

Sunrise Power Technology Co., Ltd

www.sunrisepower.com

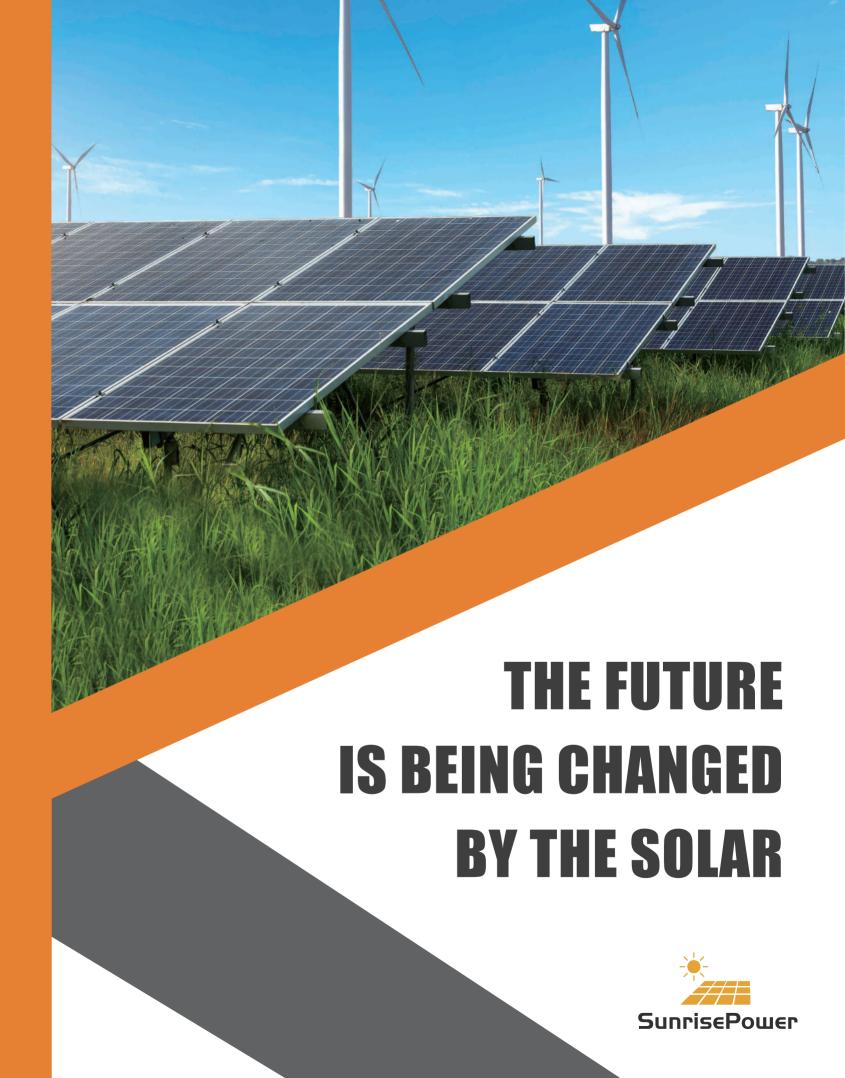
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66 SOLAR CATALOGUE

SUNRISE POWER TECHNOLOGY CO., LTD

A comprehensive range of solar modules, solar inverter, solar batteries, technology communication power supplies, and complete system supplier.



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MAKE THE
FUTURE
BRIGHT WITH
SOLAR POWER



ABOUT SUNRISE POWER

Sunrise Power Technology Co., Ltd is a high technology company, specializing in photovoltaic module more than 10 years, also comprehensive clean energy solutions provider, such as string on-grid inverter and hybrid storage system.

We have rich experience in photovolatic modules r&d and manufacturing, sunrise power modules have been installed in Europe, Australia, China, Indian, Japan, North America and South America, Sunrise aims to provide power solution and develop smart, reliable and long service renewable energy.















Export

Export to North-America / Europe / South-America / Middle-East

SUNRISE POWER | 02 01 | SUNRISE POWER



GLOBAL SALES NETWORK

Sunrise Power is a trusted renewable energy system supplier. Our high performance and good quality solar panels materials are from the reputable manufacturers in China. This emphasis on performance and quality, combined with our expert reliable after-sales services distinguishes us from our competitors and provides you with the ultimate peace of mind.

