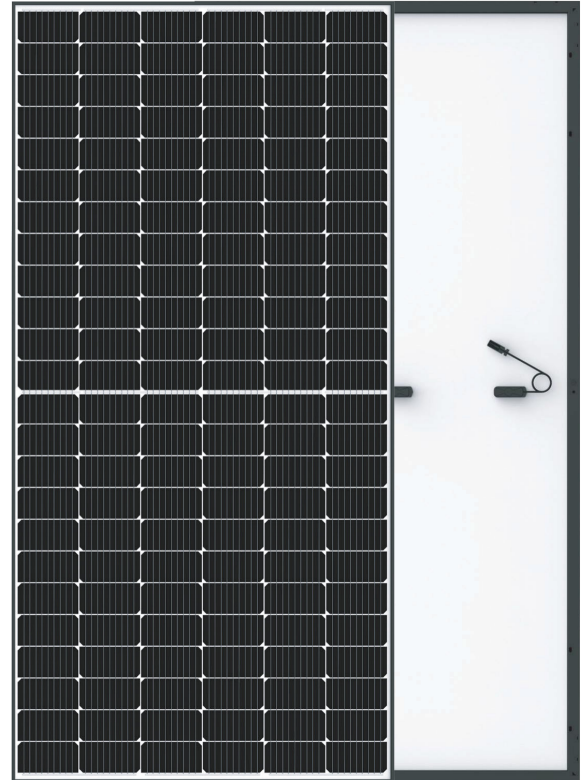
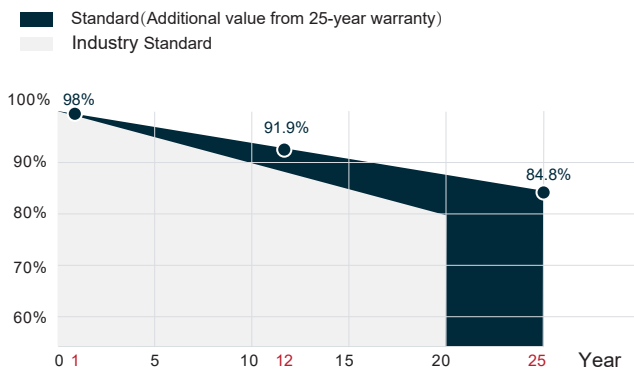




## Tier 1 460W Solar Panel

SKU: 11896 Black frame

12Yr quality guarantee | 25Yr power warranty



### WARRANTY & GUARANTEE

Linear output power guarantee  
12 years: 91.9% power output  
25 years: 84.8% power output



### WITHSTAND STRONG

Snow load 5400Pa  
Wind load 2400Pa



### R&D AND PRODUCTION

Advanced production line.  
The leading solar cell cutting process and multi busbar design.



### HIGH EFFICIENCY

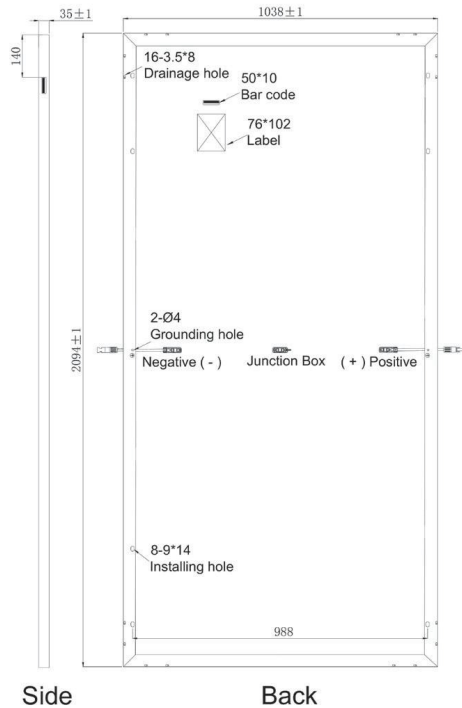
Efficiency can reach 21.28%. Excellent low light performance. Higher power output under the conditions of haze, overcast, etc.



### POWER TOLERANCE

Power positive tolerance: 0~+3%

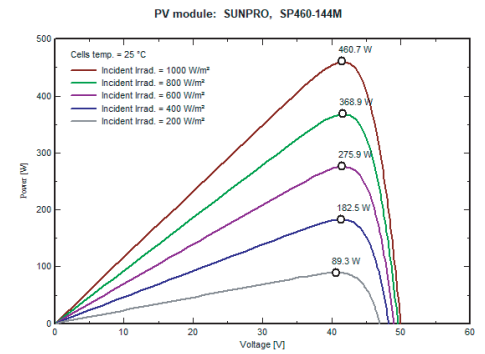
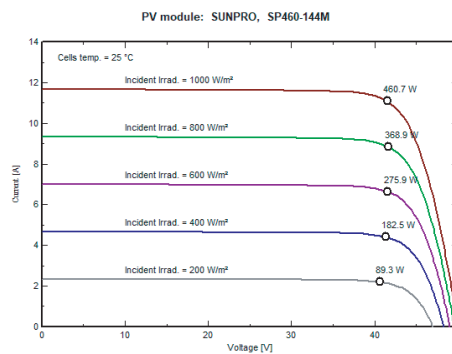
## ENGINEERING DRAWING



## Mechanical Data

Dimensions	2094x1038x35mm
Weight	23.5 kg
Glass	3.2mm ultra clear embossed tempered coated glass
Output cables	4mm <sup>2</sup> , symmetrical lengths 1300mm
Connectors	MC4 compatible IP68
Cell type	Mono-Crystalline PERC, 166x83mm
Number of cells	144 cells ( Half-Cell )

## I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



### Electrical parameters at NMOT test conditions

(Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s)

Max power(Pmax)	343
Max power voltage(Vmp)	38.5
Max power current(Imp)	8.91
Open circuit voltage(Voc)	46.6
Short circuit current(Isc)	9.44

### Electrical parameters at standard test conditions

(STC:AM=1.5, 1000W/m<sup>2</sup>, Cells Temperature 25)

Max power(Pmax)	460
Max power voltage(Vmp)	41.20
Max power current(Imp)	11.17
Open circuit voltage(Voc)	50.00
Short circuit current(Isc)	11.69
Module Efficiency(%)	21.16
Max system voltage	DC 1500V(TÜV)
Maximum Series Fuse Rating	20A

## Temperature Characteristics

Temp.Coeff.of Isc(TK Isc)	0.05%/°C
Temp.Coeff.of Voc(TK Voc)	-0.29%/°C
Temp.Coeff.of Pmax(TK Pmax)	-0.34%/°C
Operating temperature	-40~+85 °C
Normal operating cell temperature	44±2°C

## Packing Configuration

Container	40'HQ
Pieces per pallet	66
Pallets per container	11
Pieces per container	726

## Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730, IEC 61701, IEC 62716, PPP 58042
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TÜV, CE, INMETRO, WEEE
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+3%
Junction box	IP 68
Warranties	12 years product warranty and 25 years 84.8% of power