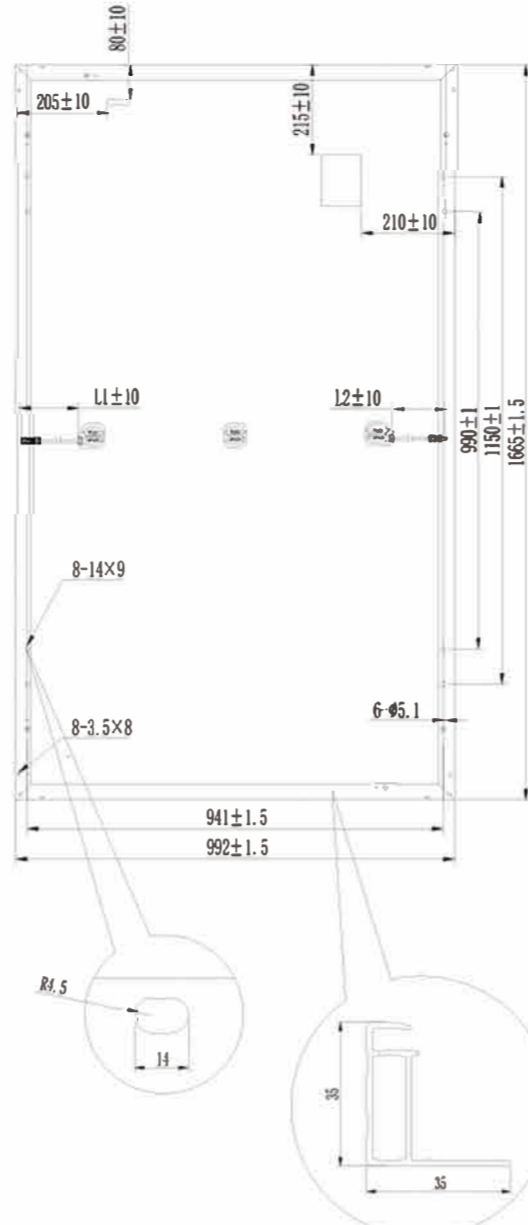


ELECTRICAL PARAMETERS AT STC

Engineering Drawing

Model	FXN310M-60HC	FXN315M-60HC	FXN320M-60HC	FXN325M-60HC	FXN330M-60HC
Nominal Power	310W	315W	320W	325W	330W
Open-circuit Voltage(Voc)	40.2V	40.4V	40.6V	40.8V	41V
Short-Circuit Current(Isc)	10.12A	10.23A	10.34A	10.45A	10.56A
Maximum Power Voltage(Vmp)	33.3V	33.5V	33.7V	33.9V	34.1V
Maximum Circuit Current (Imp)	9.32A	9.42A	9.51A	9.6A	9.69A
Module Efficiency(%)	18.77%	19.07%	19.37%	19.68%	19.98%
Power Tolerance	0 ~ +5W				
Maximum System Voltage	1000V / 1500V DC(IEC)				
Maximum Series Fuse Rating	15A				
Operating Temperature	-40 °C to +85 °C				

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



NOCT

Model	FXN310M-60HC	FXN315M-60HC	FXN320M-60HC	FXN325M-60HC	FXN330M-60HC
Maximum Power	230W	233W	237W	241W	244W
Open Circuit Voltage (Voc)	38V	38.2V	38.4V	38.6V	38.7V
Short Circuit Current (Isc)	8.17A	8.26A	8.35A	8.44A	8.53A
Maximum Power Voltage (Vmp)	31.5V	31.7V	31.8V	32V	32.2V
Maximum Circuit Current (Imp)	7.3A	7.35A	7.45A	7.53A	7.58A
NOCT	45°C±2°C				