Our Partners























Our Vision

To Build The Best Renewable Energy Company In The World.

Our Mission

- Build a world class portfolio of renewable energy assets and be in the top globally.
- Lead the energy transition by providing innovative solutions to our customers.
- Build a culture of excellence by efficient and safe execution of all our projects.
- Maintain the highest standards of quality and sustainability and act responsibly at all times.
- Foster a culture of trust, collaboration and performance to achieve our business goals and be an employer of choice.
- Be a responsible corporate citizen and uphold the highest standards of corporate governance, ethics and integrity.

OUR VALUE

COLLABORATION Be a trustworthy partner To respect each individual in the company Help each other become effective person

EFFECTIVENESS

- Get customers things done
- Make achievement
- Display professional integrity in our daily working
- Be agile responses in our changing conditions

COMMITMENT

- Continually give my best
- Drive excellence performance
- Take pride in who you are and what you do stretch your ambitions in the hest



SUNRISE POWER | 6













HOT PRODUCTS

SUN 66M-H2-MBB HALF-CELL MONO PV MODULE 210MM CELLS

650W/655W/660W/665W/670W

MECHANICAL DRAWINGS



COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 /IEC62804 /ISO 9001: 2015 Quality management system; ISO 14001: 2015 Environmental management system /OHSAS 18001: 2007 Occupational health and safety management system









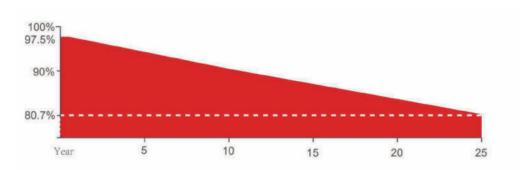






WARRANTY

- 12 Years Manufacturing Warranty
- 12 Years 90% Power Output 25 Years 80% Power Output



TECHNICAL DATASHEET

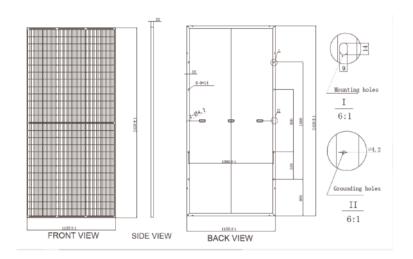
Module Type	650W	655W	660W	665W	670W	
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	
Maximum Power At STC (Pmax)	650W 492.7W	655W 496.5W	660W 500.2W	665W 504.0W	670W 507.8W	
Short Circuit Current (Isc)	18.35A 14.83A	18.39A 14.86A	18.44A 14.90A	18.48A 14.93A	18.51A 14.96A	
Open Circuit Voltage (Voc)	45.2V 42.3V	45.4V 42.5V	45.6V 42.7V	45.8V 42.9V	46.0V 43.1V	
Maximum Power Current (Impp)	17.34A 14.05A	17.38A 14.08A	17.42A 14.12A	17.46A 14.15A	17.50A 14.18A	
Maximum Power Voltage (Vmpp)	37.5V 35.1V	37.7V 35.2V	37.9V 35.4V	38.1V 35.6V	38.3V 35.8V	
Module Efficiency	20.92%	21.09%	21.25%	21.41%	21.57%	
Power Tolerance			0~+5W			
Maximum System Voltage	VDC 1500V					
Maximum Series Fuse			30A			
Increased Snowload Acc.to lec 61215			5400Pa			
Operating Temperature			~40~+85°C			
Number Of Bypass Diodes			3			
Norminal Operating Cell Temperature (Noct)			45 °C ± 2 °C			
Temperature Coefficient Of Pmax	~0.35% C					
Temperature Coefficient Of Voc	~0.27% ^C					
Temperature Coefficient Of Isc	0.05%℃					



SUN 78M-H8 - MBB HALF-CELL **MONO 182MM CELLS**

575W/580W/585W/590W/595W

MECHANICAL DRAWINGS

















High efficiency

Highly reliable

High yield

Low degradation Low hot-spot risk

1500V system voltage

COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 /IEC62804 /ISO 9001: 2015 Quality management system; ISO 14001: 2015 Environmental management system /OHSAS 18001: 2007 Occupational health and safety management system







