

Tier1

BloombergNEF



ISO 9001  
ISO 45001

ISO 14001  
OHSAS 18001

SA 8000



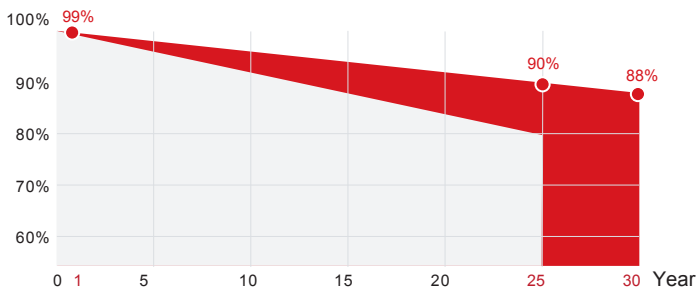
## M6 HI-EFF TWIN MONO (HJT)

SP-144DSNXXX  
450~480W

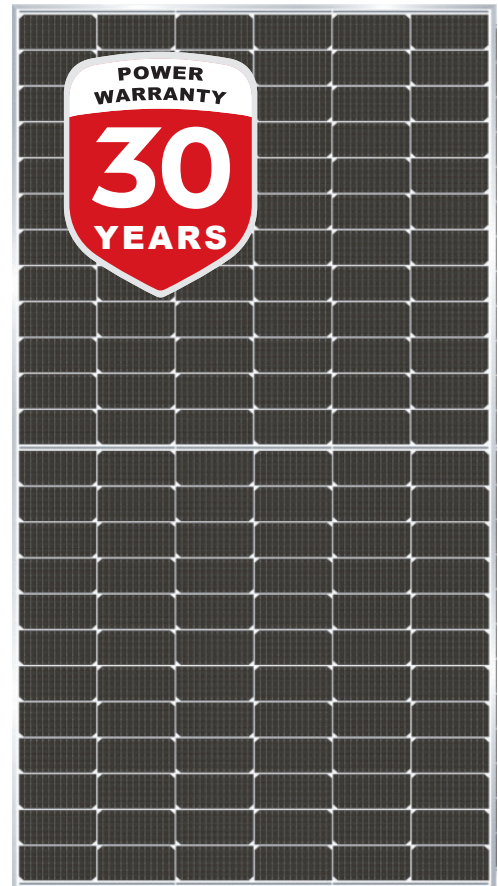
- Bifacial Transparent
- Double glass
- Silver frame
- Black frame

· 15 Yr quality guarantee | 30Yr power warranty

■ SUNPRO HJT module (Additional value from 30-year warranty)  
 ■ Common module



\*SUNPRO Standard tiered warranty



### WARRANTY & GUARANTEE

Linear output power guarantee  
25 years: 90% power output  
30 years: 88% power output



### WITHSTAND STRONG

Snow load 5400Pa  
Wind load 2400Pa



### ADVANCED BIFACIAL EFFICIENCY

Bifaciality > 95%, effectively improves backside power generation. A bifacial cell design that generates energy from both sides, capturing and converting more sunlight into power.



### R&D AND PRODUCTION

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



### HIGH ENERGY YIELD

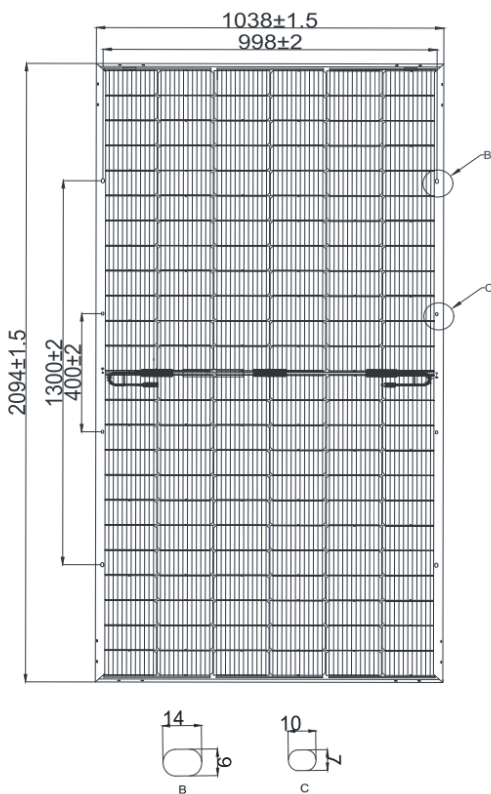
Efficiency can reach 22.08%. Excellent weak light performance and better performance in hot climate. Leading temperature coefficient for more production when the sun shines strongest, Or under the cloudy, haze condition

## Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m<sup>2</sup>, Cells Temperature 25°C)

### Typical type

	450W	455W	460W	465W	470W	475W	480W
Max power(Pmax)	450	455	460	465	470	475	480
Max power voltage(Vmp)	44.85	45.04	45.24	45.44	45.66	45.86	46.08
Max power current(Imp)	10.05	10.12	10.18	10.24	10.30	10.36	10.43
Open circuit voltage(Voc)	52.96	53.09	53.22	53.35	53.48	53.61	53.74
Short circuit current(Isc)	10.46	10.52	10.58	10.64	10.70	10.76	10.82
Module Efficiency(%)	20.70	20.93	21.16	21.39	21.62	21.85	22.08
Max system voltage	DC 1500V(TÜV)						
Maximum Series Fuse Rating	20A						

### DIMENSIONS AND STRUCTURE



### Electrical Characteristics with 15% Rear Side Power Gain

Front power Pmax/W	450W	455W	460W	465W	470W	475W	480W
Total power Pmax/W	517.5	523.25	529	534.75	540.5	546.25	552
Vmp/V(Total)	44.85	45.04	45.24	45.44	45.66	45.86	46.08
Imp/A(Total)	11.54	11.62	11.69	11.77	11.84	11.91	11.98
Voc/V(Total)	52.96	53.09	53.22	53.35	53.48	53.61	53.74
Isc/A(Total)	12.01	12.08	12.15	12.23	12.30	12.37	12.43

### Mechanical Data

Dimensions	2094x1038x30mm
Weight	27.5kg
Glass	(F) 2.0mm ultra clear embossed semi-tempered coated glass (B) 2.0mm semi-tempered glass
Output cables	4mm <sup>2</sup> , 1300mm in length, length can be customized / UV Resistant
Connectors	MC4 compatible IP68
Cell type	Mono-Crystalline ,Bifacial HJT, 166x83mm
Number of cells	144cells ( Half-Cell )

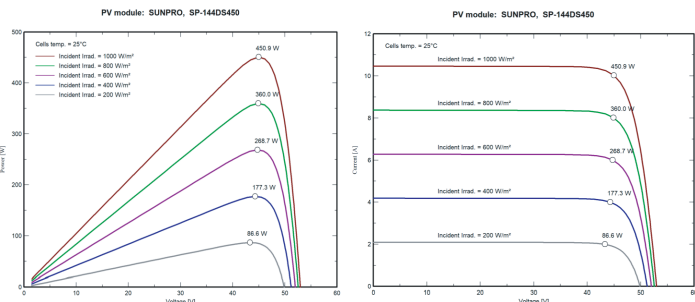
### Temperature Characteristics

Temp.Coeff.of Isc(TK Isc)	0.04%/°C
Temp.Coeff.of Voc(TK Voc)	-0.24%/°C
Temp.Coeff.of Pmax(TK Pmax)	-0.26%/°C
Operating temperature	-40~+85°C
Normal operating cell temperature	44±2°C

### Packing Configuration

Container	40'HQ
Pieces per pallet	72
Pallets per container	11
Pieces per container	792

### I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



### Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TÜV, 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	15 years product warranty and 30 years 88% of power