



SOLAR PLUS

SP-N16/108HG

TOPcon Bifacial 415-445W



HIGHER EFFICIENCY



LOWER TEMPERATURE COEFFICIENT



LOW ATTENUATION, LONG WARRANTY



HIGHER BIFACIALITY

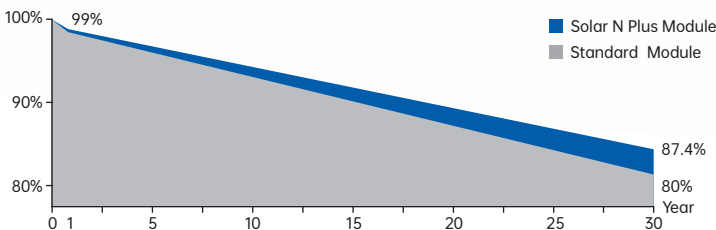
WARRANTY



Guarantee on product material and workmanship



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

415-445W

SP-N16/108HG

TOPCON BIFACIAL

SP-N16/108HG
415WSP-N16/108HG
420WSP-N16/108HG
425WSP-N16/108HG
430WSP-N16/108HG
435WSP-N16/108HG
440WSP-N16/108HG
445W

ELECTRICAL CHARACTERISTICS (STC)

Maximum Power (Pmax) / tolerance ±3%	W	415	420	425	430	435	440	445
Power Distribution	W				0~+5			
Maximum Power Voltage (Vmp)	V	33.1	33.3	33.5	33.7	33.9	34.1	34.3
Maximum Power Current (Imp)	A	12.54	12.61	12.69	12.76	12.83	12.91	12.98
Open Circuit Voltage (Voc) / tolerance ±3%	V	38.65	38.85	39.05	39.25	39.45	39.65	39.85
Short Circuit Current (Isc) / tolerance ±4%	A	13.41	13.46	13.51	13.56	13.61	13.66	13.71
Module Efficiency (ηm)	%	21.3	21.5	21.8	22.0	22.3	22.5	22.8
Bifaciality coefficient with tolerance	φIsc= 80%+5%, φVoc= 100%+5%, φPmax= 80%+5%							

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

ELECTRICAL CHARACTERISTICS (BNPI)

Maximum Power (Pmax) / tolerance ±3%	W	455	460	465	470	475	480	485
Maximum Power Voltage (Vmp)	V	33.10	33.30	33.50	33.70	33.90	34.10	34.30
Maximum Power Current (Imp)	A	13.75	13.81	13.88	13.95	14.01	14.08	14.14
Open Circuit Voltage (Voc) / tolerance ±3%	V	38.65	38.85	39.05	39.25	39.45	39.65	39.85
Short Circuit Current (Isc) / tolerance ±4%	A	14.75	14.81	14.86	14.92	14.97	15.03	15.08

E=Front 1000W/m² Rear 135W/m²

ELECTRICAL CHARACTERISTICS (αBSI)

Short Circuit Current (Isc)/tolerance ±4%	A	16.63	16.69	16.75	16.81	16.88	16.94	17.00
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E=Front 1000W/m² Rear 300W/m²

ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power (Pmax) / tolerance ±3%	W	312	316	320	324	328	332	336
Maximum Power Voltage (Vmp)	V	30.20	30.44	30.68	30.92	31.15	31.35	31.55
Maximum Power Current (Imp)	A	10.33	10.38	10.43	10.48	10.53	10.59	10.65
Open Circuit Voltage (Voc) / tolerance ±3%	V	36.50	36.70	36.90	37.10	37.30	37.50	37.70
Short Circuit Current (Isc) / tolerance ±4%	A	10.76	10.81	10.86	10.91	10.96	11.00	11.05

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

REAR SIDE POWER GAIN

5%	Max Power	436W	441W	446W	452W	457W	462W	467W
	Efficiency	16.87%	17.07%	17.27%	17.48%	17.68%	17.88%	18.09%
15%	Max Power	477W	483W	489W	495W	500W	506W	512W
	Efficiency	18.47%	18.70%	18.92%	19.14%	19.37%	19.59%	19.81%
25%	Max Power	519W	525W	531W	538W	544W	550W	556W
	Efficiency	20.08%	20.32%	20.57%	20.81%	21.05%	21.29%	21.53%

415-445W

SP-N16/108HG

MECHANICAL SPECIFICATIONS

External Dimension (L×W×H)	1722×1134×30mm
Weight	24kg
Number of Cells	108 (6×18)
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	25A
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

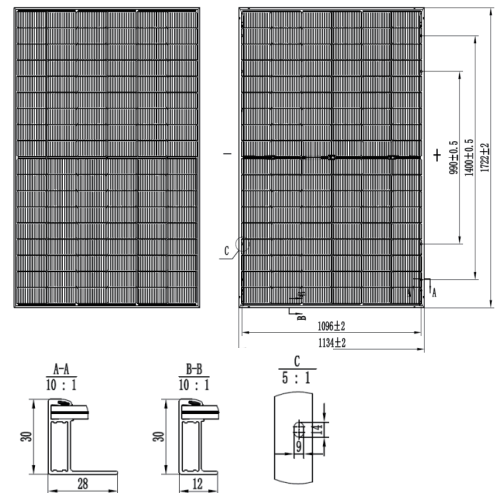
TEMP CHARACTERISTICS

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

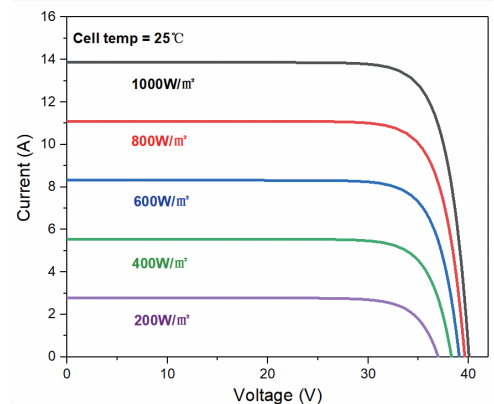
Container	40'HC
Pieces per Pallet	36 pcs
Packaging box Size	1779×1145×1260mm
Pieces per Container	936 pcs

TECHNICAL DRAWING

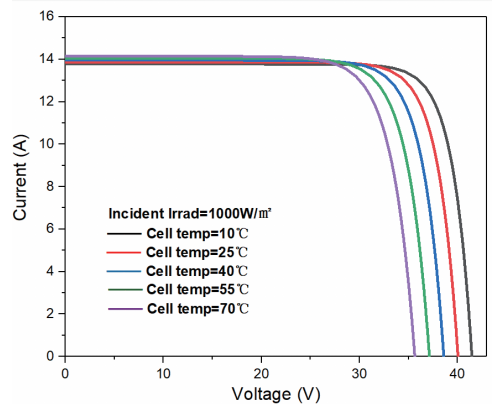


I-V CURVE

I-V characteristics at different irradiance (SP-N16/108HG445W)



I-V characteristics at different temperatures (SP-N16/108HG445W)



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