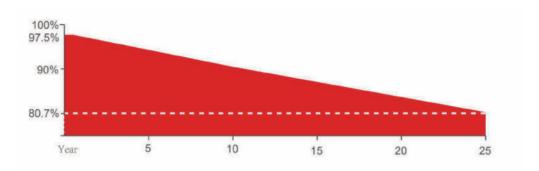






WARRANTY

- 12 Years Manufacturing Warranty 12 Years 90% Power Output 25 Years 80% Power Output



TECHNICAL DATASHEET

Module Type	575W	580W	585W	590W	595W	
	STC NOCT					
Maximum Power At STC (Pmax)	575W 433.1W	580W 436.9W	585W 440.7W	590W 444.4W	595W 448.2W	
Short Circuit Current (Isc)	13.61A 11.00A	13.67A 11.05A	13.73A 11.09A	13.78A 11.13A	13.84A 11.18A	
Open Circuit Voltage (Voc)	53.5V 50.0V	53.7V 50.2V	53.9V 50.4V	54.1V 50.6V	54.3V 50.7V	
Maximum Power Current (Impp)	12.78A 10.42A	12.84A 10.47A	12.89A 10.52A	12.94A 10.55A	12.99A 10.60A	
Maximum Power Voltage (Vmpp)	45.0V 41.6V	45.2V 41.7V	37.9V 35.4V	38.1V 35.6V	38.3V 35.8V	
Module Efficiency	20.78%	20.96%	21.14%	21.32%	21.5%	
Power Tolerance	0~+5W					
Maximum System Voltage			VDC 1500V			
Maximum Series Fuse			25A			
Increased Snowload Acc.to lec 61215			5400Pa			
Operating Temperature			~40~+85°C			
Number Of Bypass Diodes			3			
Norminal Operating Cell Temperature (Noct)	45℃ ±2℃					
Temperature Coefficient Of Pmax	~0.35% °C					
Temperature Coefficient Of Voc	~0.27%˚C					
Temperature Coefficient Of Isc	0.05%℃					

STC: 1000W/m2 irradiance, 25°C cell temperature, AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, wind speed 1m/s.

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SUN 54M-H2-MBB HALF-CELL MONO PV MODULE 210MM CELLS

530W/535W/540W/545W/550W

MECHANICAL DRAWINGS II 6:1 FRONT VIEW SIDE VIEW BACK VIEW **High efficiency** Highly reliable High yield Low degradation Low hot-spot risk 1500V system voltage

COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 /IEC62804 /ISO 9001: 2015 Quality management system; ISO 14001: 2015 Environmental management system /OHSAS 18001: 2007 Occupational health and safety management system







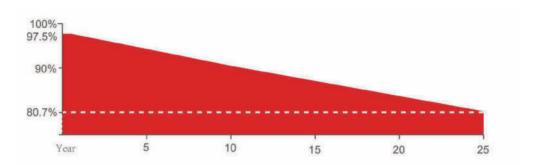






WARRANTY

- 12 Years Manufacturing Warranty 12 Years 90% Power Output 25 Years 80% Power Output



