



SOLAR N PLUS

SP-N16B/96HG

TOPcon Bifacial 435-450W

-  HIGHER EFFICIENCY
-  LOWER TEMPERATURE COEFFICIENT
-  LOW ATTENUATION, LONG WARRANTY
-  HIGHER BIFACIALITY

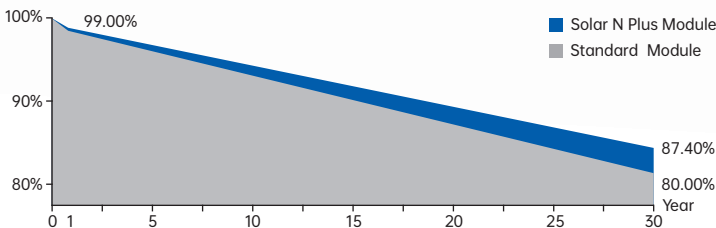
WARRANTY



15 YEARS Guarantee on product material and workmanship



30 YEARS Linear power output warranty



INSURANCE



中国平安
PINGAN

CERTIFICATION



- ISO 9001: 2015/quality management system
- ISO 14001: 2015/environment management system
- ISO 45001: 2018/occupation health safety management system

435-450W SP-N16B/96HG

TOPCON BIFACIAL

SP-N16B/96HG
435W

SP-N16B/96HG
440W

SP-N16B/96HG
445W

SP-N16B/96HG
450W

ELECTRICAL CHARACTERISTICS (STC)

		435W	440W	445W	450W
Maximum Power (Pmax) / tolerance $\pm 3\%$	W	435	440	445	450
Power Distribution	W			0~+5	
Maximum Power Voltage (Vmp)	V	29.0	29.2	29.4	29.6
Maximum Power Current (Imp)	A	15.00	15.07	15.14	15.20
Open Circuit Voltage (Voc) / tolerance $\pm 3\%$	V	35.05	35.25	35.45	35.65
Short Circuit Current (Isc) / tolerance $\pm 4\%$	A	15.83	15.9	15.96	16.02
Module Efficiency (η_m)	%	21.8	22.0	22.3	22.5
Bifaciality coefficient with tolerance	$\phi_{Isc} = 80\% \pm 5\%$, $\phi_{Voc} = 100\% \pm 5\%$, $\phi_{Pmax} = 80\% \pm 5\%$				

STC:AM=1.5, irradiance=1000W/m², module temperature=25°C

ELECTRICAL CHARACTERISTICS (BNPI)

		480W	485W	490W	495W
Maximum Power (Pmax) / tolerance $\pm 3\%$	W	480	485	490	495
Maximum Power Voltage (Vmp)	V	29.00	29.20	29.40	29.60
Maximum Power Current (Imp)	A	16.55	16.61	16.67	16.72
Open Circuit Voltage (Voc) / tolerance $\pm 3\%$	V	35.05	35.25	35.45	35.65
Short Circuit Current (Isc) / tolerance $\pm 4\%$	A	17.41	17.49	17.56	17.62

E=Front 1000W/m² Rear 135W/m²

ELECTRICAL CHARACTERISTICS (α BSI)

		19.63	19.72	19.79	19.86
Short Circuit Current (Isc)/tolerance $\pm 4\%$	A	19.63	19.72	19.79	19.86

E=Front 1000W/m² Rear 300W/m²

ELECTRICAL CHARACTERISTICS (NMOT)

		331	335	338	342
Maximum Power (Pmax) / tolerance $\pm 3\%$	W	331	335	338	342
Maximum Power Voltage (Vmp)	V	27.32	27.52	27.72	27.92
Maximum Power Current (Imp)	A	12.14	12.17	12.21	12.24
Open Circuit Voltage (Voc) / tolerance $\pm 3\%$	V	32.77	32.94	33.11	33.28
Short Circuit Current (Isc) / tolerance $\pm 4\%$	A	12.76	12.78	12.81	12.84

