

# 166 QN3MxxxH72(DH)-DGB

Monocrystalline Bifacial Double Glass Half Cell PV Module

Power Output : 440W-475W  
 Power Tolerance : 0W ~ +5W  
 Maximum Efficiency : 21.9%

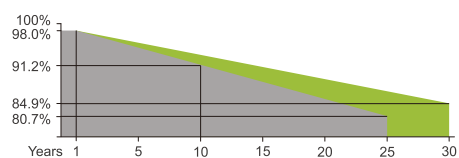


## Highlights

- 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)
- Process optimization of high efficiency PERC solar cell and strict control on raw materials to ensure highly resistance against PID of PV module.
- Better mechanical loading tolerance with the test front side 5400pa and back side 2400pa.
- 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.
- Additional safety Fire class Acertified

## Offers Long-term Quality Assurance

- 12 years Product Warranty
- 30 years Linear Power Output Warranty
- The attenuation of the power output in the first year ≤2%  
 The annual average attenuation after the first year ≤0.45%



## Optional

- Connector  Original MC4
- Cable length  1000mm  900mm
- Frame  Black
- Solar Module Dimension  2088x1032x6mm
- Glass type  Glazed  Transparency

## Packaging

- Number of modules per pallet 36 pcs
- 17.5\*2.8m Flatbed loading 1152 pcs
- 13.0\*2.35m Flatbed loading 792 pcs
- 20GP Standard container 180 pcs
- 40HQ Standard container 792 pcs

## Electrical performance parameters | STC

Power Output	Pmax(W)	440	445	450	455	460	465	470	475
Rated Power Maximum Voltage	Vmp(V)	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80
Rated Power Maximum Current	Imp(A)	10.70	10.80	10.90	11.00	11.10	11.18	11.27	11.36
Open Circuit Voltage	Voc(V)	49.50	49.60	49.70	49.80	49.90	50.00	50.10	50.20
Short Circuit Current	Isc(A)	11.30	11.40	11.50	11.60	11.70	11.80	11.90	12.00
Module Efficiency	(%)	20.2	20.5	20.7	20.9	21.2	21.4	21.6	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)	328.3	332.0	335.8	339.6	343.3	347.1	350.9	354.8
Rated Power Maximum Voltage	Vmp (V)	38.40	38.70	39.00	39.30	39.60	39.90	40.20	40.50
Rated Power Maximum Current	Imp (A)	8.55	8.58	8.61	8.64	8.67	8.70	8.73	8.76
Open Circuit Voltage	Voc (V)	45.30	45.60	45.90	46.20	46.50	46.80	47.10	47.40
Short Circuit Current	Isc (A)	9.04	9.07	9.10	9.13	9.16	9.19	9.22	9.25

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

## Electrical characteristics with different rear side power gain (450W)

Double side power gain	Power output - Pmax(W)	Open Circuit Voltage - Voc(V)	Short Circuit Current - Isc(A)	Rated Power Maximum Voltage - Vmp(V)	Rated Power Maximum Current - Imp(A)
10%	495	49.70	12.65	41.30	11.99
15%	518	49.70	13.23	41.30	12.54
20%	540	49.70	13.80	41.30	13.08
25%	563	49.70	14.38	41.30	13.63

\* Rear side power gain : The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.  
 Power measurement error +/- 3%

## Structure Features

Solar Cell	166MONO(Half Cell)
Solar Cell Array	144pCs(6×24)
Module Dimension	2094X1038X30mm
Weight	26.7kg
Glass	2.0 mm highly transparent anti-reflection coating tempered glass
Back sheet	2.0 mm highly transparent tempered glass
Frame	Anodized Aluminum Alloy
Junction Box	IP68 rated
Cable	4mm3, L=300mm, PV cable
Diode Quantity	3
Wind Pressure	2400pa
Snow Pressure	5400pa
Connector	MC4 Compatible

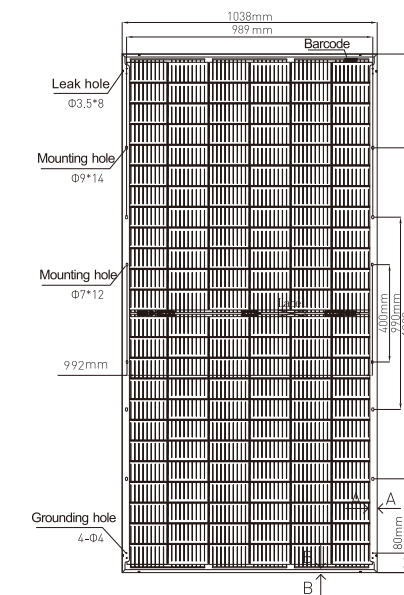
## Temperature Characteristics

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

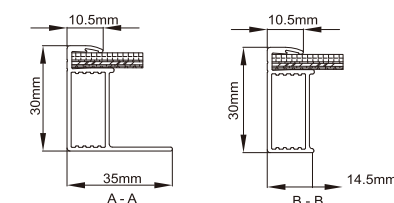
## Maximum Ratings

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

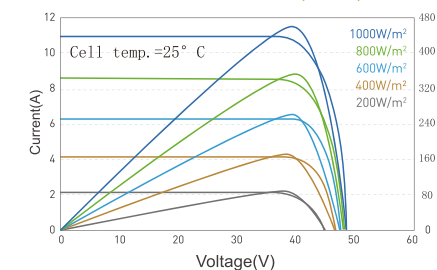
## Module Dimension



## Back View



## I-V curves/P-V curves of module under different irradiation(450w)



## I-V curves of module under different temperature(450w)

