BIPV FACADES & ROOFS

Technical
Data 2024

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PARMET
SOLAR

Introduction to BIPV

Building-integrated photovoltaics (BIPV) is a renewable energy solution that incorporates solar panels directly into the building envelope, replacing conventional building materials like roofing, facades, and windows.

BIPV systems help decrease a building's energy consumption from the grid, resulting in lower utility bills and a reduced carbon footprint. This benefits the environment and contributes to long-term cost savings for building owners.

Unlike traditional solar panels, which are often seen as unattractive additions to a building, BIPV systems are designed to seamlessly blend with the architectural style and aesthetics of the structure.

Investing in BIPV can significantly enhance the value of a property by reducing operating costs, improving energy efficiency, and appealing to environmentally conscious buyers and tenants.

Our Value Proposition

> 24% CELLEFFICIENCY

Latest state-of-the-art technology means our BIPV panels are highly efficient.

ONLY 10% DEGRADATION

Our BIPV panels will lose only 10% of their efficiency over a 30-year period.

EXTENDED WARRANTY

Have peace of mind on account of our 30-year warranty. Our BIPV panels will last the lifespan of the buiding.

FULL CYCLE

We offer full cycle services from RsD, design and after-sale support.

ONE-STOP SHOP

As exclusive distributors of leading producers, we offer full range of products including inverters and Battery Energy Storage Systems.

EXPERIENCE

We are a seasoned building envelope contractor with over 30 years experience in the world of facades and roofs.

RETURN OF INVESTMENT

Between

5 - 10 Years

On Average

Colored Series

The Colored Series offers rich, vibrant colors that match traditional rainscreen cladding colors. The highest efficiency cells offer optimal power generation. Select from a wide color selection with custom colors possible - both high gloss and matte variants.

Frameless

Framed

Color Ranges

Electrical Parameters

JSXXXDG- 18e 1/2(xxx- Power) - 1200*600*7mm

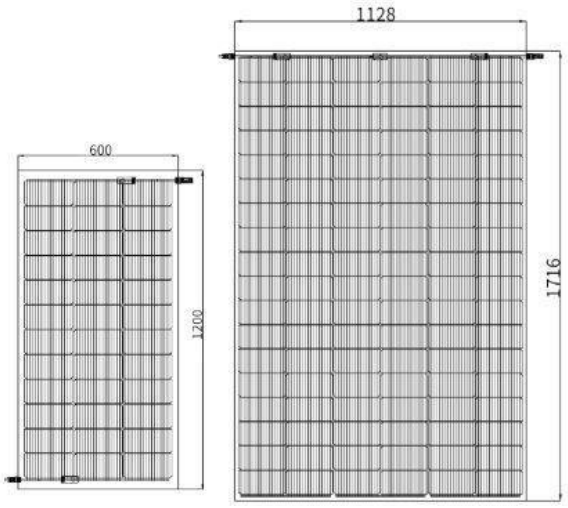
Module type	JS110CB-36	JS130CB-36	JS130CB-36	JS130CB-36	JS130CB- 36
Colour (customisable)	Grey	Red	Yellow	Green	Blue
Power output (Pmax)	110W	130W	130W	130W	130W
Power output tolerances (ΔPmax)	±3%	±3%	±3%	±3%	±3%
Module efficiency(ηp)	15.2%	18.0%	18.0%	18.0%	18.0%
Voltage at Pmax (Vmp)	19.4V	21.9V	21.9V	21.9V	21.9V
Current at Pmax (Imp)	5.67A	5.94A	5.94A	5.94A	5.94A
Open circuit current (Voc)	23.5V	26.2V	26.2V	26.2V	26.2V
Short-circuit current (Isc)	5.95A	6.24A	6.24A	6.24A	6.24A

JSXXXDG- 27e 1/2 (xxx= Power)- 1750*1150*7mm

Module type	JS335CB-36	JS395CB-36	JS395CB-36	JS395CB-36	JS395CB-36
Color (customizable)	Grey	Red	Yellow	Green	Blue
Power output (Pmax)	335W	395W	395W	395W	395W
Power output tolerances (ΔPmax)	±3%	±3 %	±3%	±3 %	±3 %
Module efficiency(ηmp)	16.6 %	19.6%	19.6%	19.6%	19.6%
Voltage at Pmax (Vmp)	58.8V	65.8V	65.8V	65.8V	65.8V
Current at Pmax (Imp)	5.70A	6.00A	6.00A	6.00A	6.00A
Open-circuit current (Voc)	69.6V	78.6V	78.6V	78.6V	78.6V
Short-circuit current (Isc)	6.00A	6.30A	6.30A	6.30A	6.30A

