

SG-78TG1D

620-645W

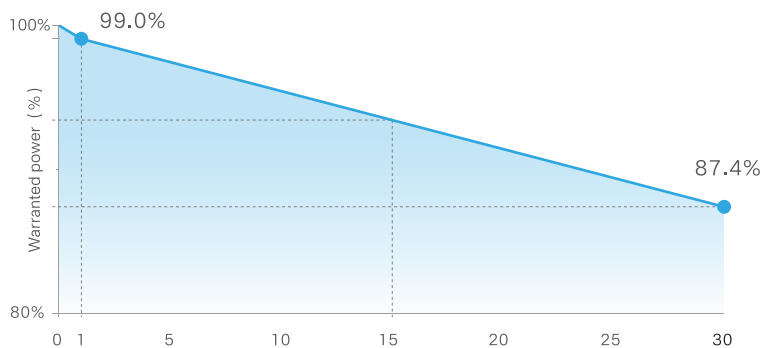
N-type TOPCon Solar Double Glass Bifacial Module
Maximum Efficiency 23.1%

Quality Certification

- IEC61215:2021 / IEC61730:2023
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



Product Warranty



15 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%

Product Performance



Bifacial Design Boosts Generation Capacity

The rear power generation is 20% higher than P-type modules



Superior Low Irradiation Performance

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



Higher Efficiency

Excellent MBB technology and leading process technology, conversion efficiency of up to 23.1%



Superior Mechanical Load Capacity

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



Anti-PID Guarantee

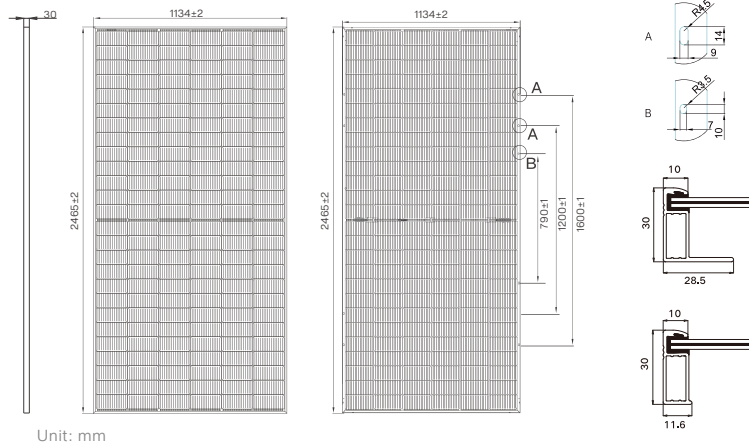
Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control



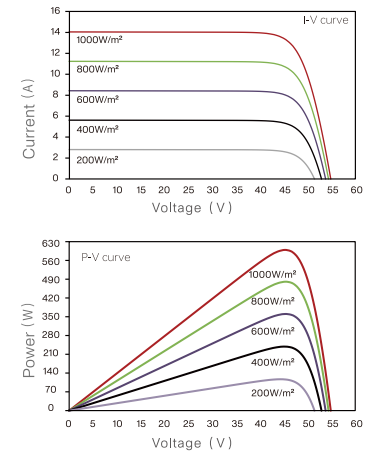
Superior Temperature Coefficient

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

Engineering Drawings



I-V and P-V Curves



Specifications (STC)

Maximum Power Pmax (W)	620	625	630	635	640	645
Voltage at Maximum Power (Vmp/V)	47.43	47.54	47.70	47.86	48.02	48.17
Current at Maximum Power (Imp/A)	13.07	13.15	13.21	13.27	13.33	13.39
Open Circuit Voltage (Voc/V)	55.99	56.95	57.08	57.21	57.34	57.47
Short Circuit Current (Isc/A)	13.74	13.80	13.86	13.92	13.98	14.04
Module Efficiency (%)	22.2	22.4	22.5	22.7	22.9	23.1
Power Tolerance	0~+3%		Maximum System Voltage		DC1500V	
Maximum Series Fuse Rating	30A		Operating Temperature		-40°C~+70°C	
Bifacial Factor	80±5%					

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

Specifications (BNPI)

Maximum Power Pmax (W)	682	688	693	699	704	710
Voltage at Maximum Power (Vmp/V)	47.43	47.54	47.70	47.86	48.02	48.17
Current at Maximum Power (Imp/A)	14.38	14.47	14.53	14.60	14.66	14.73
Open Circuit Voltage (Voc/V)	55.99	56.95	57.08	57.21	57.34	57.47
Short Circuit Current (Isc/A)	15.11	15.18	15.25	15.31	15.38	15.44

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

Mechanical Characteristics

Cell Type	N- type mono-crystalline
Cell Orientation	156 (2 x 78)
Dimension	2465 x 1134 x 30mm
Weight	33.4kg
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	MC4-EVO2A/others
Mechanical Load	5400Pa (Front side) /2400Pa (Rear side)

Temperature Characteristics

Temperature Coefficients of Pmax	-0.29%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	0.045%/°C

Packaging Configuration

Packing Detail	36 pcs/pallets, 72 pcs/stack, 576 pcs/ 40'HQ container
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