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

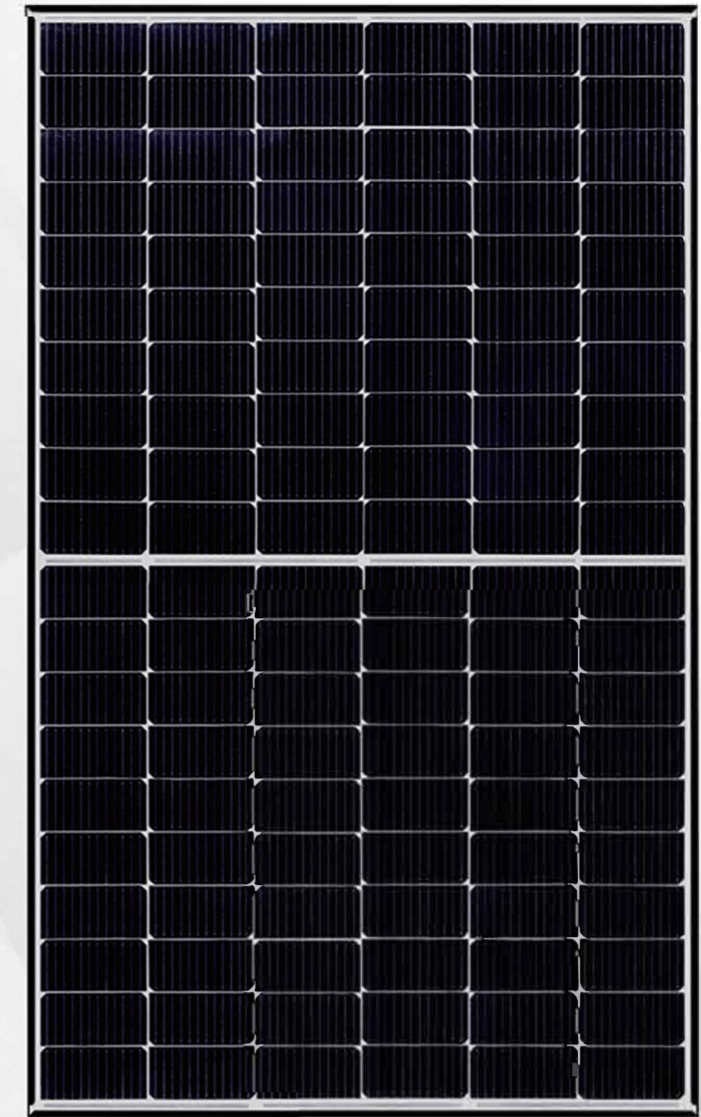
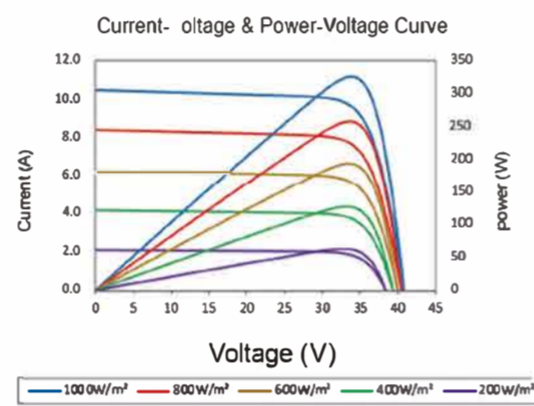
Mechanical Characteristics

Solar Cells	Monocrystalline 156.75 × 78.375mm
No of Cells	120 (6 × 20)
Dimensions	1665mm×992mm×35mm(56in×39in×1.4in)
Weight	19.0kg
Front Glass	High transmission tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP67
Cable	4mm ² (IEC)
Connectors	MCA / MCA Compatible
Packaging Configuration	30pcs / box, 840pcs / 40HQ 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

I-V Curves



PERC HALF CELL MODULE

310 - 330 Watt

+358 50 349 7879

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A Module re-Modeled

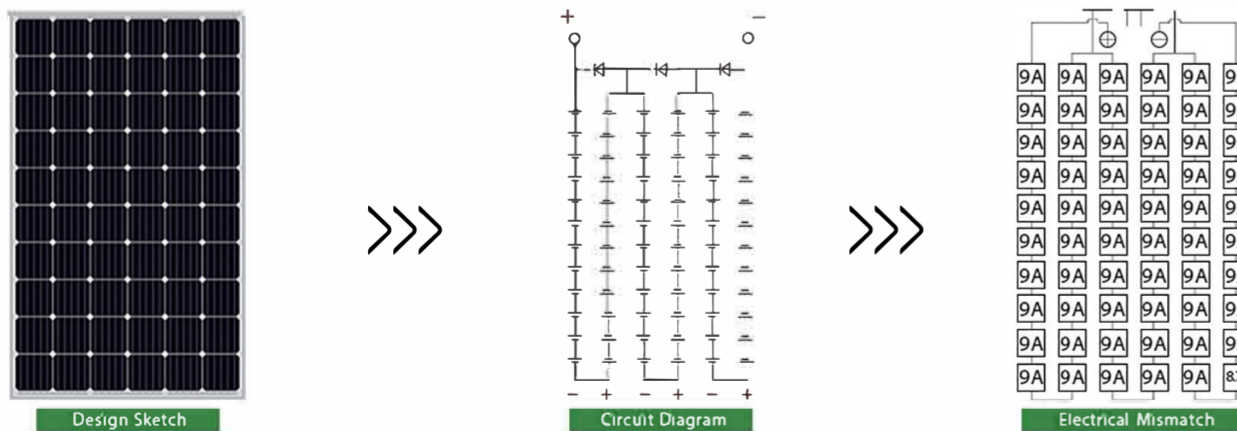
Half Cell solar module boasts two identical parts, which are composed of cells that are half the size of ordinary solar cells. By cutting into halves, these smaller currents will help reduce "Cell To Module" loss, which means higher output. In the meantime, the overall space between cells are doubled, 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