Materials

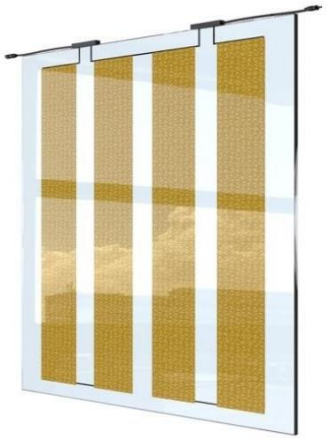
Module type	JSxxxDG-18e ½ (xxx=Power)	JSxxxDG-27e 1/2 (xxx=Power)
Glass (Material/Thickness)	Low-iron tempered glass / 6mm	Low-iron tempered glass / 10 mm
Baseplate (Material)	EVA or PVB	EVA or PVB
Junction box (Protection degree)	≥IP67	≥IP67
Cable (length/cross-sectional area)	300mm / 4mm2 / Customizable	300mm / 4mm2 / Customizable
Plug connector (Type/protection degree)	MC4 / IP67	MC4 / IP67
Packing	A frame or wooden box	A frame or wooden box
Dimensions	1200*600*7mm	1750*1150*7mm
Dimensions of cell	182*91mm	182*91mm
Cell layout	3*12	6*18
Weight	24KG	67KG



Dimension

Colored Series: Crystal Clear

With the Crystal-Clear variation of the Colored Series, it is possible to replace traditional glazing with crystalline silicon photovoltaic energy-producing facades. The cladding allows excellent light transmission while retaining high efficiency regarding power output.



Electrical parameters

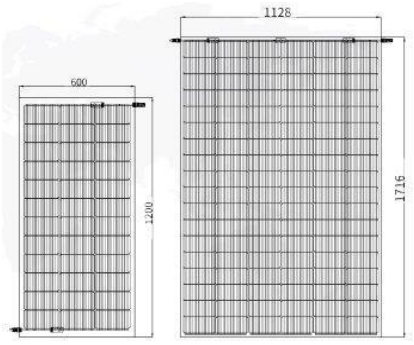
Module type	JS145CB-36	JS430CB-108
Power output (Pmax)	145 W	430 W
Power output tolerances(ΔPmax)	±3%	±3%
Module efficiency(ηmp)	16.7%	17.1%
Voltage at Pmax (Vmp)	21,8 V	65,4 V
Current at Pmax (Imp)	6,65 A	6,57 A
Open-circuit current (Voc)	25,9 V	77,8 V
Short-circuit current (Isc)	6,95 A	6,85 A

Materials

Product Type	JS145CB-36	JS430CB-108
Encapsulating material	EVA (PVB)	
Junction box (protection degree)	≥IP67	
Cable (length / cross-sectional area)	300mm / 4mm² Customizable	
Plug connector (type/protection degree)	MC4 / IP67	
Dimensions (L / W / TH)	1200*600*7mm	1750*1150*7mm
Solar Cell Type	182*91mm	182*91mm
Dimensions of cell	3*12	6*18
Weight	24kg	67 KG
Transparency	17 %	11 %

Operating Conditions

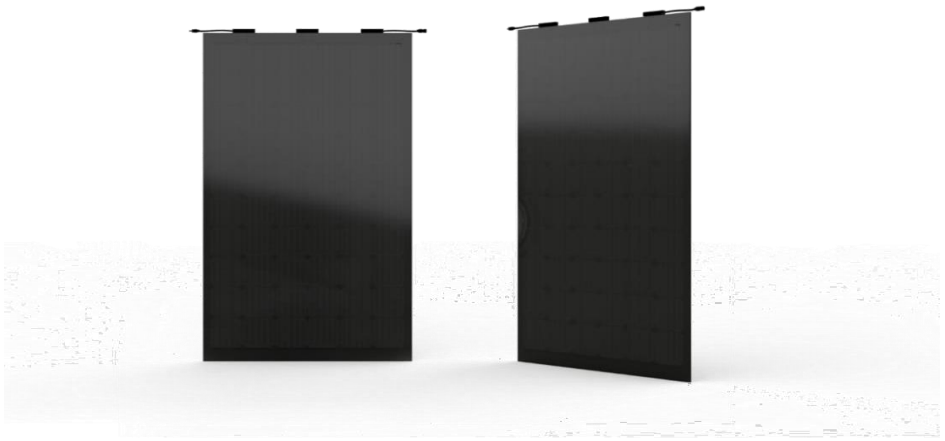
Operating Conditions	
Max. system voltage (V)	1500VDC
Max. series fuse rating (A)	16A
Operating temperature range	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity	25mm / 23m/s



Dimensions

Black Facade Series

Professional technology with reliable quality and guaranteed power generation. Utilizing top-tier N-type mono cells and superior production processes. The multi-busbar design decreases the risk of the cell microcracks.



