

eArc

SMF520J-12X12UW

520 Watt

144 Half Cell Monocrystalline Module



Ultra-light: Glass free module weighs 8.6 kg, 70% lighter than conventional glass modules.



Fast-Installation: Through "Quick-Bonding" installation, eArc requires no penetration, reduces time on roof by 40% and eliminates the use of mounting hardware.



Aesthetic: Seamless integration with underlying installation surface.



Durable: eArc is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 61215:2016, IEC61730:2016 and UL1703 (USA). eArc has also passed PID, salt mist and ammonia corrosion tests.

POWER OUTPUT RANGE 520 W

POWER TOLERANCE 0-5 W

12 Year Product Warranty

25 Year Linear Power Warranty



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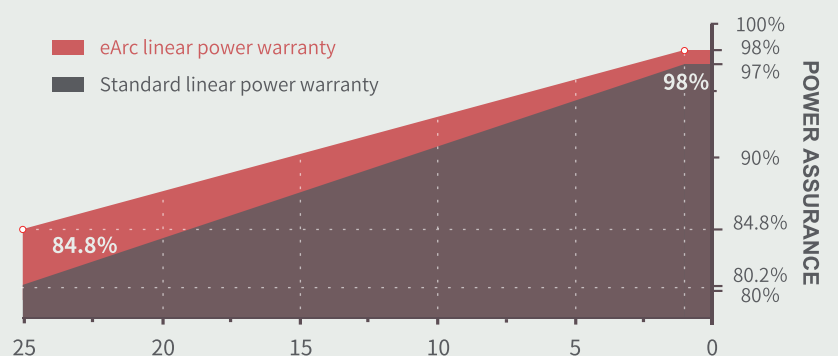


ULTRA-LIGHT & FLEXIBLE SOLAR PANEL

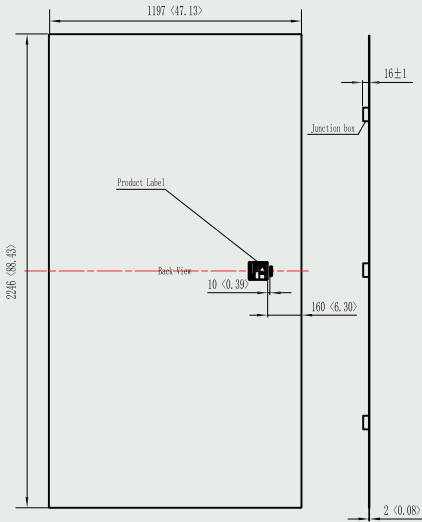
LINEAR PERFORMANCE WARRANTY

CAUTION: Read installation manual before using the product.

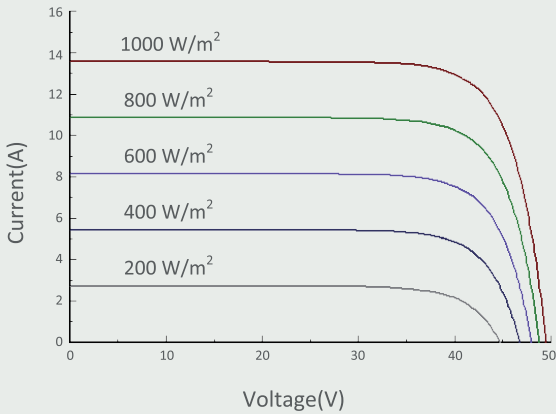
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DIMENSIONS



I-V CURVE (520)



TEMPERATURE CHARACTERISTICS

| | |
|--|-------------------|
| Nominal Module Operating Temperature(NMOT) | 41±2 °C |
| Temperature Coefficient of P_{max} | -0.38 %/°C |
| Temperature Coefficient of V_{oc} | -0.28 %/°C |
| Temperature Coefficient of I_{sc} | 0.020 %/°C |



SMF520J-12X12UW IEC EN 2023A 1

ELECTRICAL CHARACTERISTICS

STC SMF520J-12X12UW

| | |
|------------------------------------|-----------------|
| Maximum Power (P_{max}) | 520 |
| Maximum Power Voltage (V_{mp}) | 42.3 |
| Maximum Power Current (I_{mp}) | 12.31 |
| Open-circuit Voltage (V_{oc}) | 49.5 |
| Short-circuit Current (I_{sc}) | 13.56 |
| Module Efficiency (%) | 19.3 |
| Operating Temperature | -40 °C to 85 °C |
| Maximum System Voltage | 1500 V DC (IEC) |
| Maximum Series Fuse Rating | 25 A |
| Application Class | Class A |
| Power Tolerance | 0/+5 W |

STC: Irradiance 1000W/m², Cell temperature 25°C, AM=1.5.