TECHNICAL DATASHEET

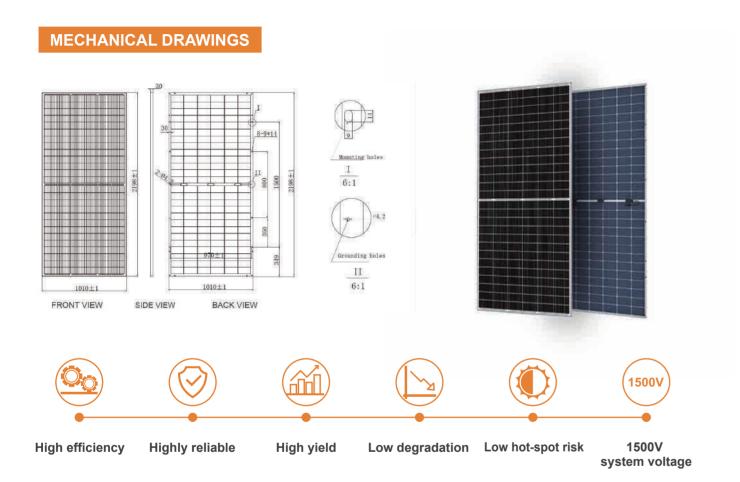
Module Type	530W	535W	540W	545W	550W	
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	
Maximum Power At STC (Pmax)	530W 401.7W	535W 405.5W	540W 409.3W	545W 413.1W	550W 416.9W	
Short Circuit Current (Isc)	18.28A 14.77A	18.33A 14.81A	18.38A 14.85A	18.45A 14.91A	18.49A 14.94	
Open Circuit Voltage (Voc)	37.0V 34.7V	37.2V 34.8V	37.5V 35.1V	37.7V 35.3V	37.9V 35.5V	
Maximum Power Current (Impp)	17.27A 14.00A	17.31A 14.04A	17.36A 14.08A	17.42A 14.13A	17.46A 14.16A	
Maximum Power Voltage (Vmpp)	30.7V 28.7V	30.9V 28.9V	31.1V 29.1V	31.3V 29.2V	31.5V 29.4V	
Module Efficiency	20.7%	20.90%	21.09%	21.29%	21.48%	
Power Tolerance	0~+5W					
Maximum System Voltage			VDC 1500V			
Maximum Series Fuse			25A			
Increased Snowload Acc.to lec 61215			5400Pa			
Operating Temperature			~40~+85°C			
Number Of Bypass Diodes			3			
Norminal Operating Cell Temperature (Noct)	45 ℃ ± 2 ℃					
Temperature Coefficient Of Pmax	~0.35% [*] C					
Temperature Coefficient Of Voc	~0.27% °C					
Temperature Coefficient Of Isc			0.05% ℃			

STC: 1000W/m2 irradiance, 25°C cell temperature, AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, wind speed 1m/s.



SUN 78M HFD-MBB HALF-CELL MONO PV MODULE

435W/440W/445W/450W/ 455W/460W



COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 /IEC62804 /ISO 9001: 2015 Quality management system; ISO 14001: 2015 Environmental management system /OHSAS 18001: 2007 Occupational health and safety management system







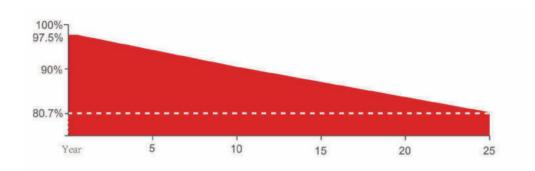






WARRANTY

- 12 Years Manufacturing Warranty 12 Years 90% Power Output 25 Years 80% Power Output



TECHNICAL DATASHEET

Module Type	435W	440W	445W	450W	455W	460W
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT
Maximum Power At STC (Pmax)	435W 327.0W	440W 330.7W	445W 334.5W	450W 338.3W	455W 342.0W	460W 319.5W
Short Circuit Current (Isc)	11.14A 9.00A	10.57A 8.56A	445W 334.5W	10.71A 8.67A	10.77A 8.72A	10.84A 8.67A
Open Circuit Voltage (Voc)	49.2V 45.9V	53.8V 50.2V	10.64A 8.61A	54.4V 50.7V	54.7V 51.0V	55.0V 47.6V
Maximum Power Current (Impp)	10.66A 8.53A	10.02A 8.11A	54.1V 50.5V	10.16A 8.22A	10.22A 8.26A	10.29A 8.22A
Maximum Power Voltage (Vmpp)	40.8V 38.3V	43.9V 40.8V	10.09A 8.17A	44.3V 41.2V	44.5V 41.4V	44.7V 38.9V
Module Efficiency	19.83%	20.06%	20.28%	20.51%	20.74%	20.97%
Power Tolerance			0~-	⊦5W		
Maximum System Voltage			VDC	1500V		
Maximum Series Fuse			2	5A		
Increased Snowload Acc.to lec 61215			540)0Pa		
Operating Temperature			~40~	+85℃		
Number Of Bypass Diodes			:	3		
Norminal Operating Cell Temperature (Noct)	45℃±2℃					
Temperature Coefficient Of Pmax	~0.36%℃					
Temperature Coefficient Of Voc	~0.29%℃					
Temperature Coefficient Of Isc			0.05	5%°C		
STC: 1000W/m2 irradiance, 25°C cell temperat	ure, AM1.5. NOC	T: Irradiance at 8	300W/m², Ambier	nt Temperature 20	0°C , wind speed	1m/s.