Electrical Parameters

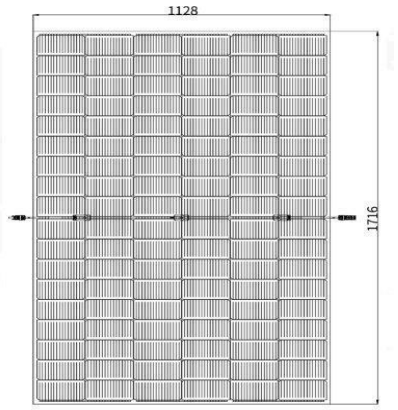
Module Type	JS400CB-108
Color (customizable)	Black
Power output (Pmax)	400 W
Power output tolerances(ΔPmax)	±5 W
Module efficiency(ηm)	21.6%
Voltage at Pmax (Vmp)	33,1V
Current at Pmax (Imp)	12,1 A
Open-circuit Current (Voc)	39,4 V
Short Circuit Current (Isc)	12.7 A

Operating Conditions

Operating Conditions	
Max. system voltage (V)	1500VDC
Max. series fuse rating (A)	16A
Operating temperature range	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity)	25mm / 23m/s

Constructing Materials

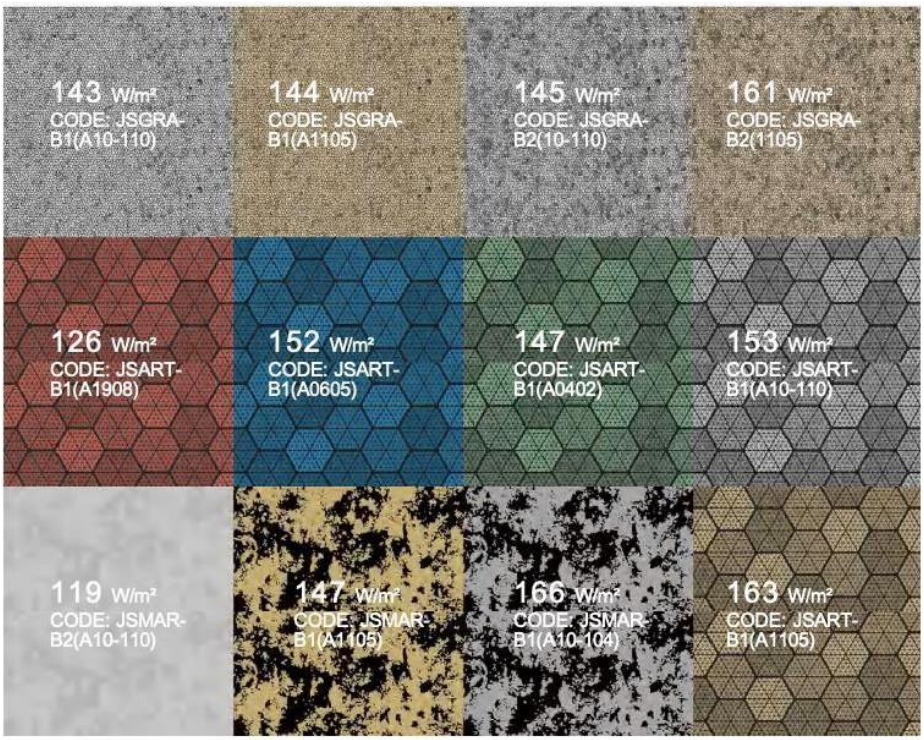
Module type	JS400CB-108
Glass (Material/Thickness)	Low-iron tempered glass 3.2mm
Baseplate (Material)	EVA or PVB
Junction box (Protection degree)	≥IP67
Cable (length/cross-sectional area)	300mm / 4mm2 / Customizable
Plug connector (Type/protection degree)	MC4 / IP67
Dimensions	1716*1128*7mm
Solar Cell Type	182*91mm
Dimensions of cell	6*9*2
Weight	35kg (frameless)



Dimensions

Marble Series

This Marble Series features mild color and rich texture, with clear stripes that reflect cultural and historical influences. It offers excellent decorative performance with sturdy, durable materials that have 0% water absorption compared to traditional stone. Easy to install, it has a hidden junction box for better aesthetics and safety and a metal pendant-connected structure.



