ELECTRICAL PARAMETERS AT STC

Model	FXN390M-72HC	FXN395M-72HC	FXN400M-72HC	FXN405M-72HC	FXN410M-72HC
Maximum Power at STC(Pmax)	390W	395W	400W	405W	410W
Open-circuit Voltage(Voc)	49V	49.2V	49.24V	49.39V	50.12V
Short-Circuit Current(Isc)	10.44A	10.53A	10.57A	11.02A	11.14A
Optimum Operating Voltage (Vmp)	40.8V	41V	41.17V	41.45V	41.76V
Optimum Operating Current(Imp)	9.57A	9.64A	9.72A	9.77A	9.82A
Module Efficiency	19.79%	20.04%	20.61%	20.87%	21.13%
Power Tolerance	0 ~ +5W				
Maximum System Voltage	1000V / 1500V DC(IEC)				
Maximum Series Fuse Rating	15A				
Operating Temperature	-40℃ to + 85℃				

*STC:Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NOCT

Model	FXN390M-72HC	FXN395M-72HC	FXN400M-72HC	FXN405M-72HC	FXN410M-72HC
Maximum Power	289W	293W	296W	300W	303W
Open Circuit Voltage （Voc）	46.3V	46.5V	46.52V	45.67V	46.72V
Short Circuit Current (Isc)	8.43A	8.5A	8.53A	8.57A	8.63A
Maximum Power Voltage (Vmp)	38.6V	38.7V	38.76V	38.82V	38.89V
Maximum Circuit Current (Imp)	7.49A	7.57A	7.64A	7.72A	7.76A
NOCT	45℃±2℃				

*NOCT：Irradiance 800W/m²，ambient temperature 20℃，wind speed 1 m/s

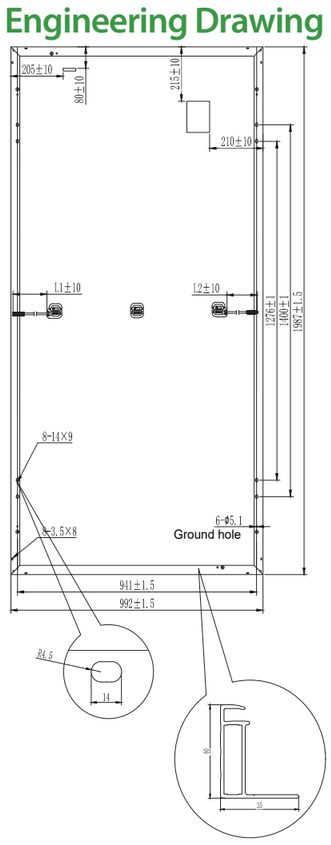
Mechanical Characteristics

Solar Cells	Monocrystalline 156.75 × 78.375mm
No.of Cells	144(6×24)
Dimensions	1987mm×992mm×40mm
Weight	23.0kg
Front Glass	High transmission tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP67
Cable	4mm² (IEC)
Connectors	MC4 / MC4 Compatible
Packaging Configuration	26pcs / box, 572pcs / 40'HQ Container

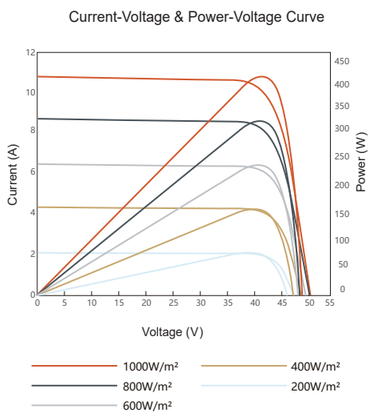
Temperature Characteristics

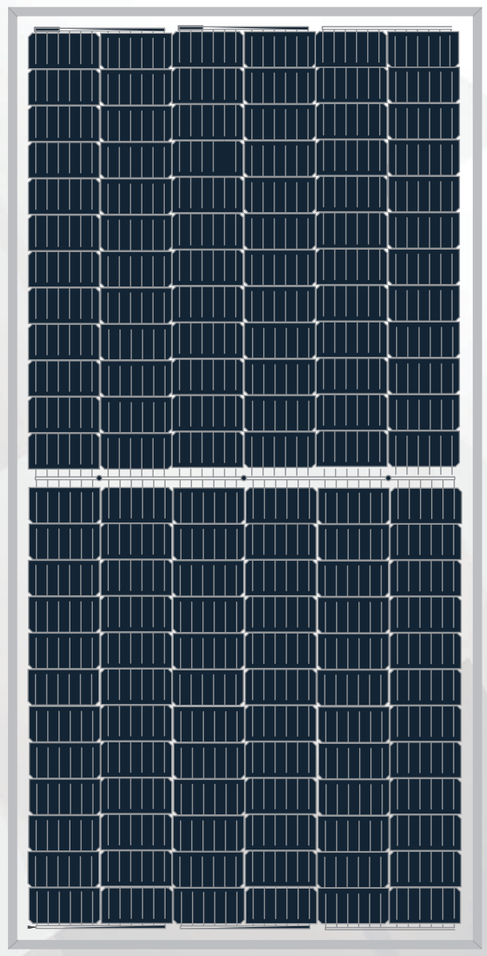
Temperature Coefficient of Pmax	γ (Pm)	-0.39%/K
Temperature Coefficient of Voc	β (Voc)	-0.29%/K
Temperature Coefficient of Isc	α (Isc)	0.049%/K