Tolerances of P_{max} , V_{oc} and I_{sc} are within ±5%

NMOT SMF520J-12X12UW

| | |
|------------------------------------|-------|
| Maximum Power (P_{max}) | 429.8 |
| Maximum Power Voltage (V_{mp}) | 41.8 |
| Maximum Power Current (I_{mp}) | 10.28 |
| Open-circuit Voltage (V_{oc}) | 49.8 |
| Short-circuit Current (I_{sc}) | 10.82 |

NMOT: Irradiance 800W/m², Ambient temperature 20°C, AM=1.5, Wind speed 1 m/s.

MECHANICAL CHARACTERISTICS

| | |
|-------------------|--|
| Solar Cell | Monocrystalline silicon(182mm half cell) |
| No. of Cells | 144 (12×12) |
| Module Dimensions | 2246×1197×2 mm |
| Weight | 8.6kg |
| Backsheet | White |
| Frame | Frameless |
| J-box | IP 68 rated |
| Output Cables | Photovoltaic technology cable 4.0 mm 2, (+)450 / (-)450 mm |
| Connector | MC4 compatible |

PACKAGING CONFIGURATION

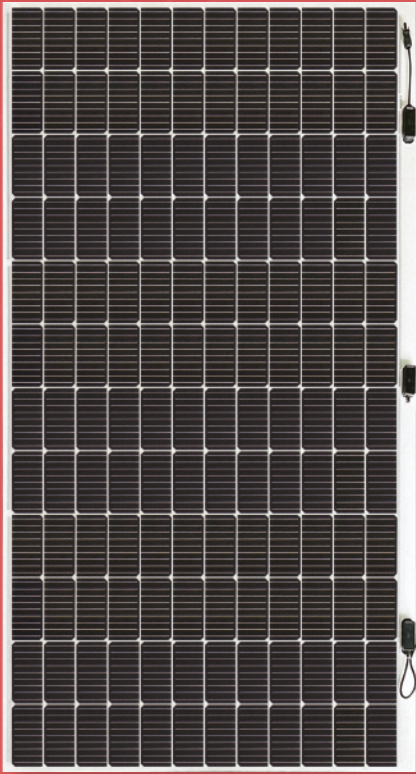
| | 20' GP | 40' HC |
|----------------------|--------|--------|
| Module per pallet | / | / |
| Pieces per container | / | / |

eArc

SMF430F-12X12UW

430 Watt

144 Half Cell Monocrystalline Module



Ultra-light: Glass free module weighs 7.3 kg, 70% lighter than conventional glass modules.



Fast-Installation: Through "Quick-Bonding" installation, eArc requires no penetration, reduces time on roof by 40% and eliminates the use of mounting hardware.



Aesthetic: Seamless integration with underlying installation surface.



Durable: eArc is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 61215:2016, IEC61730:2016 and UL1703 (USA). eArc has also passed PID, salt mist and ammonia corrosion tests.

POWER OUTPUT RANGE 425~430 W

POWER TOLERANCE 0-5 W

12 Year Product Warranty

25 Year Linear Power Warranty



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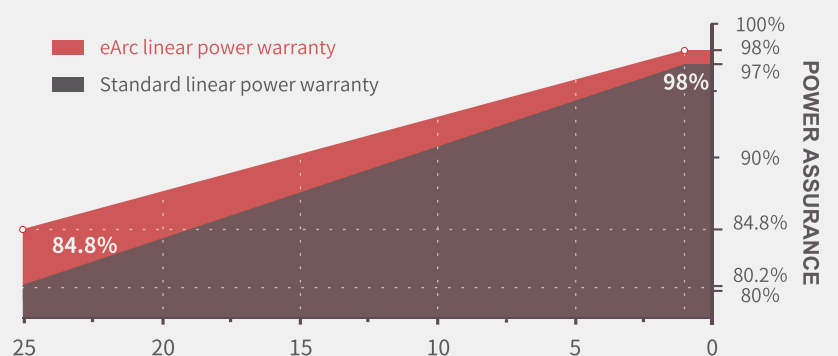


