


# Crystal P8


Full Black Mono-Crystalline

## 405~420W

0~+5W POWER TOLERANCE

- High efficiency PERC single glass full black solar module
- Stronger properties, PID resistance, reduced hot spot loss
- Better temperature coefficient
- Harsh environmental adaptation
- Full black module, aesthetic appearance

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

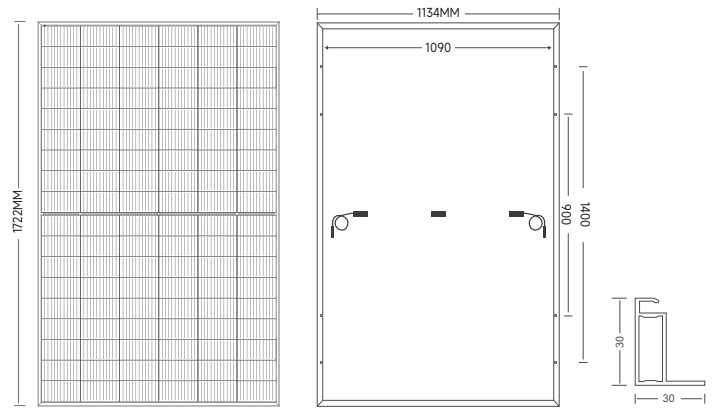


<b>21.5%</b> MAXIMUM CONVERSION	<b>0~+5W</b> POWER TOLERANCE	<b>0.55%</b> 0.55% PER YEAR OVER 25 YEARS	<b>Half-Cut Module</b> LOWER TEMPERATURE COEFFICIENT
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## Specification

<b>Cell Type</b>	PERC Mono Crystalline, 10BB or 11BB
<b>No. of Cells</b>	108 [2x(6x9)] pcs
<b>Dimension</b>	1722x1134x30mm
<b>Weight</b>	21kg±3%
<b>Glass</b>	3.2 mm Tempered Glass
<b>Back Sheet</b>	Black
<b>Frame</b>	Sliver/Black Anodized Aluminum Alloy
<b>Junction Box</b>	IP68
<b>Cable Length</b>	300mm,1200mm (can be customized)

## Mechanical Diagrams



Length: ±2mm Width: ±2mm Thickness: ±1mm Hole pitch: ±2mm

## Packing Standard

36pcs/pallet  
40HQ: 26 pallets/container, 936pcs/container

## Electrical Parameters At STC

Module Type	QN-405HT-1	QN-410HT-1	QN-415HT-1	QN-420HT-1
<b>Peak Power-Pmax (W)</b>	405	410	415	420
<b>Open Circuit Voltage-Voc (V)</b>	36.89	37.19	37.99	38.48
<b>Short Circuit Current-Isc (A)</b>	13.67	13.69	13.72	13.74
<b>Maximum Power Voltage-Vmp(V)</b>	31.25	31.59	31.90	32.21
<b>Maximum Power Current-mp(A)</b>	12.96	12.98	13.01	13.04
<b>Module Efficiency - nm(%)</b>	20.7	21.0	21.3	21.5

## Electrical Parameters At NOCT

	306	310	313	317
<b>Maximum Power-Pmax(W)</b>				
<b>Open Circuit Voltage-Voc (V)</b>	34.96	35.24	36.00	36.46
<b>Short Circuit Current-Isc (A)</b>	11.10	11.16	11.18	11.20
<b>Maximum Power Voltage-Vmp (V)</b>	29.00	29.23	29.51	29.80
<b>Maximum Power Current-Imp (A)</b>	10.56	10.62	10.64	10.66

## Operating Parameters

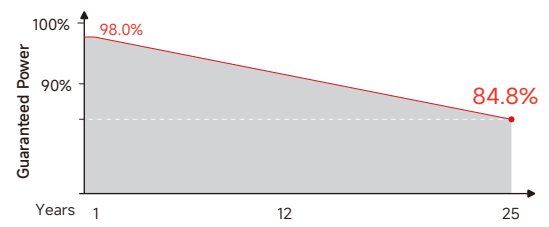
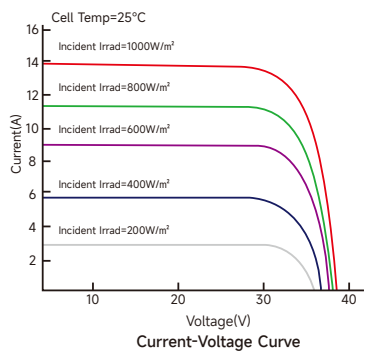
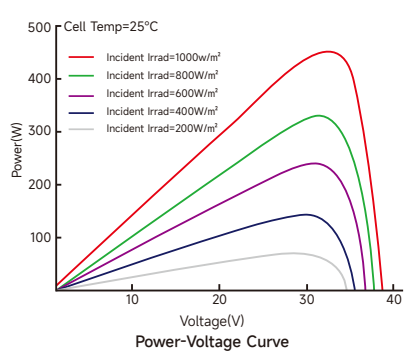
<b>Maximum System Voltage</b>	1500V DC
<b>Maximum Series Fuse Rating</b>	25A
<b>Nominal Operating Cell Temperature</b>	45±2°C
<b>Operational Temperature</b>	-45°C~+85°C
<b>Safety Class</b>	Class II

## Temperature Coefficient (STC Test)

<b>Temperature Coefficient of Isc</b>	+0.04%/°C
<b>Temperature Coefficient of Voc</b>	-0.25%/°C
<b>Temperature Coefficient of Pmax</b>	-0.34%/°C

## Load Capacity

<b>Max Load Front</b>	5400Pa
<b>Max Load Back</b>	2400Pa
<b>Through Hail Testing</b>	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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