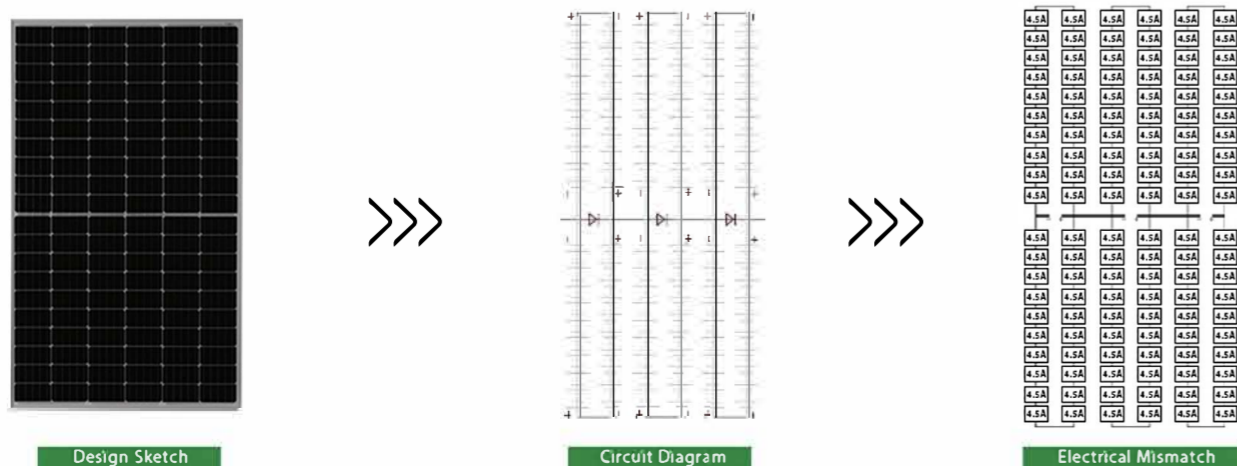
Instead of 6 internal strings of cells, half cell module has 2*6 shorter ones. This design effectively deals with the mismatch happened between cells caused by shadow, out of sync performance degradation, etc.

Standard Module / With 6 internal strings of cells



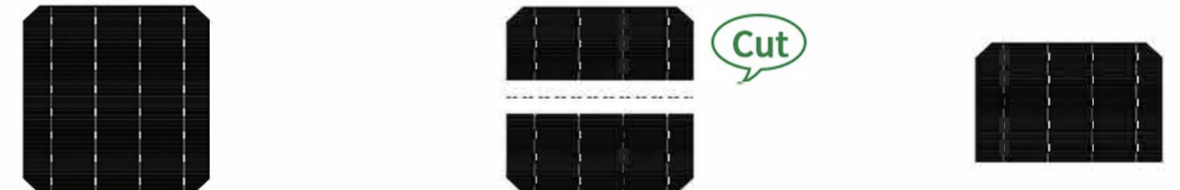
Module current output is 8.7A, current mismatch series is **0.3A**.

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

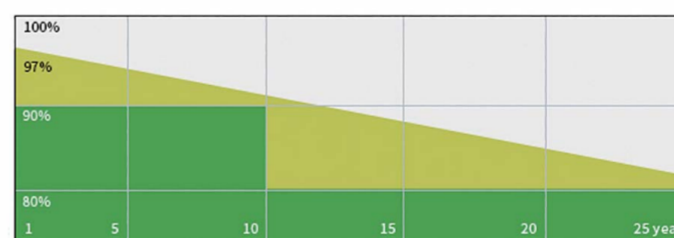


Standard Cell

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



Superior Warranty

- 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 solar 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.

Standard Module

Half Cell Module



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