Color Ranges

Electrical Parameters (STC)

1200*600mm

Module type	JS130CB-36	JS125CB - 36	JS130CB-36	JS110CB-36	JS105CB-36
Colour (customizable)	JSMAR-B1(A10-104)	JSGRA-B2(a1105)	JSART-B1(A1105)	JSMAR152-B1(A10-104)	JSWOO-B1(A1405)
Power output (Pmax)	130 W	125 W	130W	110W	105W
Power output tolerances(ΔPmax)	±3%	±3%	±3%	±3%	±3%
Module efficiency(ηm)	18.0%	17.3%	18.0%	15.3%	14.6%
Voltage at Pmax (Vmp)	21.9V	21.8V	21.9V	21.6V	21.5V
Current at Pmax (Imp)	5.94A	5.73A	5.94A	5.09A	4.88A
Open circuit current (Voc)	26.2V	26.1V	26.2V	25.9V	25.9V
Short-circuit current (Isc)	6.24A	6.02A	6.24A	5.39A	5.17A

Electrical Parameters (STC)

1750*1150mm

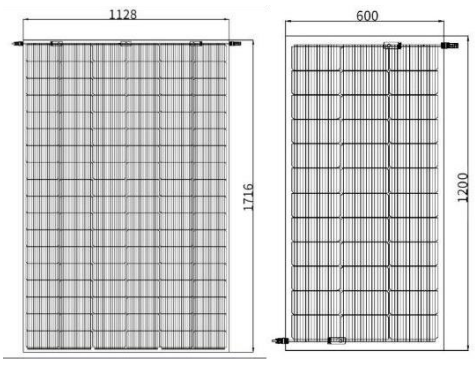
Module type	JS395CB-108	JS380CB-108	JS335CB-108	JS315CB-108
Color (customizable)	JSMAR-B1(A10 - 104)	JSGRA-B2(a1105)	JSMAR152-B1(A10-104)	JSWOO-B1(A1405)
Power output (Pmax)	395 W	380 W	335 W	315 W
Power output tolerances(ΔPmax)	±3%	±3%	±3%	±3%
Module efficiency(ηm)	19.6%	18.8%	16.6%	15.6%
Voltage at Pmax (Vmp)	65.8V	65.1V	64.8V	64.5V
Current at Pmax (Imp)	6.00A	5.68A	5.17A	4.88A
Open-circuit current (Voc)	78.6V	78.0V	77.8V	77.6V
Short-circuit current (Isc)	6.30A	6.01A	5.47A	5.17A

Materials

Module type	JSxxxCB-36 (xxx=Power)	JSxxxCB-108 (xxx=Power)
Glass (Material/Thickness)	Low-iron tempered glass 3.2mm (or 6-10mm)	Low-iron tempered glass 3.2mm (or 6- 10mm)
Encapsulating material	EVA (or PVB)	EVA (or PVB)
Junction box (Protection degree)	≥IP67	≥IP67
Cable (length/cross-sectional area)	300mm / 4mm2 / Customizable	300mm / 4mm2 / Customizable
Plug connector (Type/protection degree)	MC4 / IP67	MC4 / IP67
Packing	A pallets or wooden box	A pallets or wooden box
Dimensions	1200*600mm	1750*1150mm
Dimensions of cell	182*91mm	182*91mm
Cell layout	3*12	6*18
Weight	24 KG	67kg

