

Tier1

BloombergNEF

OPTONICA
SOLAR

YHSUNPRO
POWER



ISO 9001 ISO 14001 SA 8000
ISO 45001 OHSAS 18001



M10 TOPCON MONO

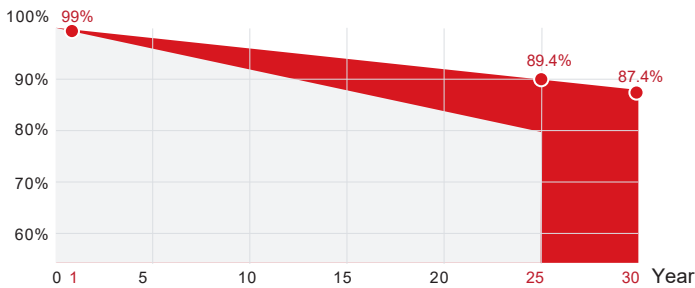
SPxxx-N144M10

550~590W

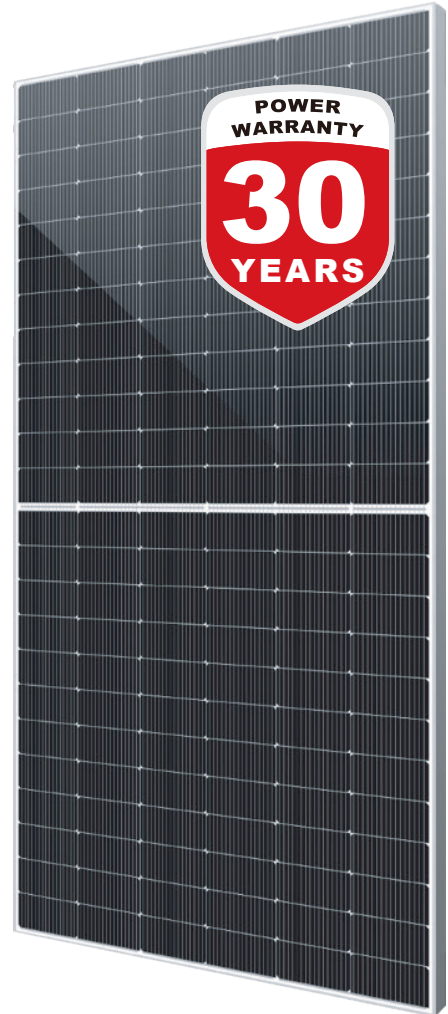
- Silver frame
- Black frame
- Full black

15 Yr quality guarantee | 30 Yr power warranty

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



*SUNPRO Standard tiered warranty



WARRANTY & GUARANTEE

Linear output power guarantee
25 years: 89.4% power output
30 years: 87.4% power output



WITHSTAND STRONG

Snow load 5400Pa
Wind load 2400Pa



PID RESISTANCE

Power positive tolerance 0~+5W.
The attenuation probability of PID phenomenon is minimized through battery production technology optimization and material control



R&D AND PRODUCTION

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



HIGH EFFICIENCY

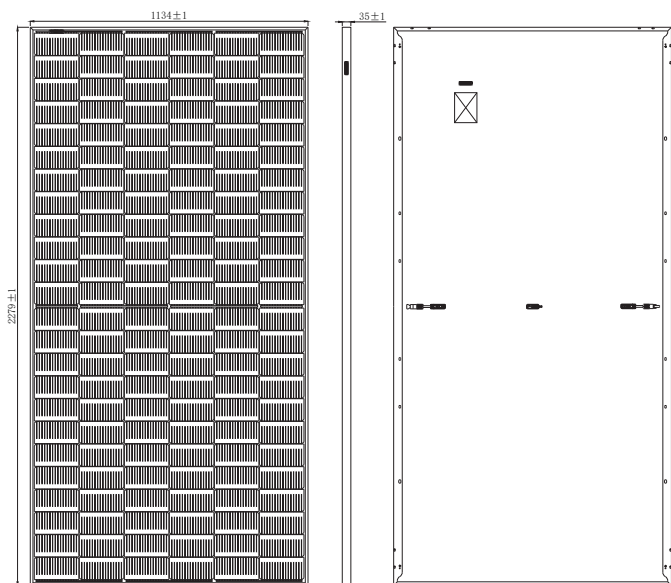
N-type, Components have better reliability and lower LID/LETID attenuation. Efficiency can reach 22.83%. Excellent low light performance. Higher power output under the conditions of haze, overcast, etc.

Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

Typical type

	550W	555W	560W	565W	570W	575W	580W	585W	590W
Max power(Pmax)	550	555	560	565	570	575	580	585	590
Max power voltage(Vmp)	41.73	41.86	41.99	42.13	42.26	42.41	42.56	42.72	42.87
Max power current(Imp)	13.18	13.26	13.34	13.41	13.49	13.56	13.63	13.7	13.77
Open circuit voltage(Voc)	50.56	50.7	50.84	50.98	51.13	51.28	51.43	51.58	51.7
Short circuit current(Isc)	13.95	14.01	14.07	14.13	14.2	14.27	14.34	14.41	14.48
Module Efficiency(%)	21.28	21.48	21.67	21.86	22.06	22.25	22.44	22.64	22.83
Max system voltage	DC 1500V (TÜV)								
Maximum Series Fuse Rating	25A								

DIMENSIONS AND STRUCTURE



Electrical parameters at NMOT test conditions

(Irradiance 800W/m², Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s)

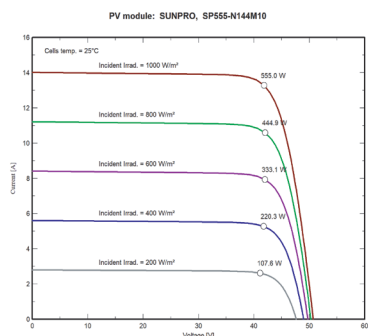
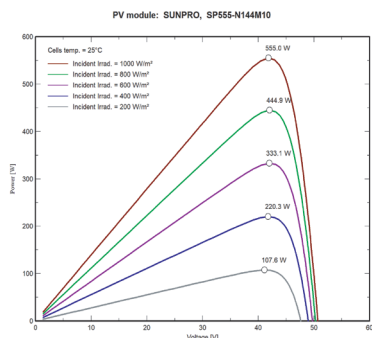
Typical type

	550W	555W	560W	565W	570W	575W	580W	585W	590W
Max power(Pmax)	411	417	421	425	429	433	437	437	441
Max power voltage(Vmp)	38.9	39.3	39.5	39.7	39.7	39.9	40.1	39.9	40.00
Max power current(Imp)	10.56	10.62	10.67	10.72	10.79	10.85	10.90	10.96	11.02
Open circuit voltage(Voc)	47.4	47.7	47.9	48.1	48.2	48.4	48.5	48.3	48.40
Short circuit current(Isc)	11.24	11.29	11.34	11.39	11.44	11.50	11.56	11.61	11.67

Mechanical Data

Dimensions	2279x1134x35mm
Weight	27kg
Glass	3.2mm ultra clear embossed tempered coated glass
Output cables	4mm ² , symmetrical lengths 1300mm
Connectors	MC4 compatible IP68
Cell type	N type Mono-Crystalline, 182x91mm
Number of cells	144cells (Half-Cell)

I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



Temperature Characteristics

Temp.Coeff. of Isc(TK Isc)	0.046%/°C
Temp.Coeff. of Voc(TK Voc)	-0.25%/°C
Temp.Coeff. of Pmax(TK Pmax)	-0.30%/°C
Operating temperature	-40~+85°C
Normal operating cell temperature	45±2°C

Packing Configuration

Container	40'HQ
Pieces per pallet	31
Pallets per container	20
Pieces per container	620

Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TÜV, CE, CEC, WEEE
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	0~+5W
Junction box	IP 68
Warranties	15 years product warranty and 30 years 87.4% of power