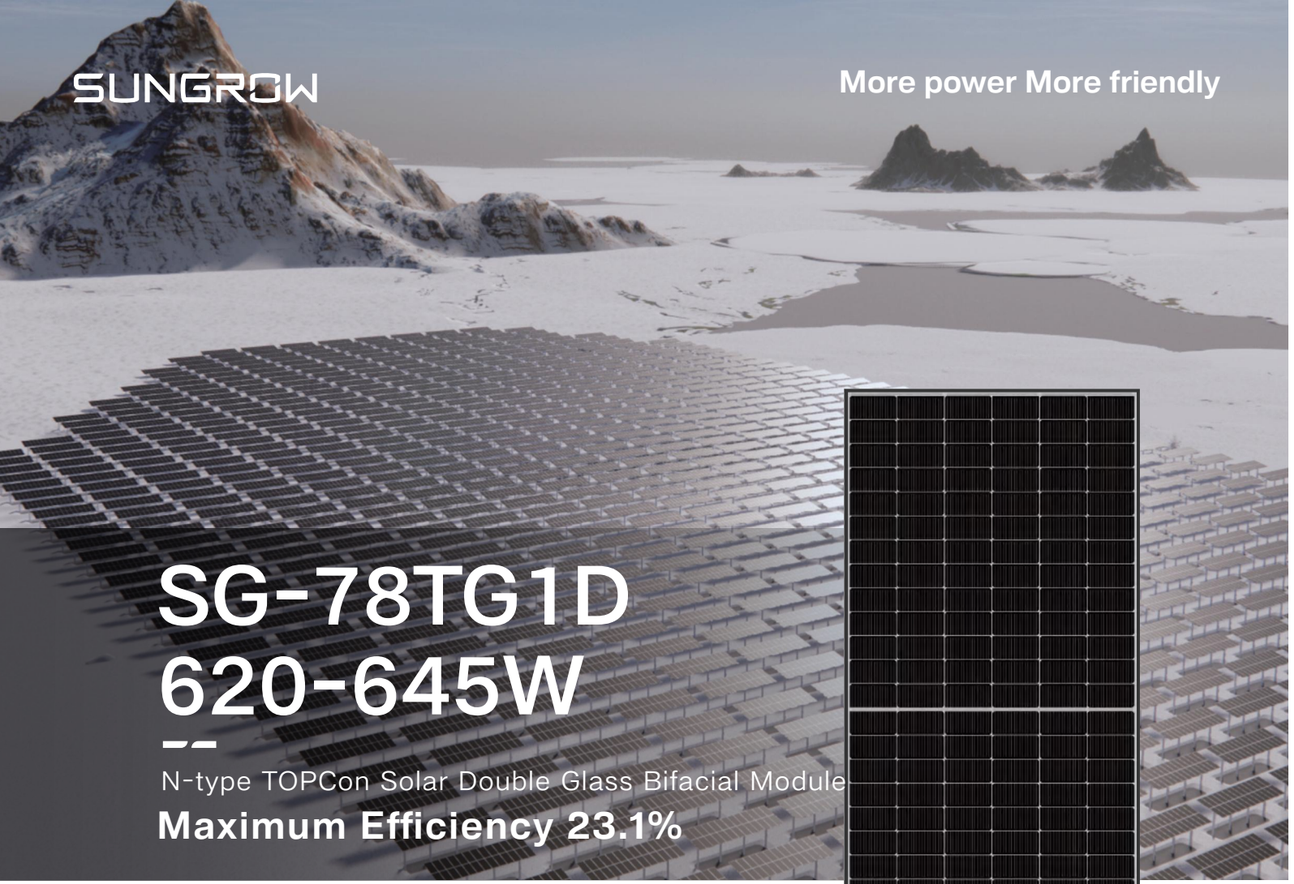
SUNGROW

More power More friendly



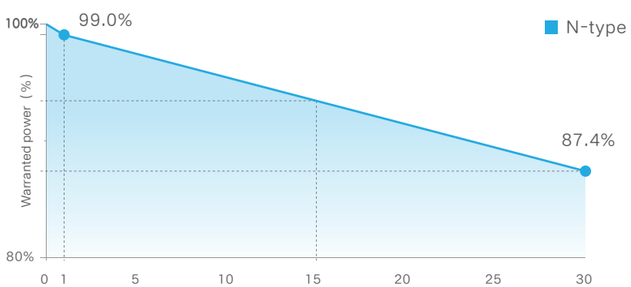
SG-78TG1D 620-645W

N-type TOPCon Solar Double Glass Bifacial Module

Maximum Efficiency 23.1%

Quality Certification

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%

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

Product Performance

Bifacial Design Boosts Generation Capacity
The rear power generation is 20% higher than PERC modules

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

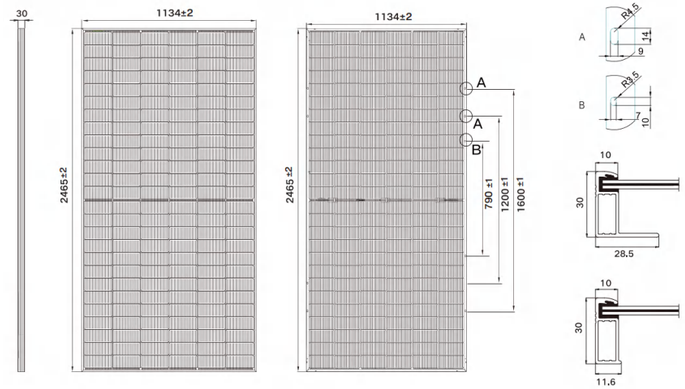
Higher Efficiency
Excellent MBB technology and leading process technology, conversion efficiency of up to 23.1%

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

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

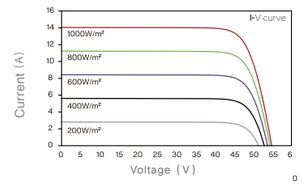
Superior Temperature Coefficient
Generating 1%-2% more power than P-type modules in high temperature regions

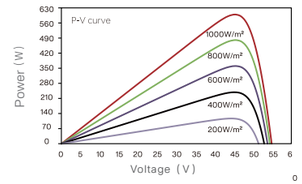
Engineering Drawings



I-V and P-V Curves

Temperature: (25 ± 2) °C





Electrical Characteristics

Module Type	SG-78TG1D-620	SG-78TG1D-625	SG-78TG1D-630	SG-78TG1D-635	SG-78TG1D-640	SG-78TG1D-645
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
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 Sorting Tolerance		0~+5W	

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

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
aBSI(A)	16.79	16.87	16.94	17.01	17.09	17.16
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	156 （2 x 78）
Dimension	2465 x 1134 x 30mm
Weight	34.0kg
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	2525 x 1140 x 1251 mm
Packing Detail	36 pcs/pallets, 72 pcs/stack, 576 pcs/ 40'HQ container

SUNGROW

Sungrow Renewables Development Co., Ltd

NO.2, Tianhu Road, High-tech Industry, Development Zone, Hefei, P.R. China

modulesales@sungrowpower.com www.sungrowplant.com

*Specifications included in this datasheet are subject to change without notice. Sungrow Renewables reserves the right of final interpretation.

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