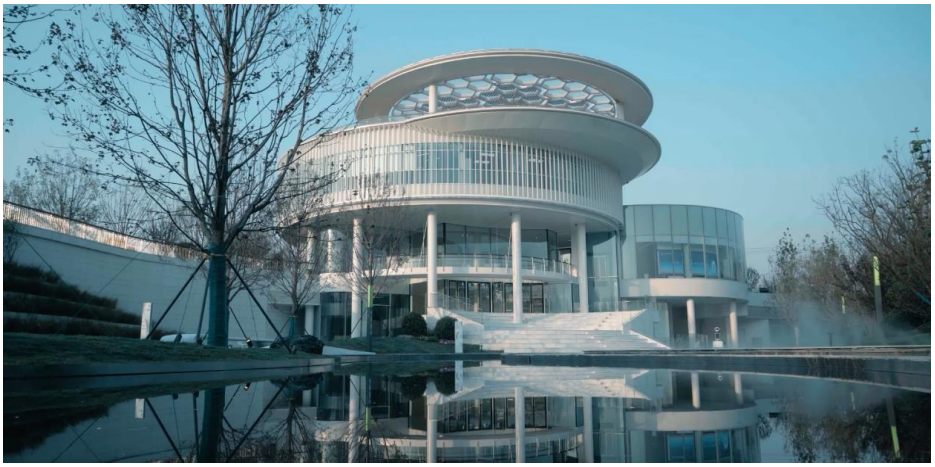
Operating Conditions

Operating Conditions	
Max. system voltage (V)	1500VDC
Max. series fuse rating (A)	16A
Operating temperature range	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity	25mm / 23m/s



Dimensions

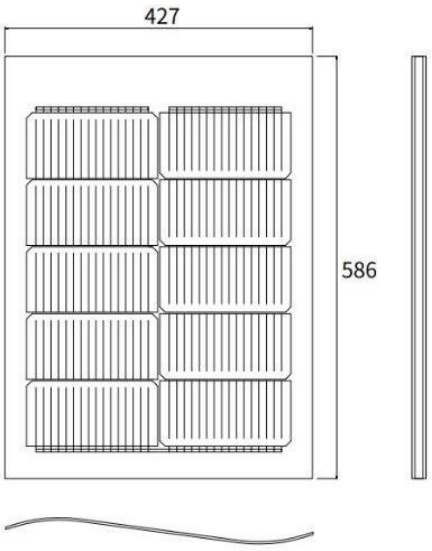
REFERENCES



ROOF TILES

T Max Tile S Series

Flexible crystalline silicon solar cells, encased in curved glass and polymer composite materials, integrated with the design of traditional roof tiles, forming an innovative green building material. It features a stable power generation system with real-time monitoring for electricity safety, a double waterproof design, and an aesthetically bent shape developed with exclusive patented technology.



Physical Parameters

Module type	JS40CB-10	JS33CB-10
Color (customizable)	Black	Red
Dimensions	586*427mm	
Weight	5 kg	
Glass (material/thickness)	Tempered glass 3.2mm+3.2mm	
Solar Cell Type	182*91mm (2*5)	
Junction box	≥IP67	
Cable type	450mm / 4mm²	
Plug connector	MC4	
Life span	>30	

Electrical Parameters

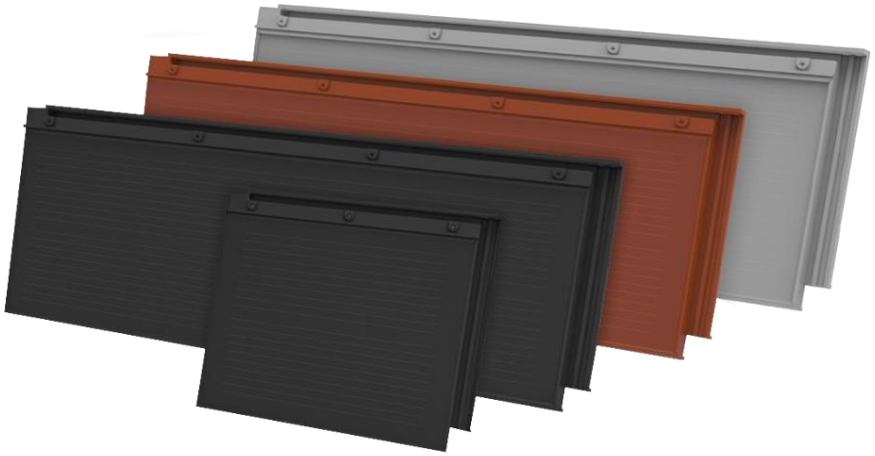
Module type	JS40CB-10	JS33CB-10
Solar Cells	Monocrystalline	
Power Output (P max)	40 W	33 W
Module efficiency(ηm)	16.0%	13.2%
Voltage at Pmax (Vmp)	6,04 V	5,92 V
Current at Pmax (Imp)	6,62 A	5,92 A
Open-circuit current(Voc)	7,13 V	7,04 V
Short-circuit current(Isc)	6,95 A	6,26 A