SUN 72M-H6 -MBB HALF-CELL MONO PV MODULE

435W/440W/445W/450W/455W/460W

MECHANICAL DRAWINGS



COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 /IEC62804 /ISO 9001: 2015 Quality management system; ISO 14001: 2015 Environmental management system /OHSAS 18001: 2007 Occupational health and safety management system















WARRANTY

- 12 Years Manufacturing Warranty
- 12 Years 90% Power Output 25 Years 80% Power Output



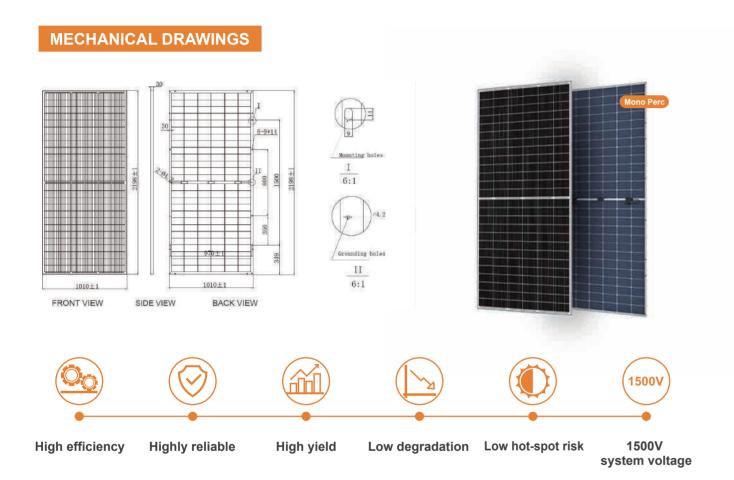
TECHNICAL DATASHEET

Module Type	435W	440W	445W	450W	455W	460W			
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT			
Maximum Power At STC (Pmax)	435W 327.0W	440W 330.7W	445W 334.5W	450W 338.3W	455W 342.0W	460W 345.8V			
Short Circuit Current (Isc)	11.14A 9.00A	11.21A 9.06A	11.29A 9.12A	11.36A 9.18A	11.43A 9.24A	11.50A 9.29			
Open Circuit Voltage (Voc)	49.2V 45.9V	49.4V 46.1V	49.7V 46.3V	50.0V 46.6V	50.3V 46.9V	50.6V 47.2V			
Maximum Power Current (Impp)	10.66A 8.53A	10.73A 8.59A	10.80A 8.65A	10.87A 8.70A	10.94A 8.75A	11.01A 8.71A			
Maximum Power Voltage (Vmpp)	40.8V 38.3V	41.0V 38.5V	41.2V 38.7V	41.4V 38.9V	41.6V 39.1V	41.8V 39.3V			
Module Efficiency	19.69%	19.92%	20.14%	20.37%	20.60%	20.82%			
Power Tolerance	 		0~	+5W					
Maximum System Voltage			VDC	1500V					
Maximum Series Fuse			2	25A					
Increased Snowload Acc.to lec 61215			54	00Pa					
Operating Temperature	 		~40~	-+85℃					
Number Of Bypass Diodes	 			3					
Norminal Operating Cell Temperature (Noct)	45℃±2℃								
Temperature Coefficient Of Pmax	~0.36% C								
Temperature Coefficient Of Voc	~ 0.29% C								
Temperature Coefficient Of Isc	 		0.0	0.05% ℃					



SUN 78MD-HFS-HALF-CELL BIFACIAL MBB MONO PERC DOUBLE GLASS MODULE

435W/440W/445W/450W



COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 /IEC62804 /ISO 9001: 2015 Quality management system; ISO 14001: 2015 Environmental management system /OHSAS 18001: 2007 Occupational health and safety management system









