

Tier1

BloombergNEF

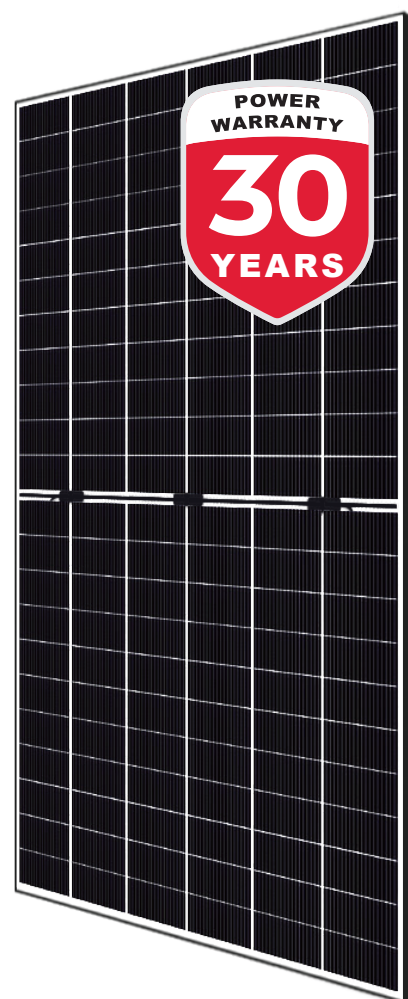


ISO 9001 ISO 14001 SA 8000  
ISO 45001 OHSAS 18001

## M10 TOPCON BIFACIAL

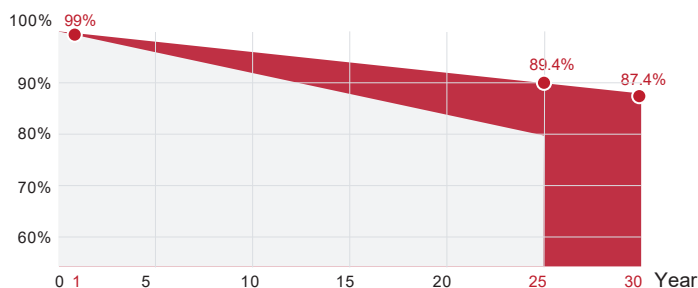
### SPDGxxx-N132M10

- Double glass (xxx=510~540W)
- Black frame
- Bifacial Transparent
- Full black



#### 30 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:  $\pm 3W$ .  
The attenuation probability of PID phenomenon is minimized through battery production technology optimization and material control



#### R&D AND PRODUCTION

Advanced production line. Bifaciality > 80%, effectively improves backside power generation. 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 22.74%. 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/m<sup>2</sup>, Cells Temperature 25°C)

Typical type	510W	515W	520W	525W	530W	535W	540W
Max power(Pmax)	510	515	520	525	530	535	540
Max power voltage(Vmp)	38.45	38.55	38.64	38.75	38.86	38.97	39.08
Max power current(Imp)	13.29	13.36	13.46	13.55	13.64	13.73	13.82
Open circuit voltage(Voc)	46.53	46.71	46.87	47.03	47.19	47.35	47.5
Short circuit current(Isc)	14.01	14.08	14.16	14.24	14.32	14.4	14.48
Module Efficiency(%)	21.48	21.69	21.90	22.11	22.32	22.53	22.74
Bifaciality Coef (φPmax/φVoc/φIsc)	80%/95%/80%						
Max system voltage	DC 1500V (TÜV,UL)						
Maximum Series Fuse Rating	30A						