ULTRA-LIGHT & FLEXIBLE SOLAR PANEL

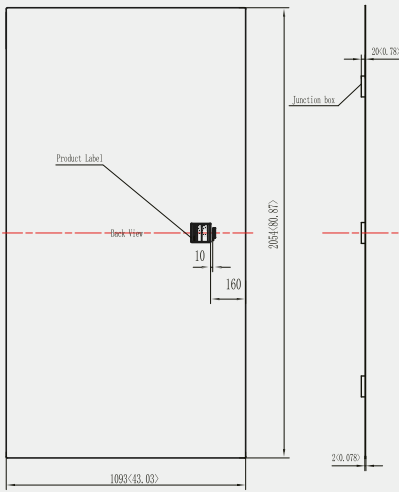
LINEAR PERFORMANCE WARRANTY

CAUTION: Read installation manual before using the product.

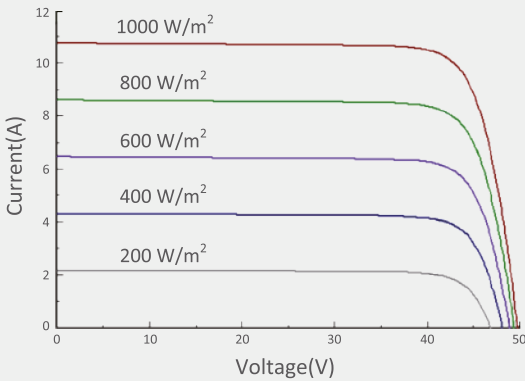
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DIMENSIONS



I-V CURVE (430)



TEMPERATURE CHARACTERISTICS

| | |
|---|-------------------|
| Nominal Module Operating Temperature(NOMT) | 41±2 °C |
| Temperature Coefficient of P _{max} | -0.38 %/°C |
| Temperature Coefficient of V _{oc} | -0.28 %/°C |
| Temperature Coefficient of I _{sc} | 0.020 %/°C |



SMF-UW IEC EN 2021B

ELECTRICAL CHARACTERISTICS

| STC | SMF425F-12X12UW | SMF430F-12X12UW |
|--|-----------------|-----------------|
| Maximum Power (P _{max}) | 425 | 430 |
| Maximum Power Voltage (V _{mp}) | 41.8 | 42.0 |
| Maximum Power Current (I _{mp}) | 10.17 | 10.24 |
| Open-circuit Voltage (V _{oc}) | 49.6 | 49.8 |
| Short-circuit Current (I _{sc}) | 10.67 | 10.74 |
| Module Efficiency (%) | 18.9 | 19.2 |
| Operating Temperature | -40 °C to 85 °C | |
| Maximum System Voltage | 1000 V DC (IEC) | |
| Maximum Series Fuse Rating | 20 A | |
| Application Class | Class A | |
| Power Tolerance | 0/+5 W | |

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5. Tolerances of P_{max}, V_{oc} and I_{sc} are within ±5%

| NMOT | SMF425F-12X12UW | SMF430F-12X12UW |
|--|-----------------|-----------------|
| Maximum Power (P _{max}) | 321.4 | 325.1 |
| Maximum Power Voltage (V _{mp}) | 38.6 | 38.8 |
| Maximum Power Current (I _{mp}) | 8.33 | 8.38 |
| Open-circuit Voltage (V _{oc}) | 46.6 | 46.8 |
| Short-circuit Current (I _{sc}) | 8.64 | 8.69 |

NMOT: Irradiance 800W/m², Ambient temperature 20°C, AM=1.5, Wind speed 1 m/s.

