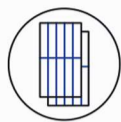




(166mm high-efficiency bifacial PERC monocrystalline module )

**440-460W** 0-5W Positive Tolerance



**MBB&SMBB Half-cut Cell Technology**  
New circuit design, lower internal current, and lower Rs loss.



**High Power Density**  
A new generation of monocrystalline products with reduced resistive losses for greater power output.



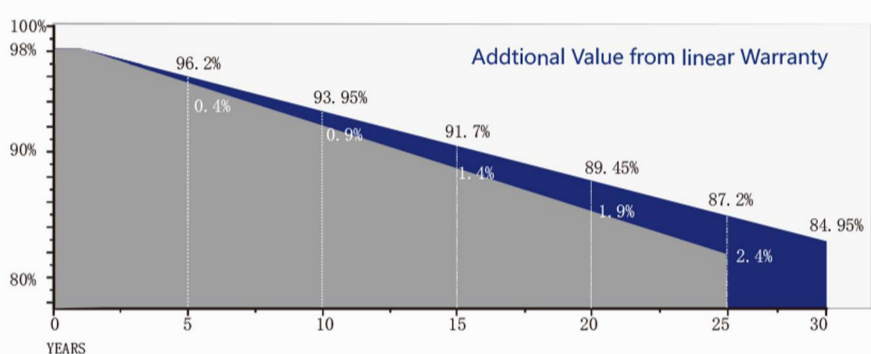
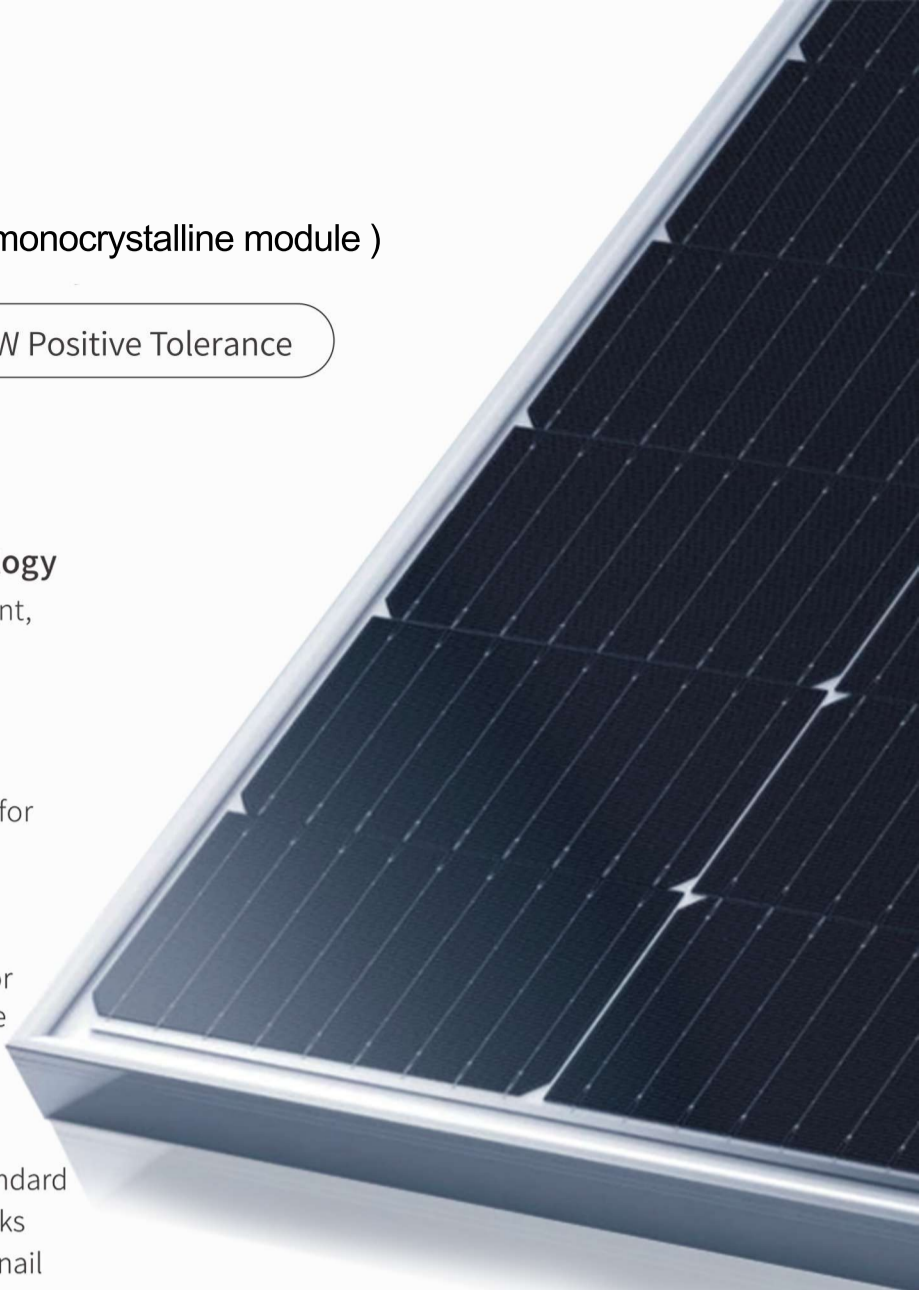
**Mechanical Properties**  
An aluminum frame in special design for better mechanical properties and more efficient installation.