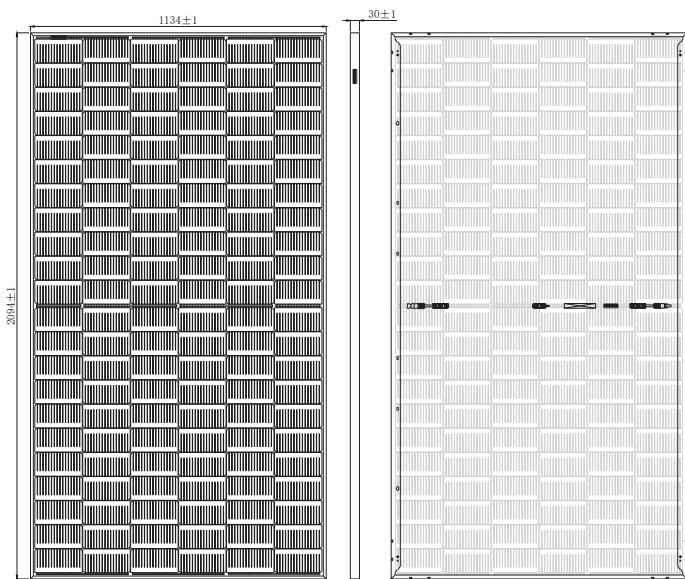
### Electrical Characteristics with 15% Rear Side Power Gain

Front power Pmax/W	510W	515W	520W	525W	530W	535W	540W
Total power Pmax/W	586.5	592.25	598	603.75	609.5	615.25	621
Vmp/V(Total)	38.45	38.55	38.64	38.75	38.86	38.97	39.08
Imp/A(Total)	15.25	15.36	15.48	15.58	15.68	15.79	15.89
Voc/V(Total)	46.53	46.71	46.87	47.03	47.19	47.35	47.5
Isc/A(Total)	16.11	16.19	16.28	16.38	16.47	16.56	16.65

### Electrical parameters at NMOT test conditions (Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s)

Typical type	510W	515W	520W	525W	530W	535W	540W
Max power(Pmax)	384	387	392	395	399	400	404
Max power voltage(Vmp)	36.1	36.3	36.4	36.6	36.7	36.6	36.7
Max power current(Imp)	10.64	10.68	10.75	10.81	10.85	10.93	11
Open circuit voltage(Voc)	43.8	44	44.2	44.3	44.5	44.3	44.5
Short circuit current(Isc)	11.29	11.35	11.41	11.48	11.54	11.60	11.67

## DIMENSIONS AND STRUCTURE



## Mechanical Data

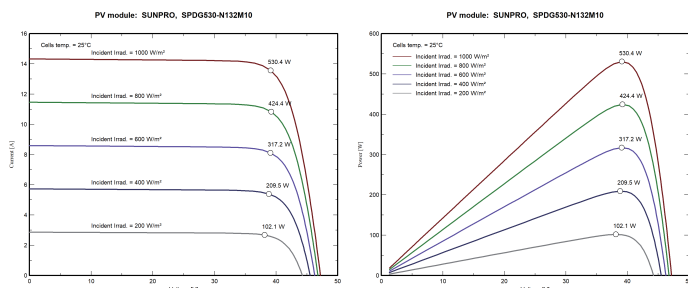
Dimensions	2094x1134x30mm
Weight	29kg
Glass	(F) 2.0mm ultra clear embossed double layer colorless glass (B) 2.0mm semi-tempered glass
Output cables	4mm <sup>2</sup> , symmetrical lengths 1300mm
Cell type	N type Mono-Crystalline, 16BB, 182x91mm
Number of cells	132 cells (Half-Cell)
Connectors	NINGBO GXZ PV TECHNOLOGY CO.,LTD PV-GZX1500,1500VDC,39A,IP68

### Temperature Characteristics

### Packing Configuration

Temp.Coeff.of Isc(TK Isc)	0.046%/°C	Container	40'HQ
Temp.Coeff.of Voc(TK Voc)	-0.25%/°C	Pieces per pallet	36
Temp.Coeff.of Pmax(TK Pmax)	-0.30%/°C	Pallets per container	22
Operating temperature	-40~+85°C	Pieces per container	792
Normal operating cell temperature	45±2°C		

## I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



## Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730
System certs	ISO 9001, ISO14001, ISO45001 OHSAS 18001, SA 8000
Certifications	TÜV, CE, CEC, WEEE, INMETRO FIRE CERTIFICA C1
Extreme wind and snow loads testing	Withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)
Power tolerance	±3%
Junction box	IP 68
Warranties	30 years product warranty and 30 years 87.4% of power
Fire class rating	Class C