MECHANICAL CHARACTERISTICS

| | |
|-------------------|--|
| Solar Cell | Monocrystalline silicon(166mm half cell) |
| No. of Cells | 144 (12×12) |
| Module Dimensions | 2054×1093×2 mm |
| Weight | 7.3kg |
| Backsheet | White |
| Frame | Frameless |
| J-box | IP 68 rated |
| Output Cables | Photovoltaic technology cable 4.0 mm 2, (+)150 / (-)450 mm |
| Connector | MC4 compatible |

PACKAGING CONFIGURATION

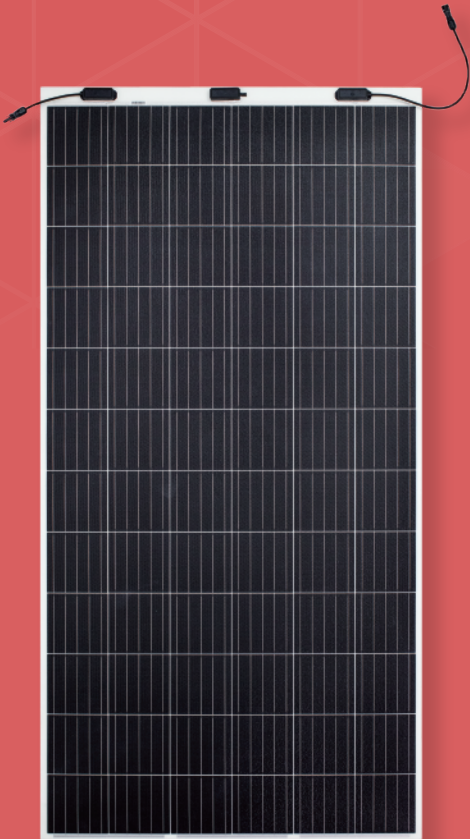
| | 20' GP | 40' HC |
|----------------------|--------|--------|
| Module per pallet | 66+50 | 66 |
| Pieces per container | 580 | 1320 |

eArc

SMF375M-6X12UW

375 Watt

72 Cell Monocrystalline Module



Ultra-light: Glass free module weighs 5.8 kg, 70% lighter than conventional glass modules.



Fast-Installation: Through "Quick-Bonding" installation, eArc requires no penetration, reduces time on roof by 40% and eliminates the use of mounting hardware.



Aesthetic: Seamless integration with underlying installation surface.



Durable: eArc is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 61215:2016, IEC61730:2016 and UL1703 (USA). eArc has also passed PID, salt mist and ammonia corrosion tests.

POWER OUTPUT RANGE 370~375 W

POWER TOLERANCE 0-5 W

12 Year Product Warranty

25 Year Linear Power Warranty

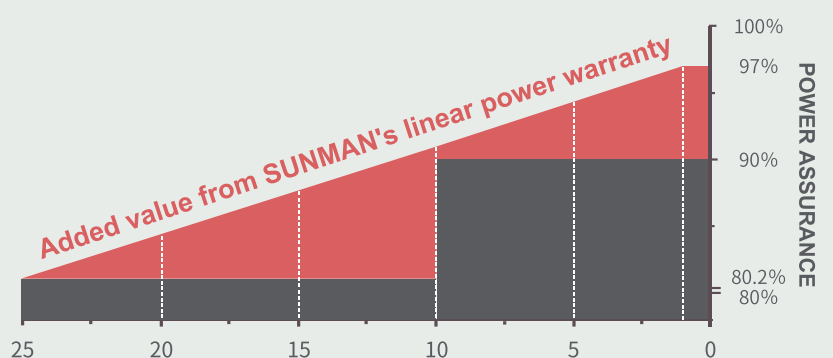


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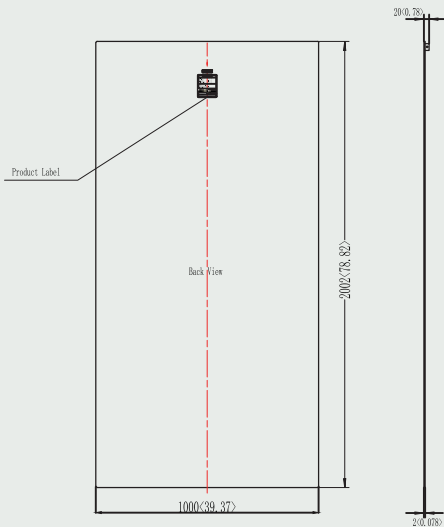
LINEAR PERFORMANCE WARRANTY

CAUTION: Read installation manual before using the product.

