

Tier1

BloombergNEF



ISO 9001

ISO 45001

ISO 14001

SA 8000

OHSAS 18001



# 186.8R TOPCON BIFACIAL

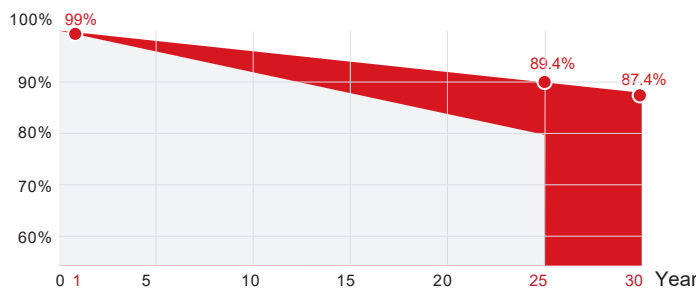
SPDGxxx-N156R10

625~650W

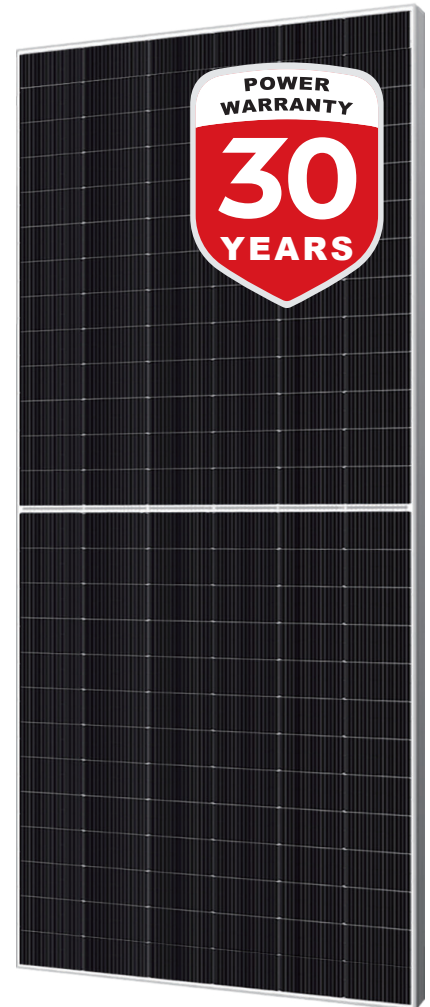
- Double glass
- Silver frame
- White mesh

25 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. 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 22.70%. 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	625W	630W	635W	640W	645W	650W
Max power(Pmax)	625	630	635	640	645	650
Max power voltage(Vmp)	46.54	46.64	46.73	46.82	46.91	47.04
Max power current(Imp)	13.43	13.51	13.59	13.67	13.75	13.82
Open circuit voltage(Voc)	56.2	56.29	56.4	56.51	56.62	56.73
Short circuit current(Isc)	13.99	14.07	14.14	14.21	14.28	14.35
Module Efficiency(%)	21.83	22.00	22.18	22.35	22.53	22.70
Max system voltage	DC 1500 (TUV)					
Maximum Series Fuse Rating	30A					

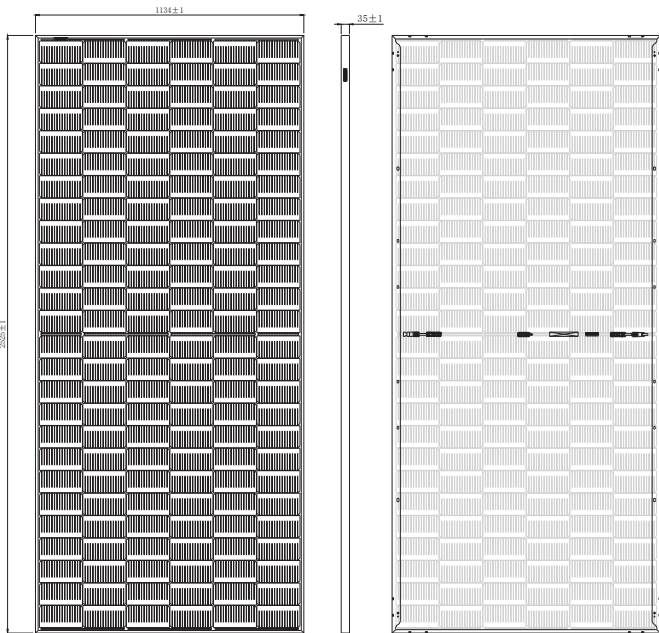
### Electrical Characteristics with 15% Rear Side Power Gain

Front power Pmax/W	625W	630W	635W	640W	645W	650W
Total power Pmax/W	718.75	724.5	730.25	736	741.75	747.5
Vmp/V(Total)	46.54	46.64	46.73	46.82	46.91	47.04
Imp/A(Total)	15.44	15.53	15.63	15.72	15.81	15.89
Voc/V(Total)	56.2	56.29	56.4	56.51	56.62	56.73
Isc/A(Total)	16.09	16.18	16.26	16.34	16.42	16.5

### 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	625W	630W	635W	640W	645W	650W
Max power(Pmax)	471.6	475.6	479.5	483.3	487.3	491.2
Max power voltage(Vmp)	44.2	44.3	44.4	44.5	44.6	44.8
Max power current(Imp)	10.68	10.74	10.79	10.86	10.92	10.97
Open circuit voltage(Voc)	53.1	53.2	53.3	53.4	53.5	53.6
Short circuit current(Isc)	11.28	11.34	11.40	11.45	11.51	11.56

### DIMENSIONS AND STRUCTURE



### Mechanical Data

Dimensions	2525x1134x35mm
Weight	36kg
Glass	(F) 2.0mm ultra clear embossed double layer colorless glass (B) 2.0mm white mesh glazed tempered glass
Output cables	4mm <sup>2</sup> , symmetrical lengths 1400mm
Connectors	MC4 compatible IP68
Cell type	N type Mono-Crystalline, 182mm×93.4mm
Number of cells	156 cells ( Half-Cell )

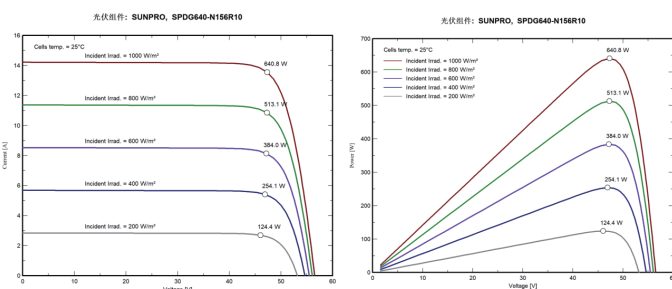
### Temperature Characteristics

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	16
Pieces per container	496

### I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



### Tests, Certifications and Warranties

Standard tests	IEC 61215, IEC 61730
System certs	ISO 9001, ISO14001, ISO45001
Certifications	TÜV, CE, 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	25 years product warranty and 30 years 87.4% of power