





# SOLAR N PLUS

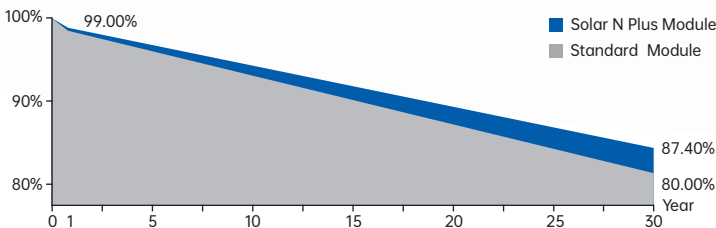
SP-N16B/96HG

# TOPcon Bifacial 440-460W

-  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



## CERTIFICATION



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

# 440-460W SP-N16B/96HG

## ELECTRICAL CHARACTERISTICS (STC)

Maximum Power (Pm)	W	440	445	450	455	460
Power Tolerance	W			0~+5		
Maximum Power Voltage (Vm)	V	29.2	29.4	29.6	29.8	30.0
Maximum Power Current (Im)	A	15.07	15.14	15.20	15.27	15.33
Open Circuit Voltage (Voc)	V	35.25	35.45	35.65	35.85	36.05
Short Circuit Current (Isc)	A	15.9	15.96	16.02	16.08	16.14
Module Efficiency (ηm)	%	22.0	22.3	22.5	22.8	23.0

STC:AM=1.5, irradiance=1000W/m<sup>2</sup>, module temperature=25°C

## ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power (Pm)	W	335	338	342	345	348
Maximum Power Voltage (Vm)	V	27.52	27.72	27.92	28.12	28.32
Maximum Power Current (Im)	A	12.17	12.21	12.24	12.27	12.3
Open Circuit Voltage (Voc)	V	32.94	33.11	33.28	33.45	33.62
Short Circuit Current (Isc)	A	12.78	12.81	12.84	12.87	12.90

NMOT: irradiance=800W/m<sup>2</sup>, environment temperature=20°C, wind speed=1m/s

## REAR SIDE POWER GAIN

5%	Max Power	462W	467W	473W	478W	483W
	Efficiency	17.88%	18.09%	18.29%	18.49%	18.70%
15%	Max Power	506W	512W	518W	523W	529W
	Efficiency	19.59%	19.81%	20.03%	20.26%	20.48%
25%	Max Power	550W	556W	563W	569W	575W
	Efficiency	21.29%	21.53%	21.77%	22.02%	22.26%

## MECHANICAL SPECIFICATIONS

External Dimension (L×W×H)	1762×1134×30mm
Weight	20.2kg
Number of Cells	96 (6×16)
Front Glass	1.6mm AR-coating heat-strengthened glass
Rear Glass	1.6mm heat-strengthened glass
Frame	Anodized aluminum alloy, silver color
Junction Box	IP68
Output Cables	4.0mm <sup>2</sup> , 300mm or customized length
Connector	MC4 Compatible

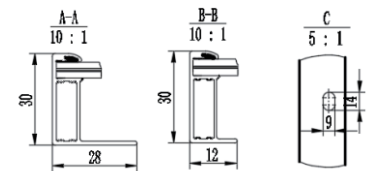
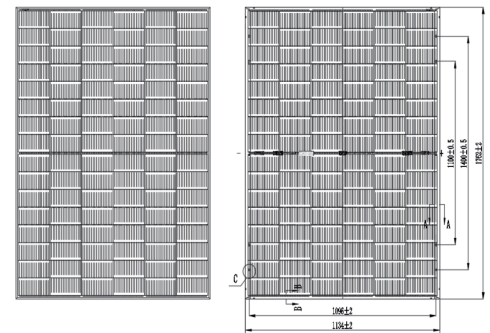
## APPLICATION CONDITIONS

Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	30A
Operating Temperature	-40°C ~ +85°C
Mechanical Load	5400Pa/2400Pa
Hail Test	25mm diameter hail at 23m/s
Bifaciality	80±5%
Application Rating	Class A

## TEMP CHARACTERISTICS

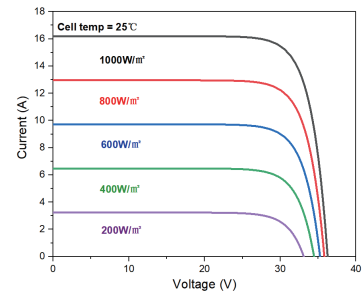
Nominal Module Operating Temperature	42±2°C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of ISC	+0.045%/°C

## TECHNICAL DRAWING

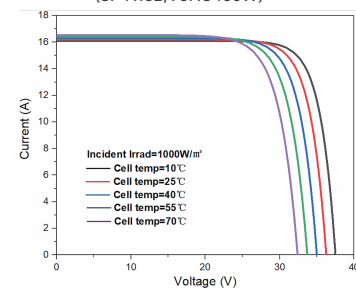


## I-V CURVE

I-V characteristics at different irradiance (SP-N16B/96HG460W)



I-V characteristics at different temperatures (SP-N16B/96HG460W)



## PACKING CONFIGURATION

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



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Version No.20240515V3.0