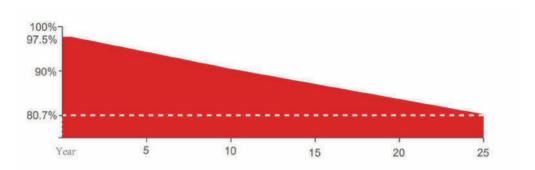






WARRANTY

- 12 Years Manufacturing Warranty 12 Years 90% Power Output 25 Years 80% Power Output



TECHNICAL DATASHEET

Module Type	435W	440W	445W	450W	
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	
Maximum Power At STC (Pmax)	435W 327.0W	440W 330.7W	445W 334.5W	450W 338.3W	
Short Circuit Current (Isc)	10.43A 8.48A	10.57A 8.56A	10.64A 8.61A	10.71A 8.67A	
Open Circuit Voltage (Voc)	53.5V 49.9V	53.8V 50.2V	54.1V 50.5V	54.4V 50.7V	
Maximum Power Current (Impp)	9.93A 8.04A	10.02A 8.11A	10.09A 8.17A	10.16A 8.22A	
Maximum Power Voltage (Vmpp)	40.8V 40.7V	43.9V 40.8V	44.1V 41.0V	44.3V 41.2V	
Module Efficiency	19.60%	19.82%	20.05%	20.27%	
Power Tolerance		0~	+5W		
Maximum System Voltage	VDC 1500V				
Maximum Series Fuse		2	0A		
Increased Snowload Acc.to lec 61215		54	00Pa		
Operating Temperature		~40~	-+85 ℃		
Number Of Bypass Diodes			3		
Norminal Operating Cell Temperature (Noct)		45 °C	±2°C		
Temperature Coefficient Of Pmax	~0.36%℃				
Temperature Coefficient Of Voc	~0.29%℃				
Temperature Coefficient Of Isc	0.05%℃				



WE PAY ATTENTION TO DETAIL BIMAX4 SERIES



Bifacial cell technology

Generate electricity from backside of solar cell with environmental light reflections, brings additional 5%-25% more power generation.



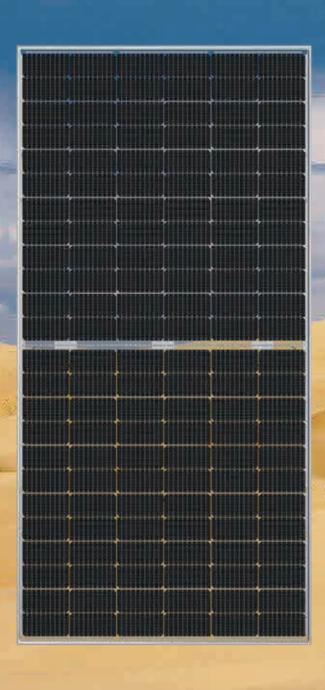
9 busbar cell technology

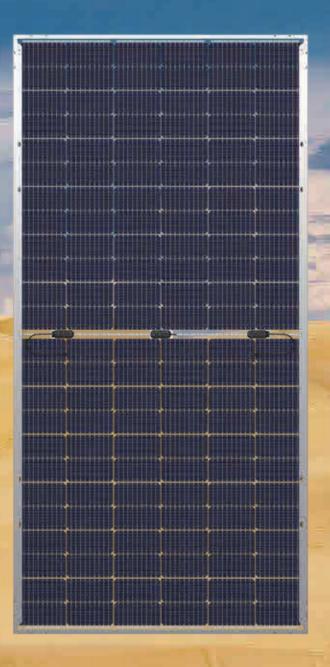
Increased cell bus-bar means more paths for electric charges, so there would be less resistance losses and more emitted electrons can be captured, thus it can increase power output by 2%.



Split module design

Better performance in shading conditions with split module design.







PERC technology

The PERC technology features were the reduction of rear surface recombination by a combination of dielectric surface passivation and reduced metal/semiconductor contact area while simultaneously increasing rear surface reflection by use of a dielectrically displaced rear metal reflector.



