

# 182 QN4MxxxH60(H) | Multi Busbar Monocrystalline Half Cell PV Module

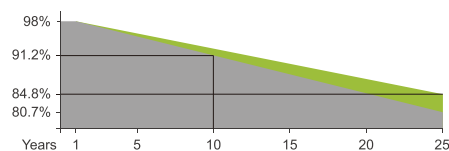
Power Output : 435W - 470W  
 Power Tolerance : 0W ~ +5W  
 Maximum Efficiency : 21.9%

## Highlights

- Assembled with multi-busbar cells**, reduce shading effect on the energy generation, lower risk of hot spot
- Pass the test for weather resistance in harsh environments (salt mist, ammonia corrosion and sand)
- Excellent encapsulating materials and strict production process to ensure highly resistance against PID (Potential Induced Degradation) of PV module.
- Lower oxygen and carbon content result in lower LID.
- Series and parallel design, reduce the series resistance RS of module, reduce the loss of internal electrical performance, and improve the power generation capacity of whole system.
- Cutting solar cell technology, which significantly reduces string current and module damage, it is good choice for projects in high temperature areas.

## Offers Long-term Quality Assurance

- 12 years Product Warranty
- 25 years Linear Power Output Warranty
- The attenuation of the power output in the first year  $\leq 2\%$   
 The annual average attenuation after the first year  $\leq 0.55\%$



## Optional

- Connector  Original MC4
- Cable length  1000mm  900mm
- Frame  Black
- Solar Module Dimension  1890x1133x40mm
- Back sheet color  Black  Transparency

## Packaging

- Number of modules per pallet: 31 pcs
- 17.5\*2.8m Flatbed loading: 1054 pcs
- 13.0\*2.35m Flatbed loading: 806 pcs
- 40HQ Standard container: 744 pcs

## Electrical performance parameters | STC

Power Output	Pmax(W)	435	440	445	450	455	460	465	470
Rated Power Maximum Voltage	Vmp(V)	34.20	34.30	34.50	34.60	34.80	34.90	35.10	35.20
Rated Power Maximum Current	Imp(A)	12.73	12.82	12.91	13.00	13.08	13.17	13.26	13.35
Open Circuit Voltage	Voc(V)	40.60	40.70	40.90	41.00	41.20	41.30	41.50	41.60
Short Circuit Current	Isc(A)	13.36	13.44	13.53	13.61	13.69	13.78	13.86	13.95
Module Efficiency	(%)	20.3	20.5	20.8	21.0	21.2	21.5	21.7	21.9
Power Tolerance	(W)	0~+5W							

\* STC : 1000W/m<sup>2</sup> irradiance, 25°C module temperature, AM1.5 spectrum.  
 Power measurement error +/- 3%

## Electrical performance parameters | NMOT

Power output	Pmax (W)	329.3	333.1	336.8	340.6	344.4	348.2	352.0	355.7
Rated Power Maximum Voltage	Vmp (V)	31.70	31.80	32.00	32.10	32.30	32.40	32.50	32.70
Rated Power Maximum Current	Imp (A)	10.38	10.46	10.53	10.60	10.67	10.75	10.82	10.89
Open Circuit Voltage	Voc (V)	38.30	38.50	38.60	38.70	38.90	39.00	39.20	39.30
Short Circuit Current	Isc (A)	10.70	10.76	10.83	10.90	10.97	11.03	11.10	11.17

\* NMOT: 800W/m<sup>2</sup> irradiance, 20°C module temperature, 1m/s wind speed.  
 Power measurement error +/- 3%

## Structure Features

Solar Cell	182MONO(Half Cell)
Solar Cell Array	120 pcs(6×20)
Module Dimension	1890×1133×35mm
Weight	22.5 kg
Glass	3.2 mm (0.13 inches) highly transparent anti-reflection coating tempered glass
Back sheet	White
Frame	Anodized Aluminum Alloy
Junction Box	IP68 rated
Cable	4mm <sup>2</sup> , L=300 mm, PV cable
Diode Quantity	3
Wind Pressure/Snow Pressure	2400pa / 5400pa
Connector	MC4 Compatible

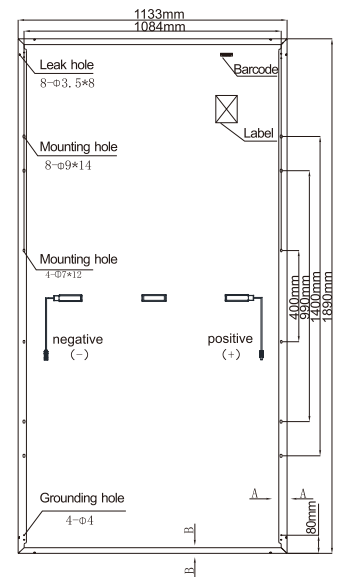
## Temperature Characteristics

Solar Cells Rated Working Temperature	44±2°C
Temperature Coefficient (Isc)	+0.06%/°C
Temperature Coefficient (Voc)	-0.35%/°C
Temperature Coefficient (Pmax)	-0.38%/°C

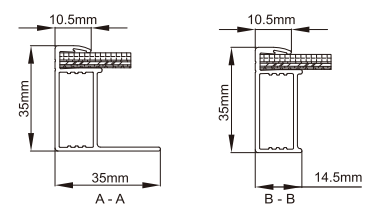
## Maximum Ratings

Working Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Maximum Fuse Rated Current	25A

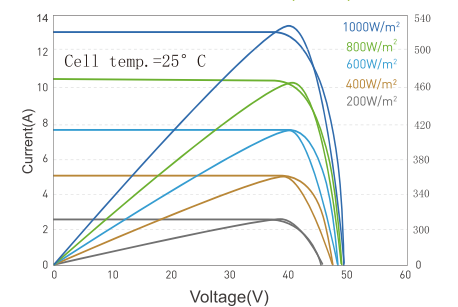
## Module Dimension



## Back View



## I-V curves/P-V curves of module under different irradiation(455w)



## I-V curves of module under different temperature(455w)

