

SINGLE CRYSTAL

450W MBB PERC

Half Piece Assembly

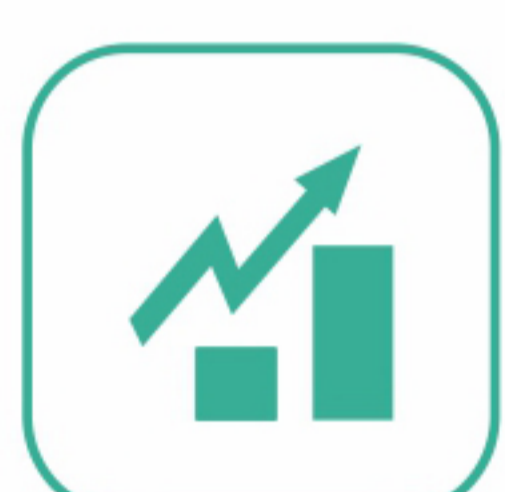
HN-M8/60GF 435-450 SERIES



Product Introduction

Adopting high-efficiency MBB perc multiple grid batteries combined with half cutting technology, the product has higher output power and effectively reduces the system cost; The product has excellent performance in temperature coefficient and shadow shading loss. At the same time, the half piece technology effectively reduces the risk of hot spots, and has better power generation performance and reliability in system applications.

Main Features



Higher Power Output

0~+5W positive power tolerance guarantee



Better Temperature Coefficient

maximum power (Pmax)
temperature coefficient of $-0.35\%/^{\circ}\text{C}$



Less Shielding Loss

get better resistance to hot spots
by optimizing circuit design



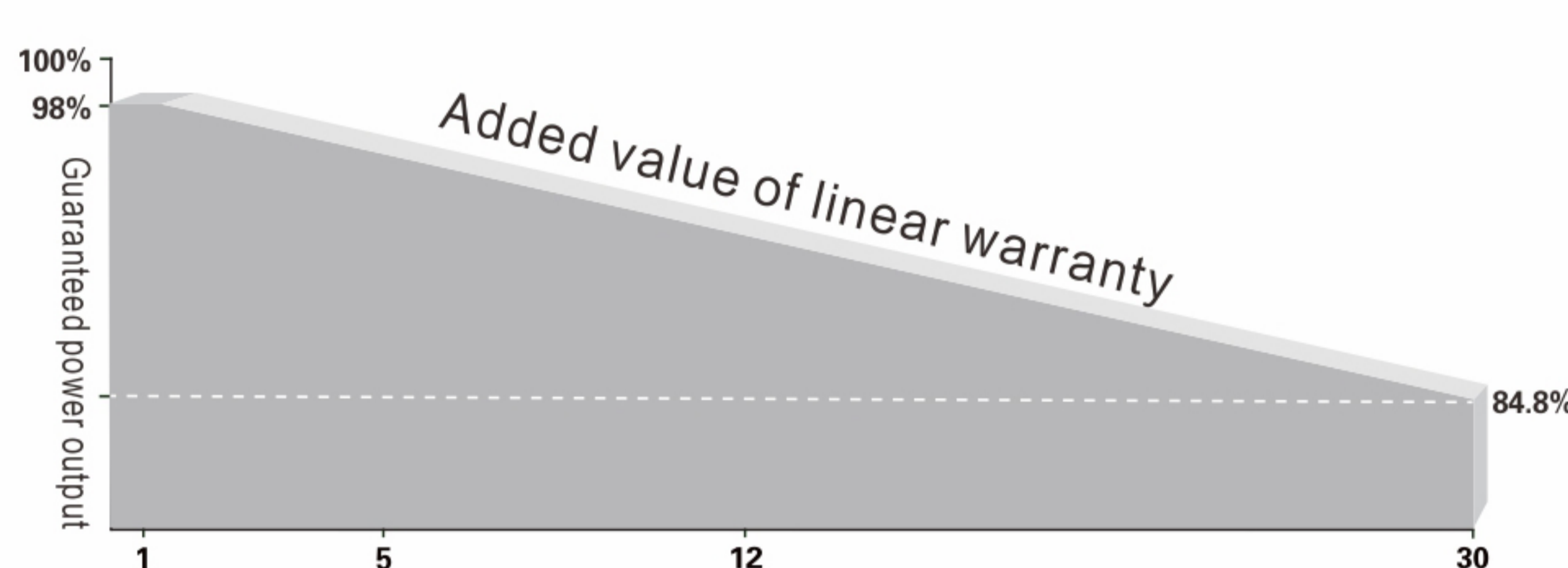
Stronger Mechanical Properties

it has passed the certification of 2400pa
wind load and 5400pa snow load

Industry Leading Linear Warranty

12 year material and process warranty and 30 year linear warranty

$\leq 2\%$ in the first year, from the second year to the 30th year: $\leq 0.45\%$ per year

