

FullBlackMono-Crystalline

430W~450W

0~+5W POWER TOLERANCE

- High efficiency N - type Double glass black grid solar module
- Stronger properties, PID resistance, reduced hot spot loss
- Better temperature coefficient
- Harsh environmental adaptation
- Full black module, aesthetic appearance
- Bifacial module, more powergeneration

25 years material warranty **25**

30 years power linear warranty **30**

108

HALF-CUT
CELLS

182
x188
mm

RECTANGULAR
CELLS



22.5%
MAXIMUM CONVERSION

0~+5W
POWER TOLERANCE

0.4%
0.4% PER YEAR OVER 30 YEARS

Half-Cut Module
LOWER TEMPERATURE COEFFICIENT

Specification

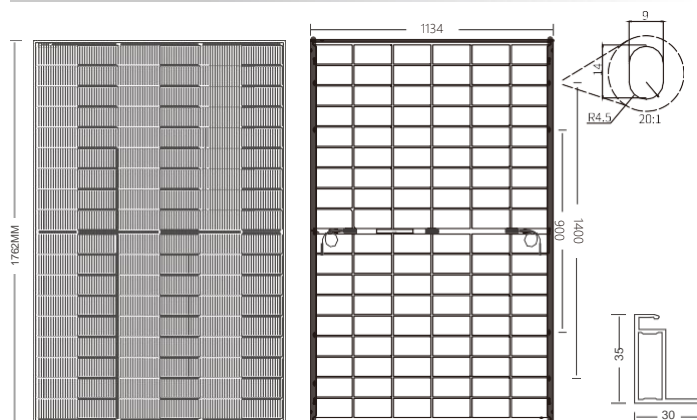
Cell Type	Mono Crystalline 16BB
No. of Cells	108 [2x(6x9)] pcs
Dimension	1762×1134×30mm
Weight	25.0kg±3%
Front Glass	2.0mm
Back Glass	2.0mm
Frame	Black Anodized Aluminum Alloy
Junction Box	IP68
Cable Length	300mm,1200mm(can be customized)

Packing Standard

36pcs/pallet

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

Mechanical Diagrams



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

Electrical Parameters At STC

Module Type	MSP430HT-5	MSP435HT-5	MSP440HT-5	MSP445HT-5	MSP450HT-5
Peak Power-Pmax (W)	430	435	440	445	450
Open Circuit Voltage-Voc (V)	38.83	39.13	39.42	39.7	39.98
Short Circuit Current-Isc (A)	14.01	14.07	14.13	14.19	14.25
Maximum Power Voltage-Vmp(V)	32.23	32.49	32.74	32.99	33.23
Maximum Power Current-mp(A)	13.34	13.39	13.44	13.49	13.54
Module Efficiency - nm(%)	21.5	21.8	22.0	22.3	22.5

Electrical Parameters At NOCT

Parameter	325	329	333	336	340
Maximum Power-Pmax(W)	325	329	333	336	340
Open Circuit Voltage-Voc (V)	36.89	37.17	37.45	37.72	37.98
Short Circuit Current-Isc (A)	11.21	11.26	11.3	11.35	11.4
Maximum Power Voltage-Vmp (V)	30.46	30.7	30.94	31.18	31.4
Maximum Power Current-Imp (A)	10.67	10.71	10.75	10.79	10.83

Operating Parameters

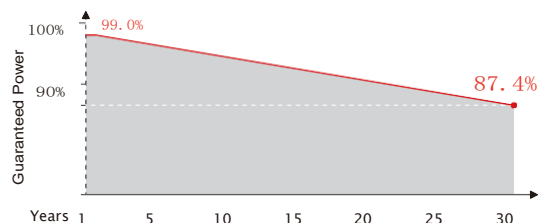
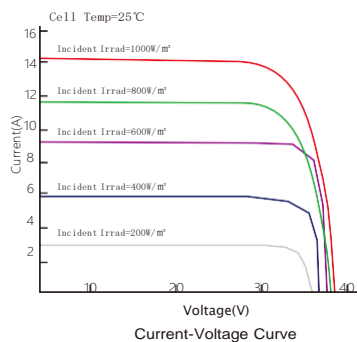
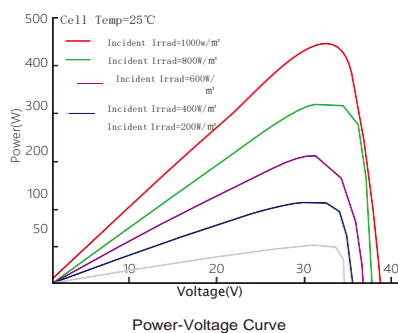
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	42±2°C
Operational Temperature	-45°C~+85°C
Safety Class	Class II

Temperature Coefficient (STC Test)

Temperature Coefficient of Isc	+0.04%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Pmax	-0.29%/°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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