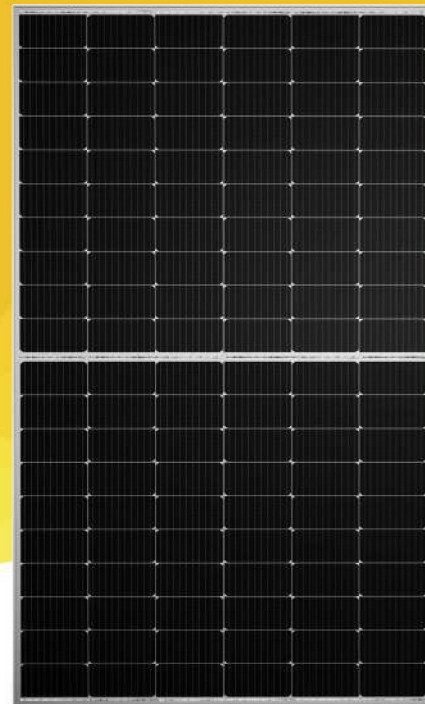




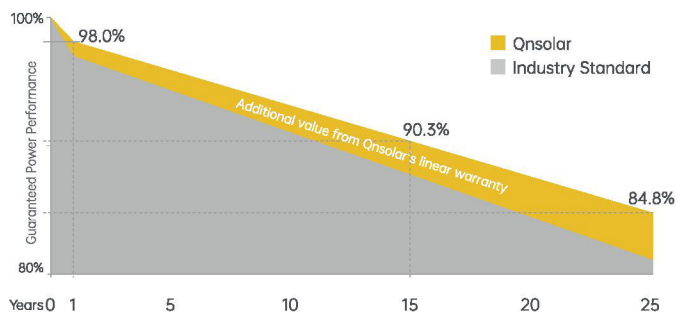
QNM182-HS-60

440-460W

Monofacial PERC Half-Cell Module



LINEAR PERFORMANCE WARRANTY



Linear power guarantee over 84.8% power output after 25 years

12 years

Product materials and process warranty

25 years

Linear power warranty

< 2%

First year power degradation

< 0.55%

Year 2-30 power degradation

COMPREHENSIVE CERTIFICATES



- IEC 61215, IEC 61730
- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Health and Safety Management System

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



The superior MBB technology and leading process ensures high efficiency.



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

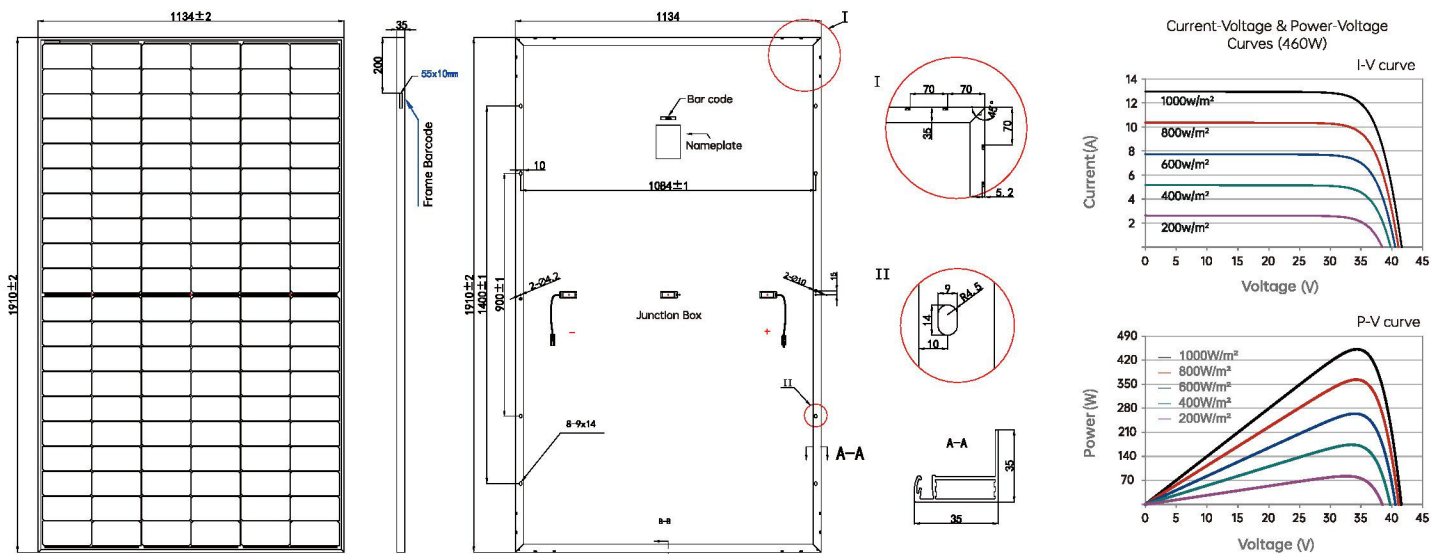


The module can withstand wind load of up to 2400Pa and snow load of 5400Pa

PERFORMANCE INSURANCE



MODULE DIMENSIONS (mm)



ELECTRIC CHARACTERISTICS

Module Type	QNM182-HS440-60	QNM182-HS445-60	QNM182-HS450-60	QNM182-HS455-60	QNM182-HS460-60
STC Peak Power P_{max}(W)	440	445	450	455	460
Power Tolerance (W)	0~+5				
Optimum Working Voltage V_m(V)	34.43	34.66	34.89	35.11	35.33
Optimum Working Current I_m(A)	12.78	12.84	12.90	12.96	13.02
Open Circuit Voltage V_{oc}(V)	40.70	40.99	41.12	41.43	41.60
Short Circuit Current I_{sc}(A)	13.47	13.53	13.59	13.65	13.71
Module Efficiency (%)	20.3	20.5	20.7	21.0	21.2

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C , Spectra at AM1.5

MECHANICAL PARAMETERS

Cell Type	P-type PERC Monocrystalline 182×91mm
Number of Half Cells	120(6×20)
Module Size	1910mm × 1134mm × 35mm(±2mm)
Weight	24.5kg(±3%)
Front Glass	3.2mm Coated tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 standard (3 bypass diode)
Output Cable	TUV (2pfg1169:2007)
	4mm ² /300mm
Connector	Compatible with MC4
Packaging of 40'HC	744pcs / 24 pallets / 31pcs per pallet

TEMPERATURE CHARACTERISTICS & OPERATING PARAMETERS

Nominal Operating Cell Temperature (NOCT)	44±2°C
Temperature Coefficient of P_{max}	-0.37%/°C
Temperature Coefficient of V_{oc}	-0.30%/°C
Temperature Coefficient of I_{sc}	0.046%/°C
Maximum System Voltage	DC1500V
Maximum Series Fuse Rating	25A
Operating Temperature	-40°C ~ +85°C
Rated Operating Cell Temperature	44°C±2°C
Front Side Maximum Static Loading	5400pa
Rear Side Maximum Static Loading	2400pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s



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