**Excellent Weather Resistance**  
The solar modules can meet the IEC standard requirements with strong resistant to risks such as salt spray, ammonia gas, dust, snail marks and electric potential induced attenuation.



**4 Times 100% EL Detection**  
Guarantee no micro cracks



**PRODUCT QUALITY SYSTEM & CERTIFICATION**



**12years** Material & process Warranty

**25years** Linear Performance Warranty

**0.55%** Linear Power Degradation

**ELECTRICAL PROPERTIES**

**SM-166M-72H 144PCS**

**STC** : irradiance, 1000W/m<sup>2</sup>; cell temperature, 25°C; spectral range, AM1.5

**NOCT**: irradiance, 800 W/m<sup>2</sup>; ambient temperature, 20 °C; spectral range, AM1.5; wind speed, 1m/s

	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power P <sub>mp</sub>	440W	326W	445W	330W	450W	333W	455W	337W	460W	342W
Open Circuit Voltage-V <sub>oc</sub>	49.80V	47.1V	49.90V	47.20V	50.00V	47.20V	50.10V	47.30V	49.70V	47.10V
Short Circuit Current-I <sub>sc</sub>	11.60A	9.37A	11.72A	9.46A	11.83A	9.55A	11.96A	9.66A	11.78A	9.51A
Max Power Voltage-V <sub>mp</sub>	40.90V	38.60V	41.00V	38.70V	41.10V	38.80V	41.40V	38.9V	41.90V	39.70V
Max Power Current-I <sub>mp</sub>	10.77A	8.45A	10.86A	8.53A	10.96A	8.58A	10.99A	8.66A	10.99A	8.61A
Module Efficiency STC-η <sub>m</sub>	20.2%		20.5%		20.7%		20.9%		21.2%	
Power Tolerance(W)	0~+5W									
Maximum System Voltage	1500V DC									
Max Serie Fuse Rating	20A									

STC:irradiance 1000W/m<sup>2</sup> module temperature 25°C AM=1.5  
NMOT: irradiance of 800W / m<sup>2</sup>, ambient temperature 20°C, and wind speed 1m / s

**Rear Gain**(Take450W as an example)

Gain	5%	10%	15%	20%	25%	30%
Maximum Power	473W	495W	517W	541W	564W	587W
Open Circuit Voltage (Voc)	50.0V	50.0V	50.0V	50.1V	50.1V	50.1V
Short Circuit Current (Isc)	12.42A	13.01A	13.60A	14.20A	14.79A	15.38A
Maximum Power Voltage (Vmp)	41.1V	41.1V	41.1V	41.2V	41.2V	41.2V
Maximum Circuit Current (Imp)	11.51A	12.06A	12.60A	13.15A	13.70A	14.25A

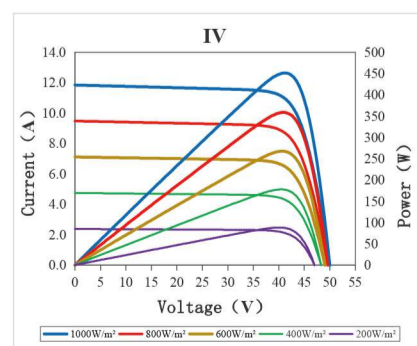
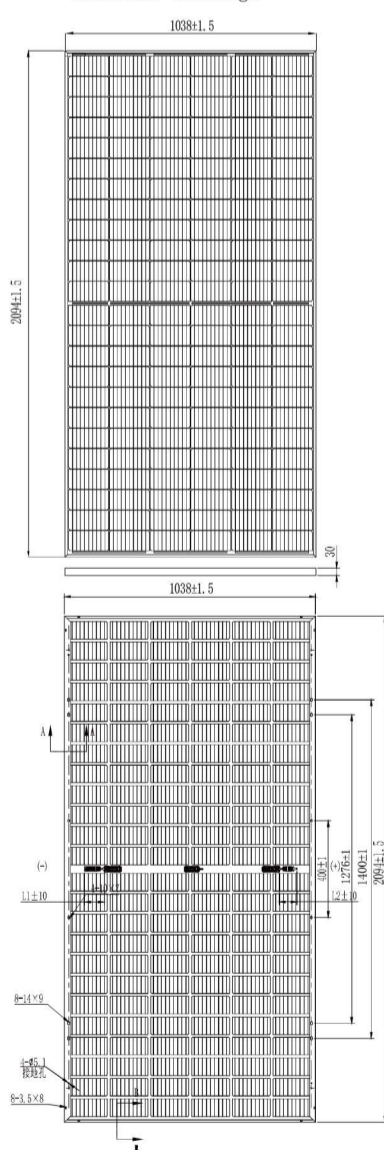
**Temperature characteristic**

Pmax Temperature Coefficient	-0.35 %/° C
Voc Temperature Coefficient	-0.26 %/° C
Isc Temperature Coefficient	+0.047 %/° C
Operating Temperature	-40~+85 ° C
Nominal module operation temperature	45 ± 2 ° C

**Mechanical Specifications**

External Dimension	2094*1038*30mm
Weight	27.0kg
Solar Cell	Mono crystalline166*83mm, 144 (6*24)
Glass	2.0mm Tempered Glass
Frame	Anodized aluminum alloy
Junction Box	IP68, 3diodes, MC4 compatible
Output Cables	4.0mm <sup>2</sup> , 200mm(+)/300mm(-)or Customized Length
Mechanical Load	Front side 5400pa/Back side 2400pa
Packaging Configuration	36pcs / box, 792pcs / 40' HQ Container

Technical drawings



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