1500V D

High system voltage of J-box and glasses, reduce
PV system cost.



Ultra high strength frame

dual-glass series, passed 7200 Pa (front)
mechanical load test, reducing shading with no 0
side design for Split module design short frame.
(Note: *120 Cells series)



Half-cut cell technology

Through reducing length of cell spacing, two half-cut cells can provide higher electric current, thus enhance 3% of power output. The output of two 9 bus-bar half-cut cells is even higher than one 12 bus-bar full cell.



Special frame design with anti-fouling patent

155-degree angle, excellent anti-fouling performance, improve long-term power generation performance.



Higher Power & More Reliable

HALF-CUT TECHNOLOGY

Half-cut cell technology is to cut the cell into two parts by mature infrared laser, hence halve the working current. The thermal loss on the ribbon will be remarkably reduced and the module's power increases by 2%. The reliability of module is also enhanced.

The combination of half-cut cell technology and bifacial module can amplify the gain over the effect of current-reduction.

Sunpal released BiMAXS series, a bifacial half-cell module, at the SNEC exhibition in 2018

Nearly 455MWp BiMAX4 were supplied to the Chinese TOP runnerproject in Sihong County. The total signed order of BiMAX4 was up to 500MWp throughout 2018.

Monofacial or bifacial PERC cell module with half-cut technology has high power, the property of anti-PID, anti-LID (including LeTID), low hot spot temperature, excellent low irradiance performance and low power temperature coefficient.

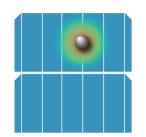


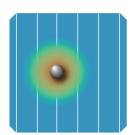
Lower Hot Spot Temperature

In field applications, small area shadings can cause the temperature of those parts extremely high. This phenomena is called hot spot. The long duration of hot spot could bring irreversible degradation of modules.

Because the string current of half-cell modules is half of full-cell modules, the hot spot temperature can be obviously reduced.

Sunpal's experiments show that this reduction could be 10-20° C, which increases the module reliability.





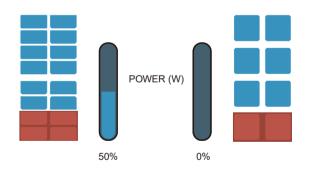
Half-cell Module Full-cell Module Half-cell Module Module Temperature (%)

2 Lower Operating Temperature

Half-cut cells have half of the working current, thereby the thermal loss is remarkably reduced. Operating temperature correspondingly decreases, and the reliability of module is improved as well as power gain.

3 Lower Shading Loss

Because of the unique parallel connection design, half-cell modules still have 50% power output under the circumstance of array shading in sunrise or sunset when portrait installation. In addition, half-cut technology can improve the output of bifacial module under non-uniform incident illumination on the backside.



Power Gain

4 Higher Energy Yield Under High Irradiation Condition

Under high irradiation conditions, half-cell module, especially bifacial half-cell module, will have a higher energy yield compared with conventional module. Bifacial half-cell module will help to achieve the lowest LCOE in regions which is rich in sun radiation resources.

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RESIDENTIAL SOLAR SOLUTIONS

Sunrise power provide reasonable total solution for one stop solar system. All products are diversified and innovative, including inverter, panel, mounting, cables and other relative equipment. The performance of products is outstanding, and greatly improves the stability of photovoltaic power plant and investment benefits.

Sunrise power have a professional and experienced team on residence roof, solar farm and panel mounting system design. From grid-tied to off-grid system, from commercial to large-scale solar power station, we provide the exact products that you need.