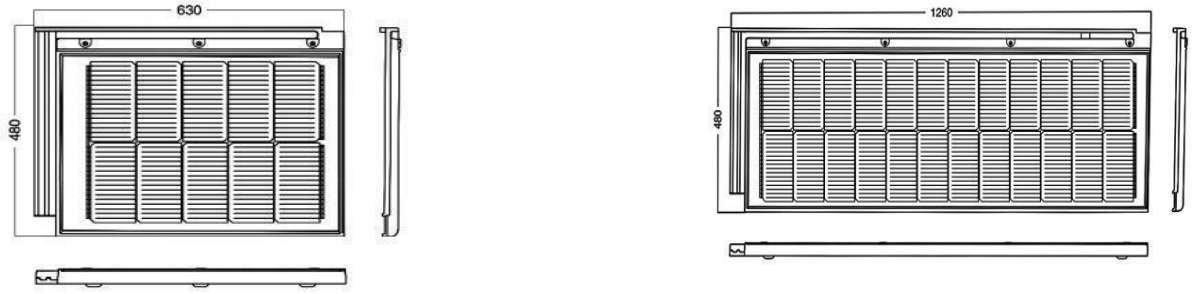
Operational Conditions

Operating Conditions	
Max. system voltage (V)	1500VDC
Operating temperature range	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity)	25mm / 23m/s

T Max Tile O Series

O series solar roof tiles are an innovative building material that offers a one-stop solution for home use by integrating roof tiles and solar energy into a seamless design. The compound integrated design facilitates drainage, ventilation, and heat dissipation, making maintenance easy and efficient. O series comes in two dimension options.





Dimensions

Physical Parameters

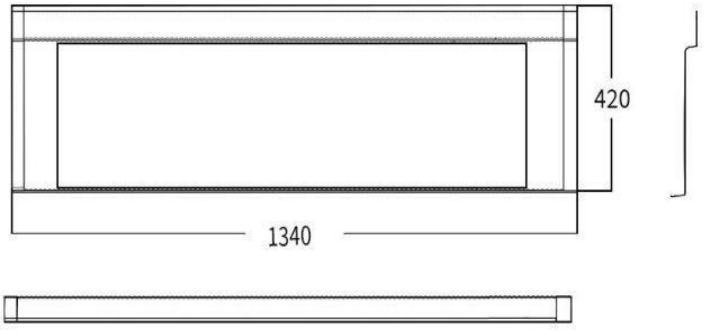
Module Type	JS40CB- 10	JS95CB- 24	JS33CB-10	JS80CB-24	JS34CB-10	JS83CB-24
Color (customizable)	Black	Black	Red	Red	Grey	Grey
Dimensions	630*480mm	1260*480mm	630*480mm	1260*480mm	630*480mm	1260*480mm
Weight	7.5kg	15.5kg	7.5kg	15.5kg	7.5kg	15.5kg
Cable type	450mm / 4mm²	900mm / 4mm²	450mm / 4mm²	900mm / 4mm²	450mm / 4mm²	900mm / 4mm²
Solar Cell Type	182*91mm (2*5)	182*91mm (2*12)	182*91mm (2*5)	182*91mm (2*12)	182*91mm (2*5)	182*91mm (2*12)
Junction box	≥IP67					
Glass(material/ thickness)	Tempered glass 3.2mm+3.2mm					
Plug connector	MC4					
Life span	>30					

Electrical Parameters

Module Type	JS40CB-10	JS95CB-24	JS33CB-10	JS80CB-24	JS34CB-10	JS83CB-24
Solar cells	Monocrystalline					
Power output (Pmax)	40W	95W	33W	80W	34W	83W
Module efficiency(ηm)	17.8%	20%	14.7%	16.8%	15.1%	17.4%
Voltage at Pmax (Vmp)	6.04V	14.5V	5.92V	14.2V	5.96V	14.3V
Current at Pmax (Imp)	6.62A	6.55Av	5.57A	5.63A	5.71A	5.81A
Open-circuit current (Voc)	7.13V	17.1V	7.04V	16.9V	7.08V	17.0V
Short-circuit current(Isc)	6.95A	6.88A	6.25A	5.94A	6.26A	6.10A

T Max Tile L Series

These solar roof tiles reduce roof load and are easy to install, providing excellent performance with waterproofing, noise reduction, and efficient ventilation and heat dissipation. They are safe and reliable, offering fireproof protection and a lifespan that matches the building. Combining fashion and beauty, the embedded high-efficiency photovoltaic design is available in three customizable colors.



