

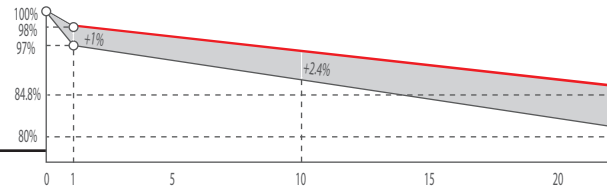
Features

Module efficiency up to **20.9%** achieved through advanced cell technology and manufacturing process

Up to **2%** power loss caused by current mismatch could be diminished by current sorting technique to maximize system power output

More power output in weak light condition, such as cloud, morning and sunset

Industry-leading Warranty ^{**}



First year power degradation: 2%
Annual degradation: 0.55%

Product warranty : 12 years
Linear warranty : 25 years



* Please refer to Suntech Standard Module Installation Manual for details.
** Please refer to Suntech Limited Warranty for details.

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℃ to +85℃
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℃, AM=1.5; NMOT: Irradiance 800 W/m², ambient temperature 20℃, AM=1.5, wind speed 1 m/s; Tolerance of P_{max} is within +/- 3%;

Different Rearside Power Gain Reference to 4455 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 (4555)

Temperature Characteristics

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

