



Mechanical Characteristics

Solar Cell	Monocrystalline silicon 166 mm
No. of Cells	144 (6 × 24)
Dimensions	2095 × 1039 × 35 mm (82.5 × 40.9 × 1.4 inches)
Weight	24.5 kgs (54.0 lbs.)
Front \ Back Glass	3.2 mm (0.126 inches) full tempered glass
Output Cables	4.0 mm ² , (-) 350 mm and (+) 160 mm in length or customized length
Junction Box	IP68 rated (3 bypass diodes)
Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500 V DC (IEC)
Maximum Series Fuse Rating	20 A
Power Tolerance	0/+5 W
Refer. Bifaciality Factor	(70 ± 5)%
Packing Configuration	Packaging box dimensions (mm) : 2125 × 1130 × 1205 Packaging box weight (kg) : 814 31 Pieces per pallet 155 Pieces per container / 20' GP 682 Pieces per container / 40' HC

For tracker installation, please turn to Suntech for mechanical load information.

Electrical Characteristics

Module Type	STP455S-B72/Pnhg		STP450S-B72/Pnhg		STP445S-B72/Pnhg		STP440S-B72/Pnhg		STP435S-B72/Pnhg	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (P _{max} /W)	455	343.1	450	339.4	445	335.8	440	332.7	435	328.9
Optimum Operating Voltage (V _{mp} /V)	41.6	38.4	41.4	38.2	41.2	38.0	41.0	37.8	40.8	37.7
Optimum Operating Current (I _{mp} /A)	10.94	8.94	10.87	8.89	10.81	8.84	10.74	8.78	10.67	8.73
Open Circuit Voltage (V _{oc} /V)	49.4	46.3	49.2	46.2	49.0	46.0	48.8	45.8	48.6	45.7
Short Circuit Current (I _{sc} /A)	11.67	9.42	11.61	9.37	11.54	9.31	11.47	9.25	11.40	9.20
Module Efficiency (%)	20.9		20.7		20.4		20.2		20.0	

STC: Irradiance 1000 W/m², module temperature 25°C, AM=1.5; NMOT: Irradiance 800 W/m², ambient temperature 20°C, AM=1.5, wind speed 1 m/s; Tolerance of P_{max} is within +/- 3%;

Different Rearside Power Gain Reference to 445S Front

Rearside Power Gain	5%	15%	25%
Maximum Power at STC (P _{max})	467.3	511.8	556.3
Optimum Operating Voltage (V _{mp} /V)	41.2	41.2	41.3
Optimum Operating Current (I _{mp} /A)	11.35	12.43	13.51
Open Circuit Voltage (V _{oc} /V)	49.0	49.0	49.1
Short Circuit Current (I _{sc} /A)	12.12	13.27	14.43
Module Efficiency (%)	21.5	23.5	25.6

Graphs Current-Voltage & Power-Voltage (455S)

Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	42 ± 2°C
Temperature Coefficient of P _{max}	-0.36%/°C
Temperature Coefficient of V _{oc}	-0.304%/°C
Temperature Coefficient of I _{sc}	0.050%/°C

