

STP310S - 20/Wfg+

STP305S - 20/Wfg+

STP300S - 20/Wfg+



310Watt

MONOCRYSTALLINE DIFACIAL SOLAR MODULE



Features



Higher module conversion efficiency

The power generation can increase 30% the highest



High PID resistant

Advanced cell technology and qualified materials lead to high resistance to PID



Low risk of micro-cracks

No internal stress from the symmetrical N-Bifacial cell scheme



Better Weak Illumination Response

Lower temperature coefficient and wide spectral response, higher power output, even under low-light settings



Zero light degradation (LID)

No LID, more power generation



Better reliability

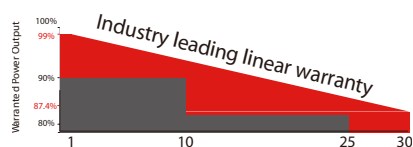
Successfully passed various strict tests

- 6 Salt Mist Corrosion Test
- Triple IEC Test
- 6-time PID Test

Certifications and standards:
IEC 61215, IEC 61730, conformity to CE



Industry-leading Warranty based on nominal power



- 99% in the first year, thereafter, for years two (2) through thirty (30), 0.4% maximum decrease from MODULE's nominal power output per year, ending with the 87.4% in the 30th year after the defined WARRANTY STARTING DATE.
- 12-year product warranty
- 30-year linear performance warranty

Mechanical Characteristics

Solar Cell	Monocrystalline silicon 6 inches
No. of Cells	60 (6 × 10)
Dimensions	1664mm*992mm*35mm
Weight	21.7 kgs (47.8 lbs.)
Front Glass	2.0 mm (0.078 inches) tempered glass
Back Glass	2.0 mm (0.078 inches) tempered glass
Junction Box	IP68 rated (distributed Junction box)
Output Cables	4.0 mm ² (0.006 inches ²), unsymmetrical lengths (-) 350mm (13.8 inches), (+) 160 mm (6.3 inches)
Connectors	MC4 compatible

Packing Configuration

Container	20' GP	40' GP	40' HC
Pieces per pallet	30	30	30
Pallets per container	6	13	26
Pieces per container	180	390	780

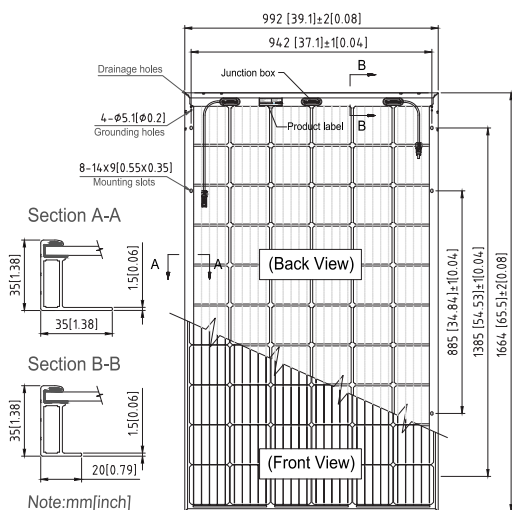
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Electrical Characteristics

STC	STP310S-20/Wfg+		STP305S-20/Wfg+		STP300S-20/Wfg+	
	Front Side	Rear Side	Front Side	Rear Side	Front Side	Rear Side
Testing Condition						
Maximum Power at STC (Pmax)	310 W	264 W	305 W	259 W	300 W	255 W
Optimum Operating Voltage (Vmp)	32.7 V	32.6 V	32.5 V	32.4 V	32.3 V	32.2 V
Optimum Operating Current (Imp)	9.49 A	8.09 A	9.39 A	8.01 A	9.29 A	7.92 A
Open Circuit Voltage (Voc)	39.6V	39.3 V	39.4 V	39.1 V	39.2 V	38.9 V
Short Circuit Current (Isc)	9.98 A	8.54A	9.90A	8.47A	9.82 A	8.41A
Module Efficiency	18.8%	16.0%	18.5%	15.7%	18.2%	15.4%
Operating Module Temperature	-40 °C to +85 °C					
Maximum System Voltage	1500 V DC (IEC) / 1000 V DC (UL)					
Maximum Series Fuse Rating	15 A					
Power Tolerance	0/+5 W					

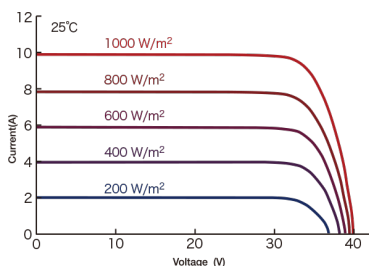
STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5;



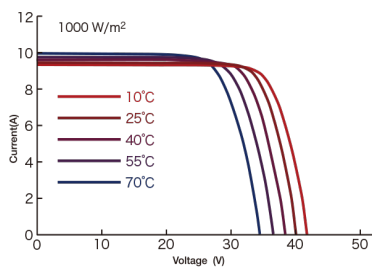
NOCT	STP310S-20/Wfg+		STP305S-20/Wfg+		STP300S-20/Wfg+	
	Front Side	Rear Side	Front Side	Rear Side	Front Side	Rear Side
Testing Condition						
Maximum Power at NOCT (Pmax)	228 W	194 W	224 W	191 W	221 W	187 W
Optimum Operating Voltage (Vmp)	30.0 V	29.9 V	29.8 V	29.7 V	29.7 V	29.6 V
Optimum Operating Current (Imp)	7.59 A	6.48 A	7.51 A	6.41 A	7.43 A	6.34 A
Open Circuit Voltage (Voc)	36.6 V	36.3 V	36.4 V	36.2 V	36.3 V	36.0 V
Short Circuit Current (Isc)	8.04 A	6.89 A	7.98 A	6.83 A	7.91 A	6.78 A

NOCT: Irradiance 800 W/m², ambient temperature 20 °C, AM=1.5, wind speed 1 m/s;

Irradiance Dependence of Isc, Voc and Pmax



Temperature Dependence of Isc, Voc and Pmax



Temperature Characteristics

Nominal Operating Cell Temperature (NOCT)	42±2°C
Temperature Coefficient of Pmax	-0.38 %/°C
Temperature Coefficient of Voc	-0.30 %/°C
Temperature Coefficient of Isc	0.048 %/°C

With Different Power Generation Gain(310S)

Power Gain	Peak Power (Pmax)	MPP Voltage (Vmp)	MPP Current (Imp)	Open Circuit Voltage(Voc)	Short Circuit Current(Isc)
10%	336 W	32.7 V	10.30 A	39.6 V	10.83 A
15%	350 W	32.7 V	10.70 A	39.6 V	11.25 A
20%	363 W	32.8 V	11.07 A	39.7 V	11.64 A
25%	376 W	32.8 V	11.46 A	39.7 V	12.05 A
30%	389 W	32.8 V	11.85 A	39.7 V	12.47 A

All values indicated in this data sheet are subject to change without prior announcement. The specifications may vary slightly. All specifications are in accordance with standard EN 50380. Color differences of the modules relative to the figures as well as discolorations of/in the modules which do not impair their proper functioning are possible and do not constitute a deviation from the specification.