

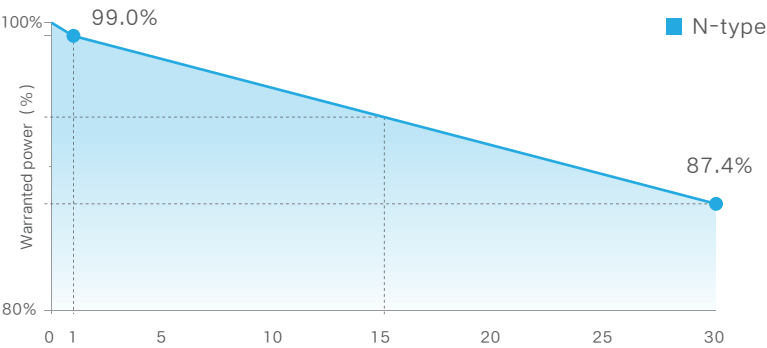
SG-54TG1D
430-450W

N-type TOPCon Solar Double Glass Bifacial Module
Maximum Efficiency 23.0%

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



Outstanding Aesthetics

An elegant, all-black design that can be easily integrated into various roof types



Smaller Size

A lightweight 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

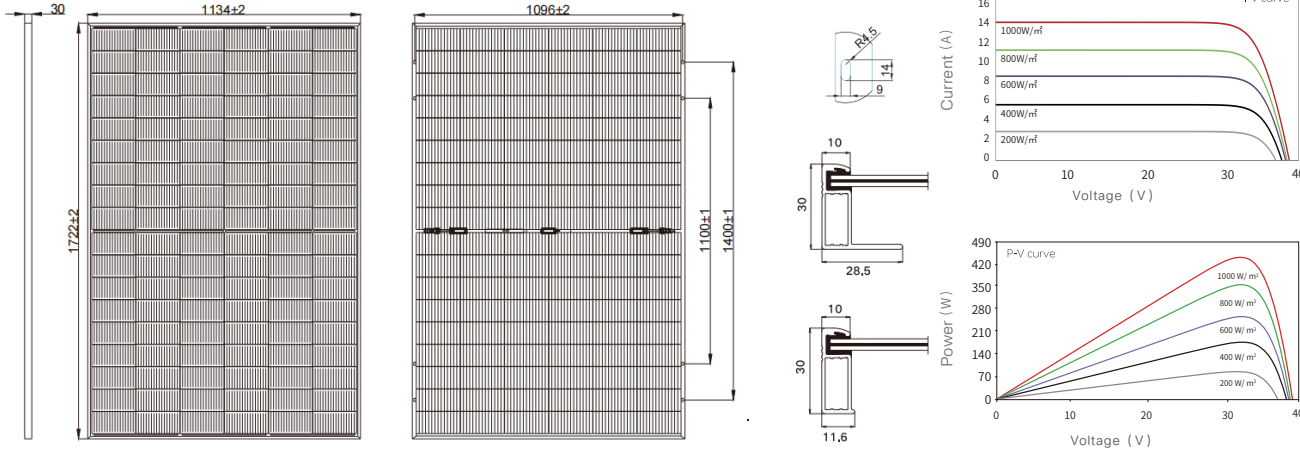
Achieving better cell strength, lower micro-cracks risk for better product reliability



Superior Mechanical Load Capacity

Heavy snow load up to 5400 Pa
wind load up to 2400 Pa

Engineering Drawings



Electrical Characteristics

Module Type	SG-54TG1D -430	SG-54TG1D -435	SG-54TG1D -440	SG-54TG1D -445	SG-54TG1D -450
Maximum Power Pmax (W)	430	435	440	445	450
Voltage at Maximum Power (Vmp/V)	32.68	32.86	33.04	33.21	33.39
Current at Maximum Power (Imp/A)	13.16	13.24	13.32	13.40	13.48
Open Circuit Voltage (Voc/V)	39.18	39.38	39.58	39.79	39.98
Short Circuit Current (Isc/A)	13.89	13.97	14.05	14.13	14.21
Module Efficiency (%)	22.0	22.3	22.5	22.8	23.0
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)	473	479	484	490	495
Voltage at Maximum Power (Vmp/V)	32.68	32.86	33.04	33.21	33.39
Current at Maximum Power (Imp/A)	14.48	14.56	14.65	14.74	14.83
Open Circuit Voltage (Voc/V)	39.18	39.38	39.58	39.78	39.98
Short Circuit Current (Isc/A)	15.28	15.37	15.46	15.54	15.63
aBSI(A)	16.98	17.07	17.17	17.27	17.37
Pmax/Voc/Isc/aBSI Tolerance	±3%				
Bifaciality Coefficient	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, (+): 300mm, (-): 200mm or customized length
Connector Type	Z4S-abcd(Zerun)/PV-ZH202B(Zhonghuan)/PV-HT03x(Haitian)/QC4.10-cds(QC Solar)
Mechanical Load	+5400Pa / -2400Pa

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