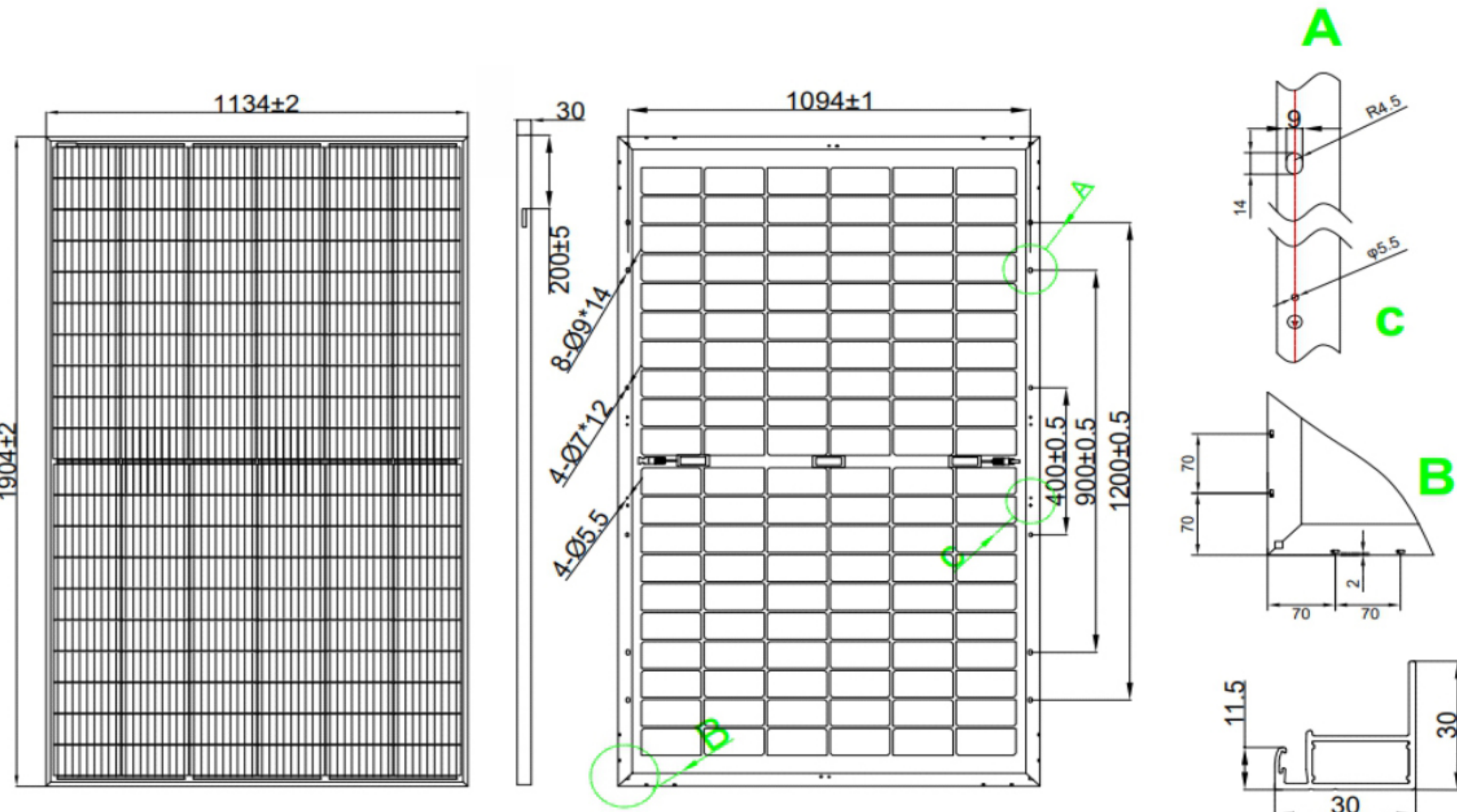


Comprehensive Product And System Certification



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Engineering Drawings



Note: the border color and cable length can be customized on demand

Product Specifications

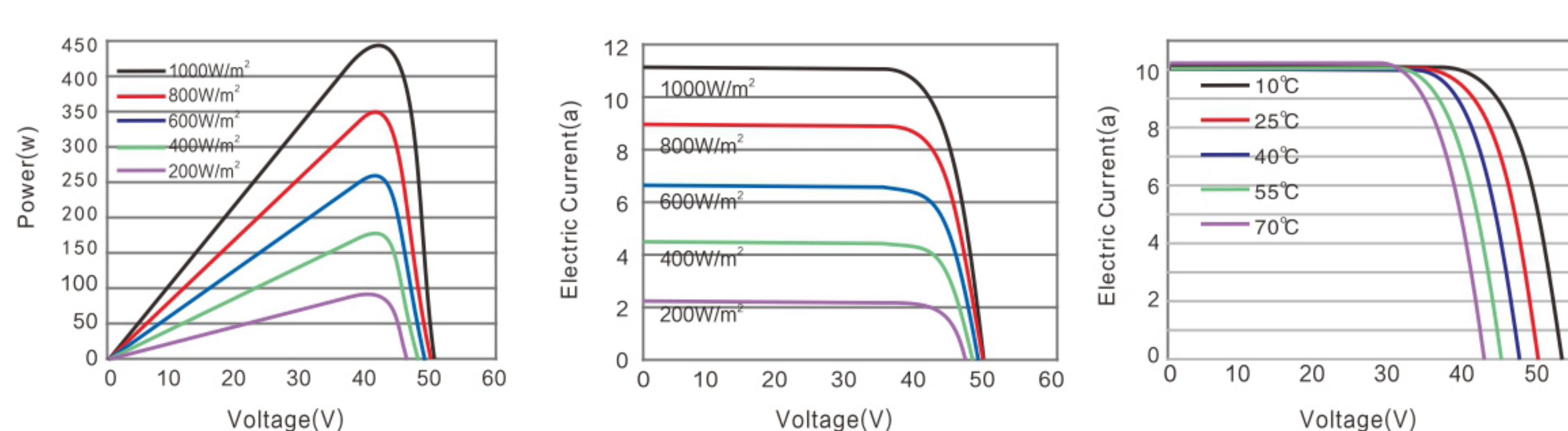
Battery Type	Single crystal
Battery Slice	120 (6*20)
Component Size	1904*1134*30mm
Glass Thickness	2.0mm
Border Type	Anodized aluminum profile
Junction Box	IP68 , 3SPLIT
Cable Section	4mm ² (IEC) , 12AWG(UL)

Battery Performance Parameters

Model	HN-M8/60GF435		HN-M8/60GF440		HN-M8/60GF445		HN-M8/60GF450	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Rated Peak Power(pmax)[w]	435	323	440	327	445	331	450	335
Rated Peak Voltage(vmp)[v]	33.97	21.22	34.02	31.39	34.07	31.56	34.12	31.73
Rated Peak Current(imp)[a]	12.80	10.37	12.93	10.43	13.06	10.49	13.19	10.55
Open Circuit Voltage(voc)[v]	41.20	38.65	41.26	38.72	41.32	38.79	41.38	38.87
Short Circuit Current(isc)[a]	13.47	11.04	13.61	11.09	13.75	11.14	13.91	11.19
Overall Efficiency Of Components(%)	19.80%		20.10%		20.40%		20.60%	
Operating Temperature(°C)	-40°C~+85°C							
Maximum System Voltage	1500VDC(IEC)							
Maximum Fuse Rated Current	20A							
Power Tolerance	0~+3%							
Rated Power Temperature Coefficient (pmp)	-0.35%/°C							
Open Circuit Voltage Temperature Coefficient (voc)	-0.28%/°C							
Short Circuit Current Temperature Coefficient(isc)	0.048%/°C							
Nominal Operating Temperature Of Battery	45 ± 2°C							
Number Of Diodes	3							
Protection Grade Of Junction Box	IP68							

STC : light intensity 1000w/m², battery temperature 25 °C, atmospheric quality =1.5 NOCT: light intensity 800w/m², battery temperature 20 °C, atmospheric quality =1.5, wind speed 1m/s

Characteristic Curv



Packaging Parameters

Component Weigh	28.5kg ± 3%
Single Trailer Quantity	36pieces / tray
Weight Per Palle	1076kg
Loading Capacity	864 pieces/40ft containers 1080pieces / car (17.5m flat car)