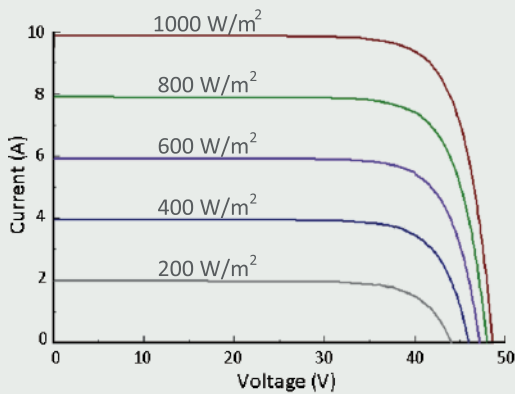
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DIMENSIONS

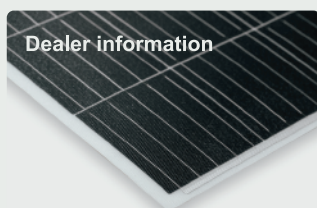


I-V CURVE (375)



TEMPERATURE CHARACTERISTICS

| | |
|---|------------|
| Nominal Module Operating Temperature(NOMT) | 41±2 °C |
| Temperature Coefficient of P _{max} | -0.38 %/°C |
| Temperature Coefficient of V _{oc} | -0.28 %/°C |
| Temperature Coefficient of I _{sc} | 0.020 %/°C |



SMF-UW IEC EN 2022B

ELECTRICAL CHARACTERISTICS

| STC | SMF370M-6X12UW | SMF375M-6X12UW |
|--|-----------------|----------------|
| Maximum Power (P _{max}) | 370 | 375 |
| Maximum Power Voltage (V _{mp}) | 39.9 | 40.2 |
| Maximum Power Current (I _{mp}) | 9.28 | 9.33 |
| Open-circuit Voltage (V _{oc}) | 48.4 | 48.6 |
| Short-circuit Current (I _{sc}) | 9.81 | 9.86 |
| Module Efficiency (%) | 18.5 | 18.7 |
| Operating Temperature | -40 °C to 85 °C | |
| Maximum System Voltage | 1000 V DC (IEC) | |
| Maximum Series Fuse Rating | 20 A | |
| Application Class | Class A | |
| Power Tolerance | 0/+5 W | |

STC: Irradiance 1000W/m², Cell temperature 25 °C, AM=1.5. Tolerances of P_{max}, V_{oc} and I_{sc} are within ±5%

| NMOT | SMF370M-6X12UW | SMF375M-6X12UW |
|--|----------------|----------------|
| Maximum Power (P _{max}) | 278 | 282 |
| Maximum Power Voltage (V _{mp}) | 36.8 | 37.0 |
| Maximum Power Current (I _{mp}) | 7.56 | 7.63 |
| Open-circuit Voltage (V _{oc}) | 45.1 | 45.3 |
| Short-circuit Current (I _{sc}) | 8.00 | 8.07 |

NMOT: Irradiance 800W/m², Ambient temperature 20 °C, AM=1.5, Wind speed 1 m/s.