Growatt 2.5KW/3KW/4KW/5KW/6KW on grid system

Components	SP2.5KW-ON	SP3KW-ON	SP4KW-ON	SP5KW-ON	SP6KW-ON
410W Solar Panel	6 Pieces	8 Pieces	10 Pieces	12 Pieces	15Pieces
DC Isolation Switch	2 Set				
Grid Tied Inverter	2.5KW	3.0KW	4.0KW	5.0KW	6.0KW
AC Isolation Switch	1 Set				
DC Cable 4mm2	200 Meters				
MC4 Connector	10 Piece				
Mounting System	1 Set				
PV Tools	1 Set				



X12 PANELS -INCLUDESSWITCHES WIRING MOUNTING KIT LUGS - FUSES CONNECTORS

Goodwe 5KW/6.5KW/8KW/10KW hybrid storage system

Components	SP5KW-HY	SP6.5KW-HY	SP8KW-HY	SP10KW-HY
410W Solar Panel	12 Pieces	19 Pieces	20 Pieces	25 Pieces
DC Isolation Switch	2 Set	2 Set	2 Set	2 Set
Grid Tied Inverter	5KW	6.5KW	8KW	10KW
Lithium Battery	5 Pieces	5Pieces	9Pieces	9Pieces
AC Isolation Switch	1 Set	1 Set	1 Set	1 Set
СТ	1 Pair	1 Pair	1 Pair	1 Pair
DC Cable 4mm2	200 Meters	200 Meters	200 Meters	200 Meters
MC4 Connector	10 Piece	10 Piece	10 Piece	10 Piece
Mounting System	1 Set	1 Set	1 Set	1 Set
PV Tools	1 Set	1 Set	1 Set	1 Set

Solis 6KW/7KW/8KW/9KW/10KW on grid system

Components	SP6KW-ON	SP7KW-ON	SP8KW-ON	SP9KW-ON	SP10KW-ON
410W Solar Panel	16 Piece	18 Piece	20 Piece	22 Piece	26 Piece
DC Isolation Switch	2 Set				
Grid Tied Inverter	6KW	7KW	8KW	9KW	10KW
AC Isolation Switch	1 Set				
DC Cable 4mm2	200 Meters	200 Meters	100 Meters	200 Meters	200 Meters
MC4 Connector	10 Piece				
Mounting System	1 Set				
PV Tools	1 Set				



Deye 5KW/7.6KW/8KW hybrid stroage system



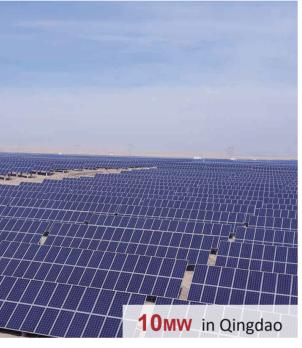
Components	SP5KW-HY	SP7.6KW-HY	SP8KW-HY
410W Solar Panel	12 Pieces	19 Pieces	20 Pieces
DC Isolation Switch	2 Set	2 Set	2 Set
Grid Tied Inverter	5KW	7.6 KW	8KW
Lithium Battery	8 Pieces	8 Pieces	8 Pieces
AC Isolation Switch	1 Set	1 Set	1 Set
СТ	1 Pair	1 Pair	1 Pair
DC Cable 4mm2	200 Meters	200 Meters	200 Meters
MC4 Connector	10 Piece	10 Piece	10 Piece
Mounting System	1 Set	1 Set	1 Set
PV Tools	1 Set	1 Set	1 Set

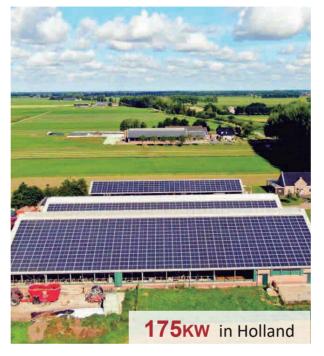
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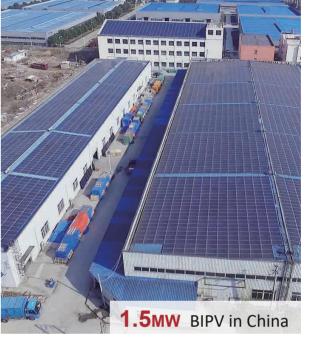
PROJECT CASE

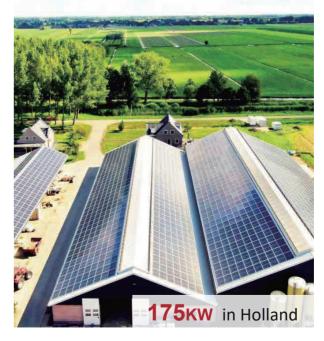














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