Engineering Drawing



I-V Curves





PERC HALF CELL MODULE

390 - 410 Watt

A Module re-Modeled

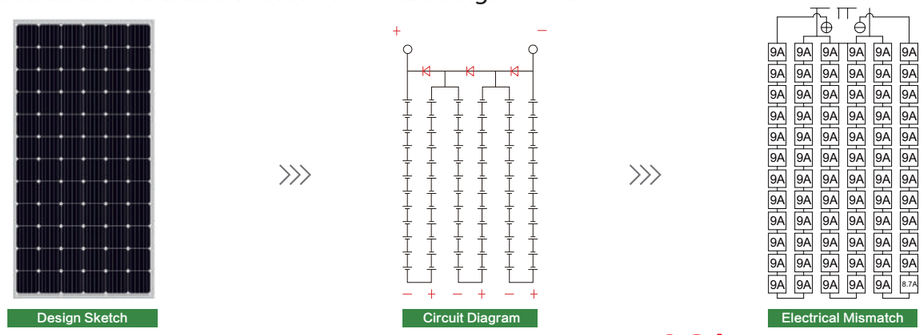
Half Cell solar module boasts two identical parts, which are composed of cells that are half the size of ordinary solar cells. By cutting into halves, these smaller currents will help reduce “Cell To Module” loss, which means higher output.
In the meantime, the overall space between cells are doubled, and more light will be transferred into power through multiple reflections. Compared to mainstream standard modules, half cell module has lower current and series resistance which helps
minimize mismatch loss, internal power loss, and shadow effect etc. Once one cell has EL defect or appearance defect, such as black edge or V sharp. After cutting,one intact half can be reused.

More Output | Higher Efficiency | Higher ROI

Less Mismatch Loss

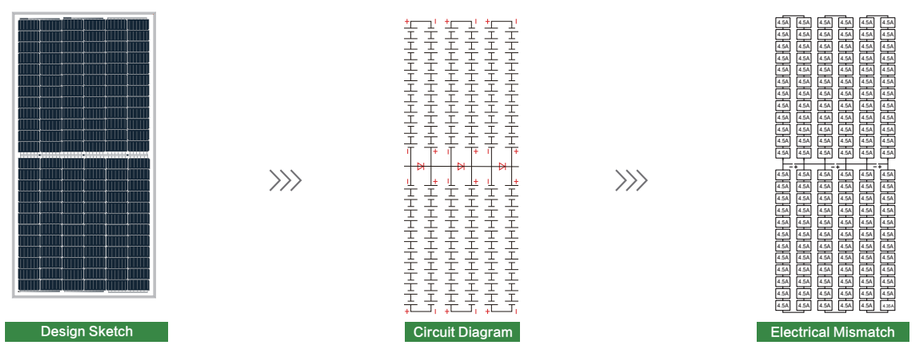
Instead of 6 internal strings of cells, half cell module has 2*6 shorter ones. This design effectively deals with the mismatch happened between cells caused by shadow, out of sync performance degradation, etc.

Standard Module / With 6 internal strings of cells



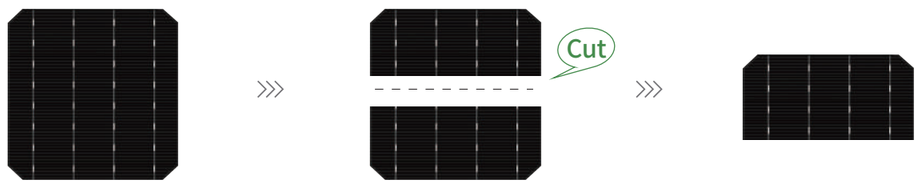
Module current output is 8.7A, current mismatch series is 0.3A.

Half Cell Module / With 2 x 6 internal strings of cells



Module current output is 4.5+4.35=8.75A, current mismatch series is 0.15A.

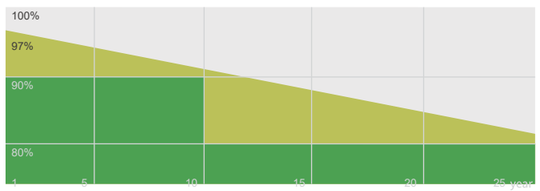
Less Internal Power Loss



Standard Cell **Half Cell**

The ribbon length of half-cell is shorter than normal cell. Calculated by Joule’s law and Ohm’s law, the power loss reduction is nearly 6%.

Warranty



Standard Module

- 25-year- product warranty
- 25-year-linear power output warranty

Higher Yield Due to Better Shading Response

Half Cell Module comprises two separated and identical solalr cell arrays, which means the ordinary strings of cells are cut into halves, and these shorter strings compose which has separated current paths. When a module is shaded, only one side shaded array’s current will be impacted, while the other array will still be functionally producing power. Under this circumstance, when a module is shaded, the affected working areas of Blade will be 50% less.
By cutting solar cell into halves, the internal power loss will be lower and hot spot effect will also be reduced.