MECHANICAL CHARACTERISTICS

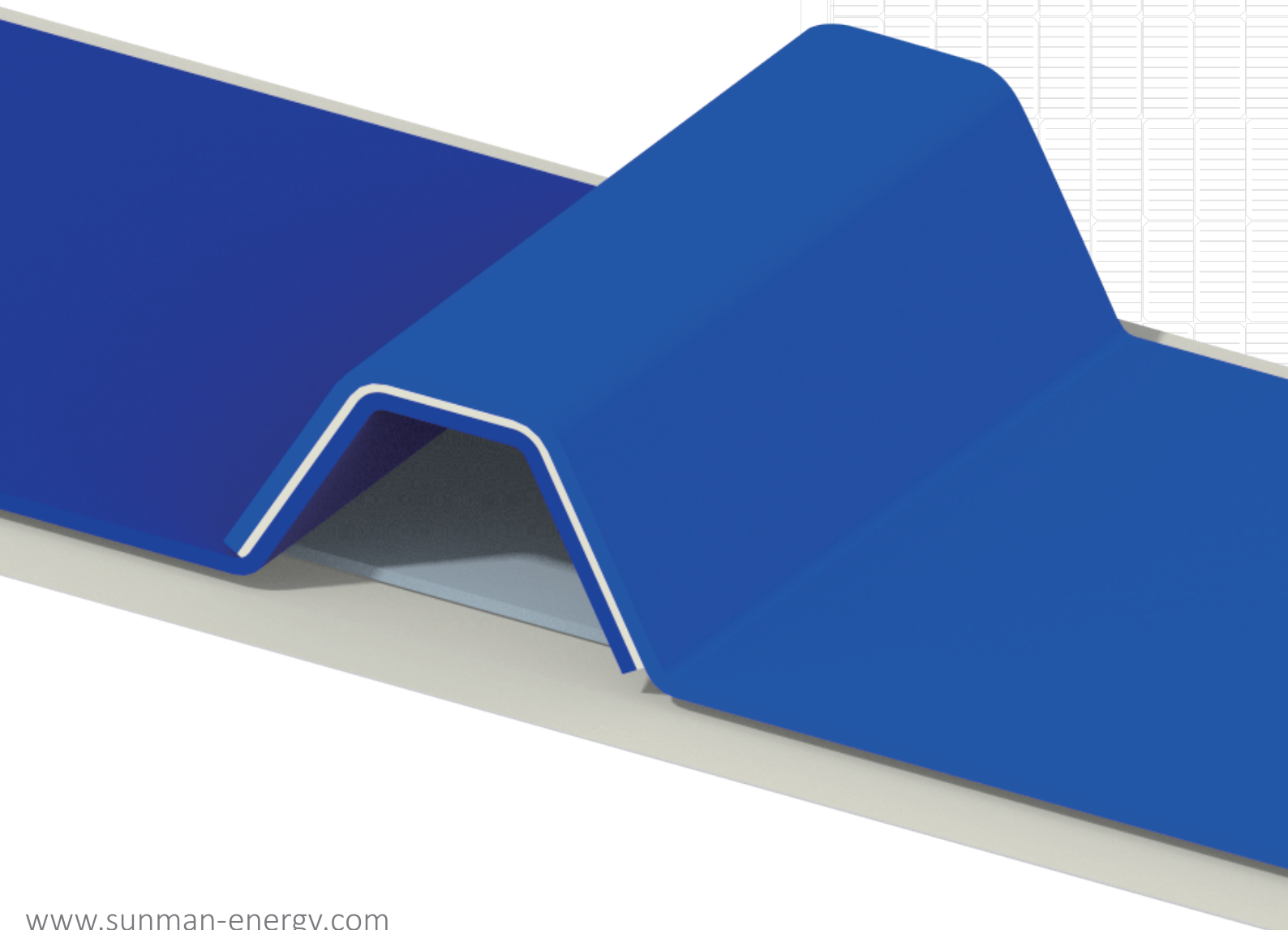
| | |
|-------------------|--|
| Solar Cell | Monocrystalline silicon (158.75mm) |
| No. of Cells | 72 (6×12) |
| Module Dimensions | 2002×1000×2 mm |
| Weight | 5.8kg |
| Backsheet | White |
| Frame | Frameless |
| J-box | IP 68 rated |
| Output Cables | Photovoltaic technology cable 4.0 mm 2, (+)150 / (-)450 mm |
| Connector | MC4 compatible |

PACKAGING CONFIGURATION

| | 20' GP | 40' HC |
|----------------------|--------|--------|
| Module per pallet | 30+66 | 66 |
| Pieces per container | 480 | 1452 |

CS Installation

- 12 years warranty
- 25 years lifetime
- The weight of the system is less than 4.5kg/m²
- B1 grade fire resistance class for buildings



Performance Advantages

Higher power generation:

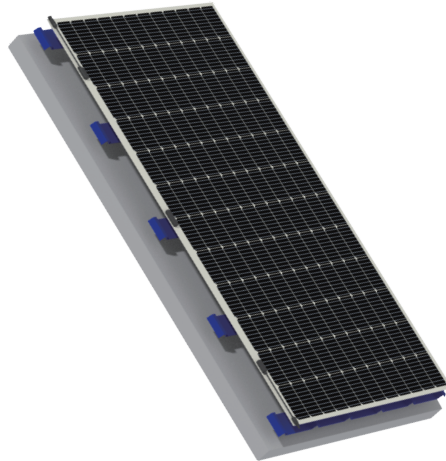
Enhance air ventilation, improve module heat dissipation, and increase power generation by about 5% compared to directly paste.

Excellent conformability:

Avoiding unevenness of the roof and enhancing adhesion.