Dimensions

Physical Parameters

Module type	JS80CB-26	JS62CB-26	JS66CB-26
Color (customizable)	Black	Red	Grey
Dimensions		1340*420mm	
Weight		6.5kg	
Glass (material/thickness)		Tempered glass 3.2mm+3.2mm	
Solar Cell Type		166*83mm (2*13)	
Junction box		≥IP67	
Cable type		900mm / 4mm²	
Plug connector		MC4	
Life span		>30	

Electrical Parameters

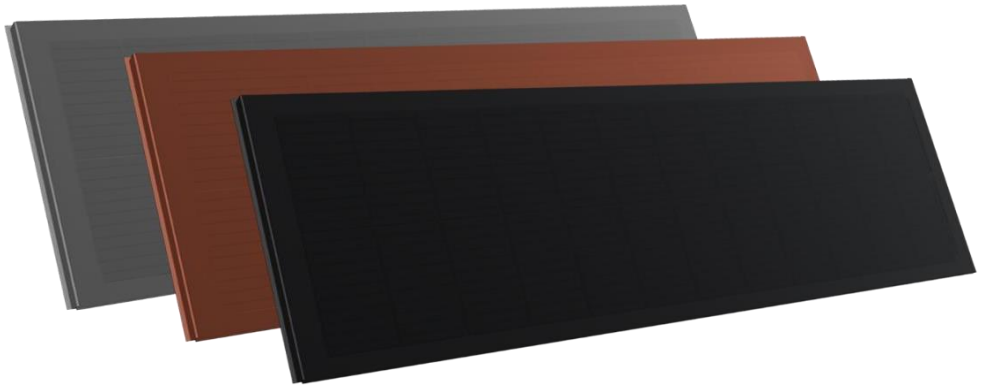
Module type	JS80CB-26	JS62CB-26	J S66CB-26
Solar cells		Monocrystalline	
Power output (Pmax)	80W	62W	66W
Module efficiency(ηm)	19.4%	15.0%	16.0%
Voltage at Pmax (Vmp)	14.7V	14.1V	14.3V
Current at Pmax (Imp)	5.44A	4.40A	4.62A
Open-circuit current(Voc)	17.7V	17.2V	17.3V
Short-circuit current(Isc)	5.71A	4.64A	4.85A

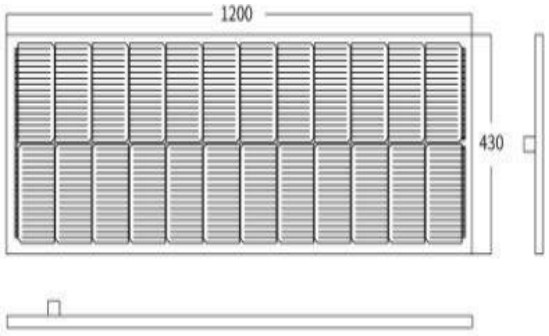
Operating Conditions

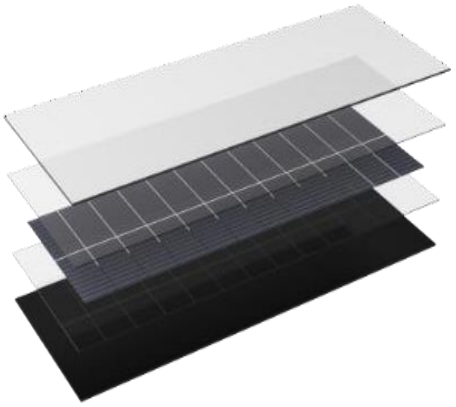
Operating Conditions	
Max. system voltage (V)	1500VDC
Operating temperature	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity)	25mm / 23m/s

T Max Tile A Series

These solar roof tiles are secure and reliable, offering high compression resistance and a lifespan that matches the building. Their high-efficiency integrated roof design allows for more installation capacity and power generation. Installation is convenient with a buckle design, positioning overlap, and quick fixation. The double glass hidden structure prevents the formation of mud belts, ensuring self-cleaning capabilities and powerful snow melting.