NMOT: irradiance=800W/m², environment temperature=20°C, wind speed=1m/s

REAR SIDE POWER GAIN

		457W	462W	467W	473W
5%	Max Power	457W	462W	467W	473W
	Efficiency	17.68%	17.88%	18.09%	18.29%
15%	Max Power	500W	506W	512W	518W
	Efficiency	19.37%	19.59%	19.81%	20.03%
25%	Max Power	544W	550W	556W	563W
	Efficiency	21.05%	21.29%	21.53%	21.77%

435-450W SP-N16B/96HG

MECHANICAL SPECIFICATIONS

External Dimension (L×W×H)	1762×1134×30mm
Weight	20.2kg
Number of Cells	96 (6×16)
Front Glass	2.0mm AR-coating heat-strengthened glass
Rear Glass	2.0mm heat-strengthened glass
Frame	Anodized aluminum alloy, silver color
Junction Box	IP68
Output Cables	4.0mm ² , 300mm or customized length
Connector	Tonglin TL-CABLE01S Pro

APPLICATION CONDITIONS

Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	30A
Operating Temperature	-40°C ~ +85°C
Maximum Mechanical load	5400Pa/2400Pa
Hail Test	25mm diameter hail at 23m/s
Application Rating	Class II
Fire Safety Class	Class C

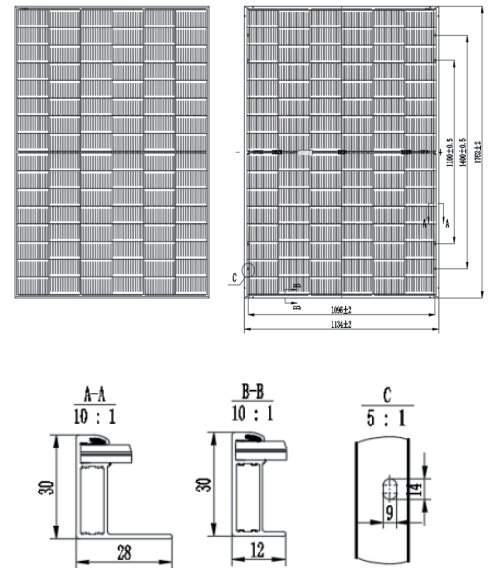
TEMP CHARACTERISTICS

Nominal Module Operating Temperature	42±2°C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of ISC	+0.045%/°C

PACKING CONFIGURATION

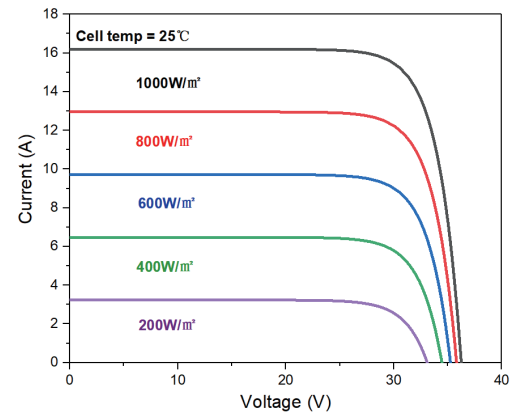
Container	40'HC
Pieces per Pallet	36 pcs
Packaging box Size	1819×1145×1260mm
Pieces per Container	936 pcs

TECHNICAL DRAWING

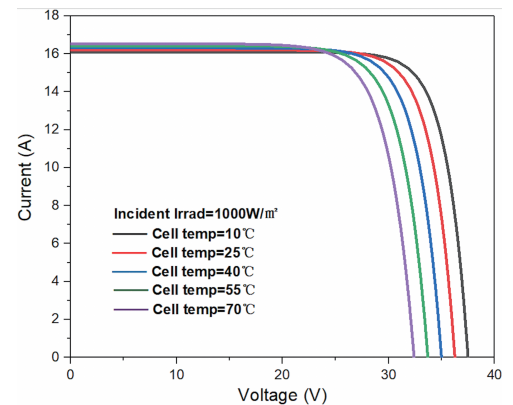


I-V CURVE

I-V characteristics at different irradiance (SP-N16B/96HG450W)



I-V characteristics at different temperatures (SP-N16B/96HG450W)



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