Non-damaging installation:

The adhesive installation method avoids penetrating the original roof structure and does not affect the original waterproof performance of the roof.



Durability:

New composite material with special treatment, excellent anti-corrosion and anti-aging ability, no degradation of performance after 1000 hours of damp heat test.

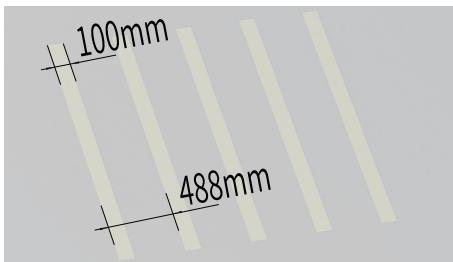
Mechanical load performance:

2400Pa mechanical load, 45m/s wind tunnel test, stable and reliable installation.

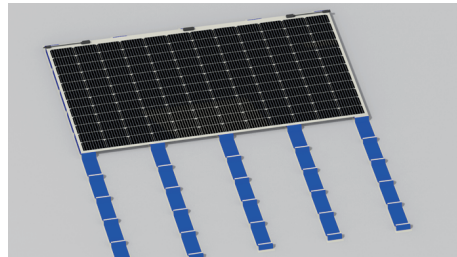
Roof protection:

No heat transfer contact between module and roof, reduce UV radiation from roof, reduce roof temperature.

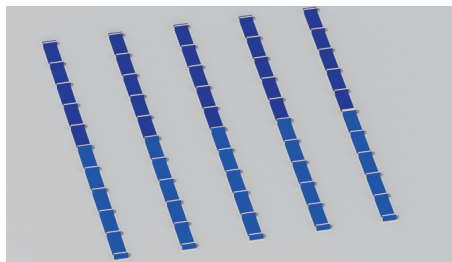
Installation



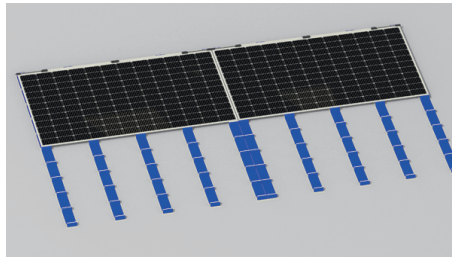
Positioning of the installation area, each row is 100mm, the interval between two rows is 488mm, and cleaning of the bonding area with special cleaning agents.



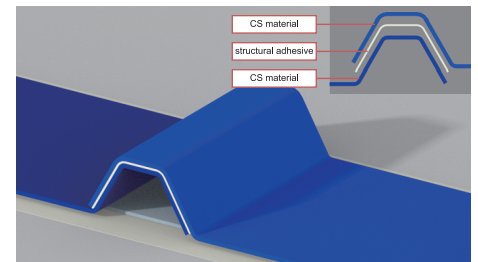
Gluing at the ribs of the CS support, installing and flattening the assembly, placing the junction box side at the service walkway, and rolling the surface of the module with a plastic roller to ensure a good bond between the module and the CS supports.



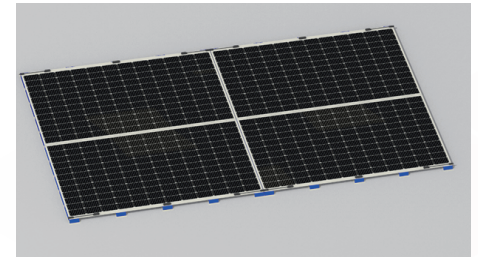
Install the CS supports with an adhesive specified by Sunman according to the type of roofing material. Each module uses five CS supports.



Continue to install adjacent modules in the same way and connect cables.



Overlap two CS supports with adjacent waves and use structural adhesive at the lap.



Complete the installation of the remaining modules.

Packaging

| Modules with CS supports | | | | | Only CS supports | | | | |
|--------------------------|------------|---------------|------------|---------------|------------------|------------|---------------|------------|---------------|
| | 20'GP | | 40'HC | | CS support | 20'GP | | 40'HC | |
| | per pallet | per container | per pallet | per container | | per pallet | per container | per pallet | per container |
| module | 50+66 | 464 | 66 | 1188 | | | | | |
| CS support | 2350 | 2350 | 3000 | 6000 | | 2200 | 35200 | 2500 | 90000 |

(Pieces)