

# Photovoltaic Module Monocrystalline120

## KEY FEATURES



High module efficiency through superior manufacturing technology



No power loss thanks to improved temperature co-efficient caused by 10 busbar solar cell



Strictly control the micro-crack of solar cells and the other non visible defect of internal modules



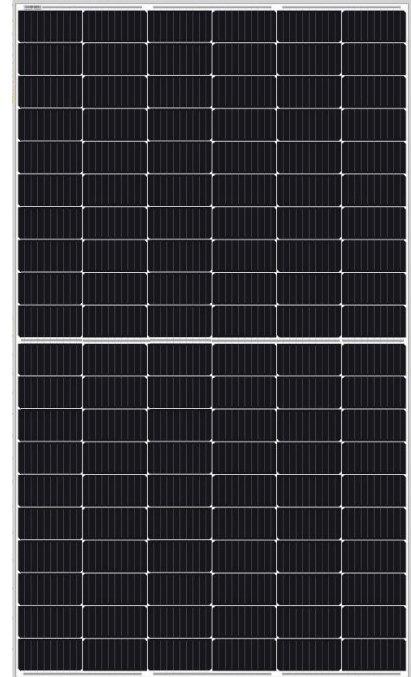
Module can bear snow loads up to 5400Pa and wind loads up to 2400Pa



Manufactured according to and certified international I Quality and Environment Management System



Using advanced low reflection and high light transmission glass and cell sheet surface cutting technology, in the weak light environment can also play a good performance.



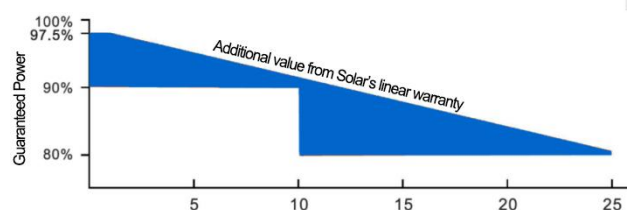
## Certificates

- IEC61215, IEC61730, CQC, CE, TUV
- ISO9001:2015
- ISO14001:2015
- ISO45001:2018



## Warranties

- 15 years product warranty
- 25 years power warranty



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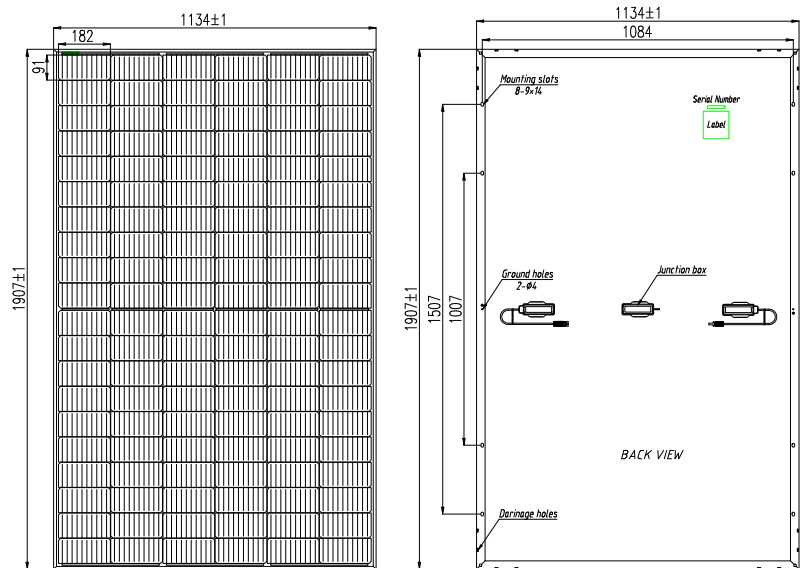
# Electrical Characteristics

Model	NS-440MH-120	NS-445MH-120	NS-450MH-120	NS-455MH-120	NS-460MH-120
Maximum Power at STC(Pmax)	440W	445W	450W	455W	460W
Optimum Operating Voltage (Vmp)	34.45V	34.63V	34.80V	34.97V	35.16V
Optimum Operating Current (Imp)	12.78A	12.86A	12.94A	13.02A	13.09A
Open-Circuit Voltage (Voc)	41.10V	41.30V	41.50V	41.70V	41.90V
Short-Circuit Current (Isc)	13.72A	13.55A	13.64A	13.73A	13.80A
Solar Cell Efficiency (%)	22.43	22.68	22.94	23.19	23.45
Solar Module Efficiency (%)	20.34	20.57	20.80	21.04	21.27
Operating Temperature	-40to85°C				
Maximum System Voltage	DC1500V				
Maximum Series Fuse Rating	25A				
Power Tolerance	0~+3%				
STC:Irradiance 1000W/m <sup>2</sup> , Modules Temperature 25°C,AM=1.5					

## Temperature Coefficient

NOCT	45°C ± 2°C
Temperature Coefficient of Pmax	-0.34%/°C
Temperature Coefficient of VOC	-0.26%/°C
Temperature Coefficient of ISC	+0.05%/°C

## Engineering Drawings



## Mechanical Characteristics

No. of cells	120(6×10+6×10)
Dimensions	1907mm*1134mm*35mm
Weight	23.7kg
Front glass	3.2mm tempered glass
Frame	Anodized aluminium alloy
Junction box	IP68, three diodes
Connector	Plug and socket
Output cables	PV 4.0mm <sup>2</sup>
1*40'HQ	31 pcs/Pallet, 794 pcs/ 40'HQ;

## IV-Curves

