

Qrystal **P8**

Mono-Crystalline

445~460W

0~+5W POWER TOLERANCE

- High efficiency PERC single glass solar module ●
- Stronger properties, PID resistance, reduced hot spot loss ●
- Better temperature coefficient ●
- Harsh environmental adaptation ●

12 years material process warranty 

25 years power linear warranty 

**A sound quality management
system and product certification**

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality management system

ISO14001:2015: Environmental management system

ISO45001:2018: Occupational health and safety management system



21.2% MAXIMUM CONVERSION	0~+5W POWER TOLERANCE	0.55% 0.55% PER YEAR OVER 25 YEARS	Half-Cut Module LOWER TEMPERATURE COEFFICIENT
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Specification

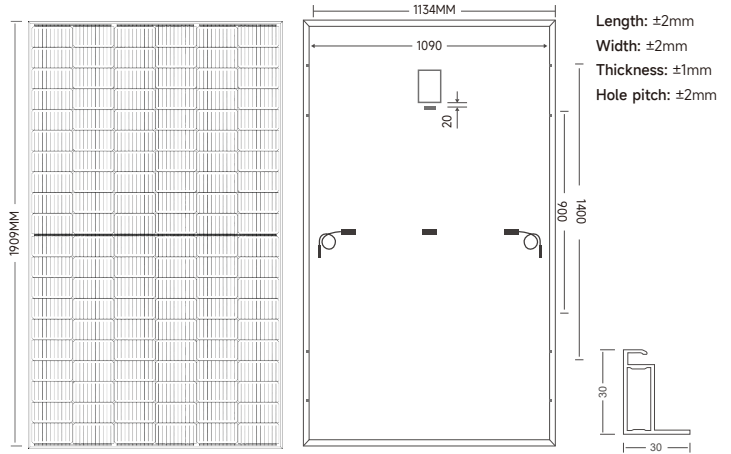
Cell Type	PERC Mono Crystalline, 10BB or 11BB
Half-cell Quantity	120 (6×20) pcs
Dimension	1909×1134×30mm
Weight	24kg±3%
Glass	3.2 mm Tempered Glass
Frame	Sliver/Black Anodized Aluminum Alloy
Junction Box	IP68
Cable Length	300mm,1200mm (can be customized)

Packing Standard

36pcs/pallet

40HQ: 24 pallets/container, 864pcs/container

Mechanical Diagrams



Electrical Parameters At STC

Module Type	QN-445HT-1	QN-450HT-1	QN-455HT-1	QN-460HT-1
Peak Power-Pmax (W)	445	450	455	460
Open Circuit Voltage-Voc (V)	41.20	41.35	41.5	41.75
Short Circuit Current-Isc (A)	13.75	13.83	13.90	13.97
Maximum Power Voltage-Vmp(V)	34.75	34.90	35.05	35.20
Maximum Power Current-mp(A)	12.81	12.90	12.99	13.07
Module Efficiency - nm(%)	20.5	20.8	21.0	21.2

Electrical Parameters At NOCT

Maximum Power-Pmax(W)	333.7	337.5	341.2	345.4
Open Circuit Voltage-Voc (V)	38.50	38.64	38.79	38.94
Short Circuit Current-Isc (A)	11.06	11.14	11.22	11.30
Maximum Power Voltage-Vmp (V)	31.63	31.76	31.90	32.07
Maximum Power Current-Imp (A)	10.55	10.63	10.70	10.77

Operating Parameters

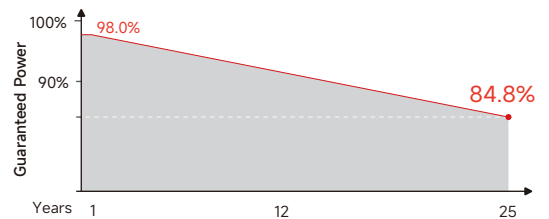
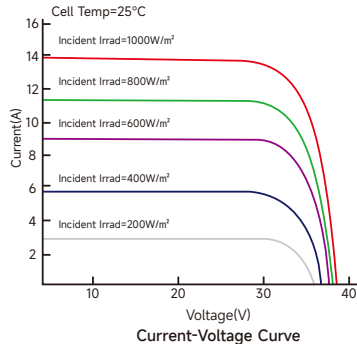
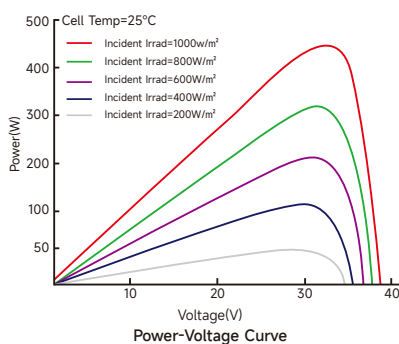
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Operational Temperature	-45°C~+85°C
Safety Class	Class II

Temperature Coefficient (STC Test)

Temperature Coefficient of Isc	+0.055%/°C
Temperature Coefficient of Voc	-0.289%/°C
Temperature Coefficient of Pmax	-0.380%/°C

Load Capacity

Max Load Front	5400Pa
Max Load Back	2400Pa
Through Hail Testing	25mm Diameter, Impact Speed 23m/s



STC: Irradiance:1000W/m² | Battery temperature: 25°C | Atmospheric=1.5

NOCT: Irradiance:800W/m² | Ambien temperature: 20°C | Atmospheric=1.5 | Wind speed 1m/s

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