_2 emission: 1882Tons
Equivalent trees planted: 17113
Inverter: GW20KF-DT、 GW30K-MT、GW50KS-MT

In response to the call for carbon emission reduction, this project was created by the government of Huaining County and Goodwe as a low-carbon and environmental protection demonstration project and a typical practice of digital ecological. With Goodwe's smart energy WE platform, we provide a safe, durable and economical overall solution to escort green, zero-carbon travel.

Polaris Series (365W) PV Storage and Charging Carport, Guangde Smart Park

GOODWE PVBM





Guangde Anhui

Power generation: 199.8kW
Photovoltaic area: 1079m²
Annual power generation: 201MWh
Equivalent reduction in CO_2 emission: 3172Tons
Equivalent trees planted: 28837
DC combiner box: TC100NB-8T*4

System of power generation, energy storage and all-day charging. The solar carport is constructed using perfection technology that is not only solid, beautiful and simple but also offers a complete waterproof shading surface. This helps to promote the concept of clean energy in the society and create a new era of real zero carbon travel.

Starlux Series

GOODWE



- 25 years lifespan
- Well ventilated
- Reliable and safe
- Anti-impact and hail
- Anti-dust design
- Easy to install and maintain
- High efficient power generation

Product model	BMT-L2/080A
Product Name	Starlux
Size (including frame)	1635±2×1185±2×52.8±1mm
weight	67±0.5kg
color	Translucent frosted
structure	6mm+POE+cells+POE+6mm
Quantity of cells	80(10x8)
Open circuit voltage	27.52V
Short circuit current	13.56A
Vmp	23.48V
Imp	10.80A
Max.Power	275W
Isc	0.048%/℃
Voc	-0.28%/℃
Pmax	-0.35%/℃
Size of battery cell	182
Type of battery cell	Mono PERC half cell
Installation method	Silicone structural adhesive+ mechanically fixed

Starlux Series Guangde Smart Industrial Park Sunroom

GOODWE PVBM





Guangde Anhui

Power generation: 2.3kW
Photovoltaic area: 21m²
Annual power generation: 2300kWh
Equivalent reduction in CO_2 emission: 37Tons
Equivalent trees planted: 332
Inverter: GW5048-ESA

The zero-carbon sunroom has the basic attributes of transparency, heat insulation and waterproofing, and by enhancing the active sensing and regulating ability of the building, it allows the building to actively produce energy to achieve a balance among health and comfort, energy saving andenvironmental protection. At the same time, it is a convenient and diversified overall solution as it packed and redeployed elsewhere.

PV Building Materials

Integrated
Same lifecycle as the building itself
Water, fire and wind resistant
Streamlined construction process
Easy installation/less resource usage
Easy to remove/maintain
Good self-cleaning
Integration in architecture/ same style with architecture

Conventional PV

Attached, difficult roof maintenance
Poses a safety hazard ≤ 25 years
Potential roof leakage
Repeated construction
Cascading systems / waste resources
Difficult to maintain / risk of trampling
Easy dust accumulation
PV + mounting kits, affecting the aesthetics of the building



Warranty



Warranty Start Date:

Six months after shipping the products to the customer.

The date on which the product was first installed.

- 12 years limited product warranty
- 30 years limited power output warranty

  Power output of the first year ≥ 98%

  Power output of the 30th year≥ 82.05%

After-sales service

- If you have any questions about GOODWE PVBM products or there are any flaws upon receiving the products, you can reach us by the website https://support.goodwe.com/portal/home. We will provide you with a satisfactory solution within 7 days, including the replacement and repair of the products and refund the residual value of the defective products.

- GOODWE will provide our customers with well-rounded tutorial trainings before installation of products and a timely response and after-sales technical support if the PVBM products have any problems.

- GOODWE PVBM after-sales team is committed to providing our customers with best after-sales technical support and a satisfactory solution within the shortest time.

Guangde Smart Factory

GOODWE

Galaxy Testing Zone

1st Lightweight Roof Solar Project Golbally

Starlux Testing Zone

Create a safe, intelligent and comfortable sun room

Polaris Testing Zone

Cost-effective photovoltaic garden solution

Automated Production Line

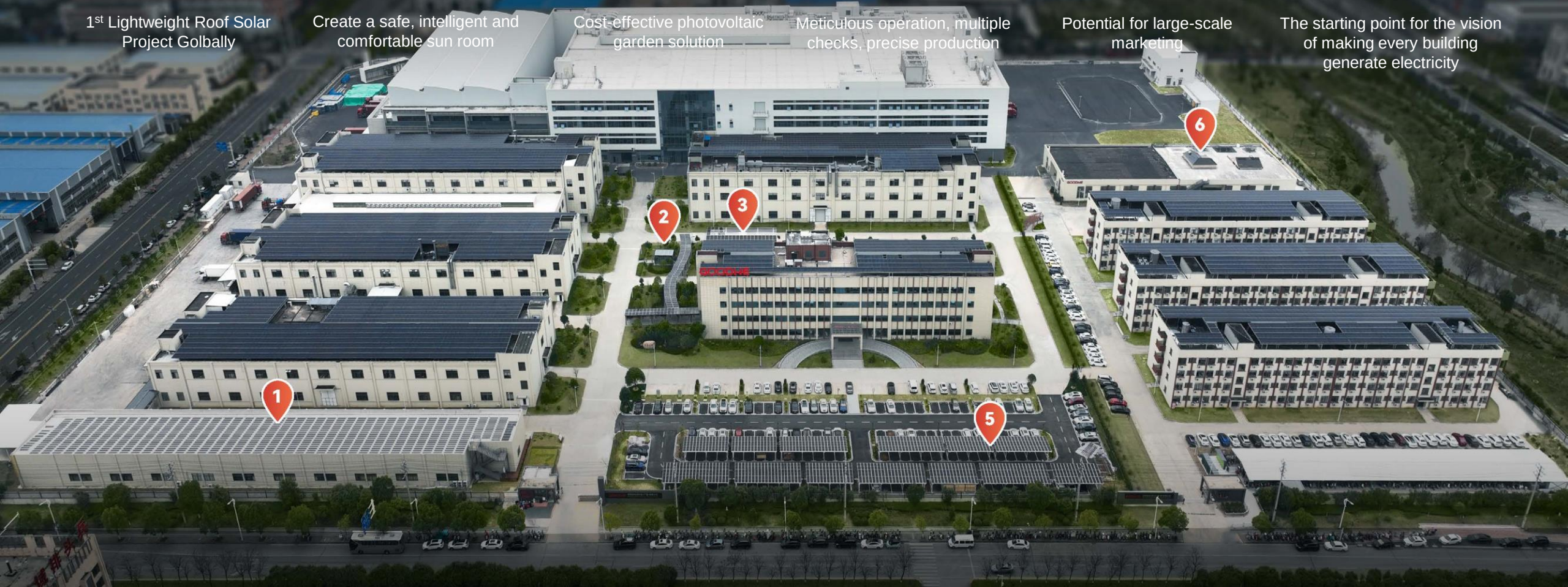
Meticulous operation, multiple checks, precise production

Polaris Testing Zone

Potential for large-scale marketing

Sunshine Testing Zone

The starting point for the vision of making every building generate electricity



GOODWE PVBM

UP TO A SUSTAINABLE FUTURE

