SUNGROW

More power More friendly

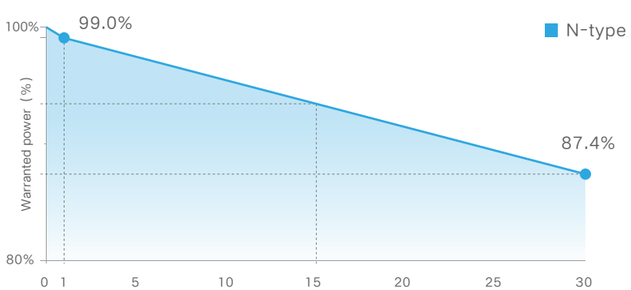
SG-54TG1D 435-455W

N-type TOPCon Solar Double Glass Bifacial Module

Maximum Efficiency 23.3%

Quality Certification

Product Warranty



25-year Warranty for Materials and Processing

30-year Warranty for Extra Linear Power Output

First Year Power Degradation<1%

Year 2-30 Power Degradation<0.4%

Power warranty applies at STC condition or only applies to the front side of the module

Product Performance

Superior Low Irradiation Performance
Higher power output in the morning and evening, cloudy days, haze and other low-light scenarios

Smaller Size
A lightweighted design for convenient transportation and installation

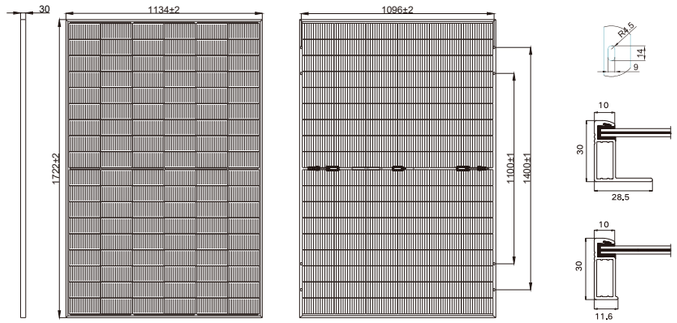
Higher Bifacial Factor
The rear power output and generation capacity are 20% and 3.5% higher than PERC, respectively

Superior Temperature Coefficient
Generating 1%-2% more power than P-type modules in high temperature regions

Non-destructive Laser Cutting Technology
Achieving better cell strength, lower micro-cracks risk for better product reliability

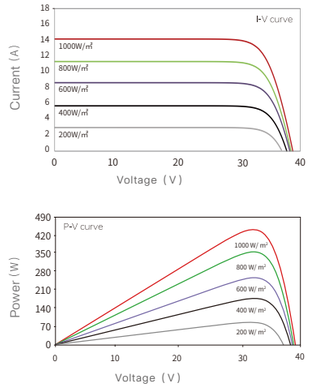
Superior Mechanical Load Capacity
Heavy snow load up to 5400 Pa wind load up to 2400 Pa

Engineering Drawings



I-V and P-V Curves

Temperature: (25 ± 2) °C



Electrical Characteristics

Module Type	SG-54TG1D-435	SG-54TG1D-440	SG-54TG1D-445	SG-54TG1D-450	SG-54TG1D-455
Maximum Power Pmax（W）	435	440	445	450	455
Voltage at Maximum Power (Vmp/V)	32.86	33.04	33.21	33.39	33.56
Current at Maximum Power (Imp/A)	13.24	13.32	13.40	13.48	13.56
Open Circuit Voltage (Voc/V)	39.38	39.58	39.78	39.98	40.18
Short Circuit Current (Isc/A)	13.97	14.05	14.13	14.21	14.29
Module Efficiency (%)	22.3	22.5	22.8	23.0	23.3

Pmax/Voc/Isc Tolerance	±3%	Maximum System Voltage	DC1500V
Maximum Series Fuse Rating	30A	Operating Temperature	-40°C~+70°C
Fire Rating	Class C	Power SortingTolerance	0~+5W

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5

Maximum Power Pmax（W）	479	484	490	495	500
Voltage at Maximum Power (Vmp/V)	32.86	33.04	33.21	33.39	33.56
Current at Maximum Power (Imp/A)	14.56	14.65	14.74	14.83	14.92
Open Circuit Voltage (Voc/V)	39.38	39.58	39.78	39.98	40.18
Short Circuit Current (Isc/A)	15.37	15.46	15.54	15.63	15.72
aBSI(A)	17.07	17.17	17.27	17.37	17.47
Pmax/Voc/Isc/aBSI Tolerance	±3%				
Bifaciality Coefficent	φVoc: 100±3 %, φIsc: 80±10 %, φPmax: 80±10 %				

BNPI: Irradiance Front 1000W/m², Rear 135W/m² Cell Temperature 25°C, AM=1.5
aBSI: Irradiance Front 1000W/m², Rear 300W/m² Cell Temperature 25°C, AM=1.5

Mechanical Characteristics

Cell Type	N- type mono-crystalline
Cell Orientation	108 （2 x 54）
Dimension	1722 x 1134 x 30mm
Weight	24.1kg
Glass	Dual glass, 2.0mm+2.0mm semi-tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 rated
Output Cables	4mm², (+): 1200mm, (-): 1200mm or customized length
Connector Type	Z4S-abcd(Zerun)/PV-ZH202B(Zhonghuan)/PV-HT03x(x=0,1or 2)(Haitian)/QC4.10-cds(QC Solar)/PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy(Staubli)
Mechanical Load	+5400Pa（Front side）/-2400Pa（Rear side）

Temperature Characteristics

Temperature Coefficients of Pmax	-0.30%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	0.046%/°C
Temperature Rating [T98]max	70°C

Packaging Configuration

Pallet Dimension	1752 x 1140 x 1249 mm
Packing Detail	36 pcs/pallets, 72 pcs/stack, 936 pcs/ 40'HQ container

SUNGROW

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