

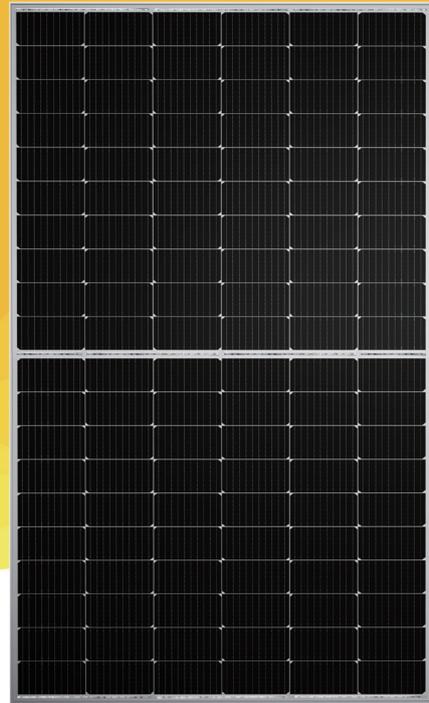


QNM182-HS-60

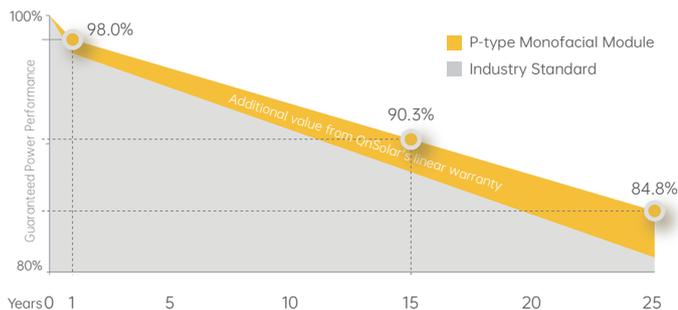
# 440-460W

Monofacial PERC Half-Cell Module

## Max Efficiency 21.26%



### LINEAR PERFORMANCE WARRANTY



Linear power guarantee over 84.8% power output after 25 years

**12~30** years

Product materials and process warranty

**25** years

Linear power warranty

**< 2%**

First year power degradation

**< 0.55%**

Year 2~25 power degradation



0~+5W positive power tolerance peak power output ensures the reliability of the module.



Effectively reduces the loss of up to 2% caused by mismatch and maximizes the output power of the system.



The module shows excellent weak light performance in the morning, evening and cloudy days.



Improved cell technology and selected materials make the module has good PID resistance.



The module can withstand wind load of up to 2400Pa and snow load of 5400Pa.

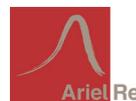
### COMPREHENSIVE CERTIFICATES

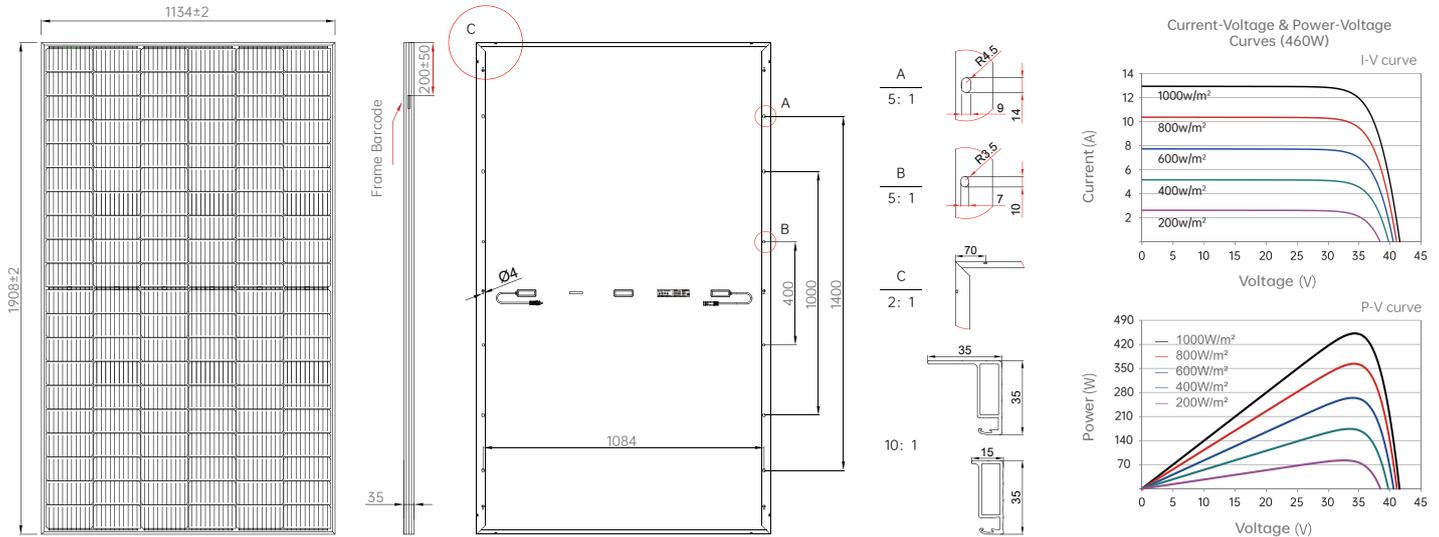


• IEC 61215, IEC 61730 • UNI9177 • ISO 9001:2015 • ISO 14001:2015 • ISO 45001:2018

\* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

### PERFORMANCE INSURANCE





ELECTRIC CHARACTERISTICS

Module Type	QNM182-HS440-60	QNM182-HS445-60	QNM182-HS450-60	QNM182-HS455-60	QNM182-HS460-60
STC Peak Power - <b>Pmax(Wp)</b>	440	445	450	455	460
Optimum Working Voltage - <b>Vmp(V)</b>	34.43	34.66	34.89	35.11	35.33
Optimum Working Current - <b>Imp(A)</b>	12.78	12.84	12.90	12.96	13.02
Open Circuit Voltage - <b>Voc(V)</b>	40.70	40.99	41.12	41.43	41.60
Short Circuit Current - <b>Isc(A)</b>	13.47	13.53	13.59	13.65	13.71
Module Efficiency (%)	20.34	20.57	20.80	21.03	21.26

STC (Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 °C , Spectra at AM1.5.

MECHANICAL PARAMETERS

Cell Type	P-type PERC Monocrystalline
Number of Half Cells	120 (2x60)
Module Size	1908mm × 1134mm × 30mm(35mm)
Weight	23.7kg (30mm Frame) / 23.9kg(35mm Frame)
Glass	3.2mm Coated tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 standard (3 bypass diode)
Output Cable	TUV (2pfg1169:2007) 4mm <sup>2</sup> /1200mm
Connector	MC4 or (Compatible with MC4)
Hailstone Test	25mm Hailstone at the speed of 23m/s
Mechanical Load	Max. Snow load 5400 Pa, Max. Wind load 2400 Pa

NOCT : Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s.

TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of <b>Pmax</b>	-0.32%/°C
Temperature Coefficient of <b>Voc</b>	-0.26%/°C
Temperature Coefficient of <b>Isc</b>	0.052%/°C
Power Tolerance (W)	0~+5
Maximum Series Fuse Rating	25A
Maximum System Voltage	DC1500V
Operating Module Temperature	-40°C ~ +85°C

PACKING CONFIGURATION (40'HC)

864 pcs / container , 24 Pallets , 36 pcs / pallet (30mm Frame)
744 pcs / container , 24 Pallets , 31 pcs / pallet (35mm Frame)



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