Dimensions

Physical Parameters

Module type	JS95CB-24	JS80CB-24	JS83CB-24
Color (customizable)	Black	Red	Grey
Dimensions	1200*430mm		
Weight	9.5kg		
Glass (material/thickness)	Tempered glass 3.2mm+3.2mm		
Solar Cell Type	182*91mm (2*12)		
Junction box	≥IP67		
Cable type	900mm / 4mm²		
Plug connector	MC4		
Life span	>30		

Electrical Parameters

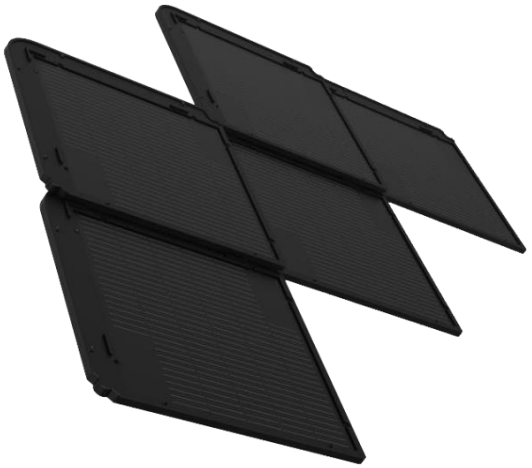
Module type	JS95CB-24	JS80CB-24	JS83CB-24
Solar cells	Monocrystalline		
Power output (Pmax)	95W	80W	83W
Module efficiency(ηm)	18.4%	15.5%	16.1%
Voltage at Pmax (Vmp)	14.5V	14.2V	14.3V
Current at Pmax (Imp)	6.55A	5.63A	5.81A
Open-circuit current(Voc)	17.1V	16.9V	17.0V
Short-circuit current(Isc)	6.88A	5.94A	6.10A

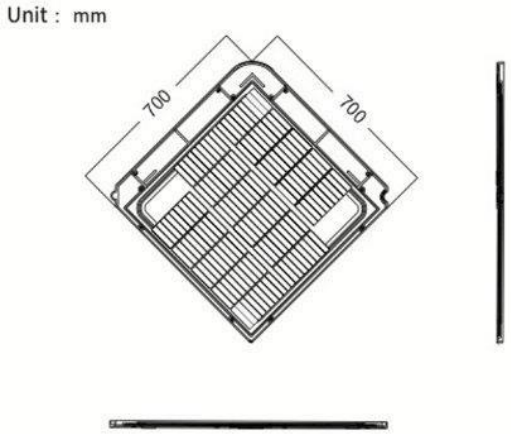
Operating Conditions

Operating Conditions	
Max. system voltage (V)	1500VDC
Operating temperature range	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity)	25mm / 23m/s

T Max Tile R Series

R series features a cloud shape and high compression resistance, matching the lifespan of the building. They are widely used for facade and rooftop solutions, providing increased electricity generation. With a triple waterproof structure compliant with GB/T 36584-2018 5.1, they ensure superior water resistance. Combining fashion and beauty, the embedded high-efficiency photovoltaic integrated design is both functional and aesthetically designed.





Dimensions

Physical Parameters

Module type	JS55DG-8e1/2
Dimensions	700*700mm
Weight	10.5 kg
Glass (material/thickness)	Tempered glass 3.2mm+3.2mm
Solar Cell Type	182*91mm
Junction box	≥IP67
Cable type	500mm / 4mm²
Plug connector	MC4
Life span	>30

Electrical Parameters

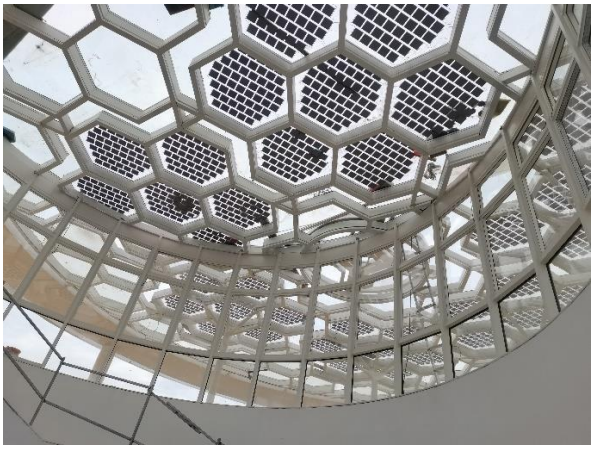
Module type	JS55DG-8e1/2
Solar cells	Monocrystalline
Power output (Pmax)	55 W
Module efficiency(ηm)	15.4%
Voltage at Pmax (Vmp)	8.90 V
Current at Pmax (Imp)	6,18 A
Open-circuit current(Voc)	10,59 V
Short-circuit current(Isc)	6,54 A

Operating Conditions

Operating Conditions	
Max. system voltage (V)	1500VDC
Operating temperature range	-40°C; +85°C
Max. static load, Front	5400Pa
Max. static load, Rear	2400Pa
Max. hailstone impact (Diameter / Velocity)	25mm / 23m/s

REFERENCES

REFERENCES



THANK YOU!