



HALF-CELL N-Type TOPCon FULL-BLACK SINGLE GLASS MONOFACIAL MODULE TYPE:STPXXXS-H48-Nfb

430-450W 22.5%

POWER OUTPUT

MAX EFFICIENCY



High module conversion efficiency Module efficiency up to 22.5% achieved through advanced cell

technology and manufacturing process



Multi busbar technology

Superior optical utilization and current collection capability, effectively improving product power and reliability



Excellent low light performance

More power output in low light conditions such as cloudy days, mornings and evenings



Extended wind and snow load tests

Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)*















Environment Management System ISO 45001 Occupational Health and Safety ISO 9001 Quality Management System Social Responsibility Standards IEC TS 62941Guideline for Module Design

IEC 61701 Salt-mist Certification IEC 62716 Ammonia Certification

IEC 60068-2-68 Dust and Sand IEC 61730-2 (UL790) Fire Class C









30 years of linear warranty

25 years of product warranty

First year power degradation 1% Annual degradation 0.40%

^{87.4%}

^{*} Please refer to Suntech Standard Module Installation Manual for details.

^{***} WEEE only for EU market.

^{**} Please refer to Suntech Limited Warranty for details.

^{****} Suntech reserves the right to the final.



990 [39.0]±2[0.08] 1300 [51.2]±2[0.08] 1762 [69.4]±2[0.08]



Mechanical Characteristics

Solar Cell	N-type monocrystalline silicon	
No. of Cells	96 (6 × 16)	
Dimensions	1762 × 1134 × 30 mm (69.4 × 44.6× 1.2 inches)	
Weight	21.5 kg (47.40lbs.)	
Front Glass	3.2 mm (0.126 inches) fully tempered glass	— Drainage holes
Output Cables	4.0 mm², (-)1400 mm (+) 1400 mm in length	4-95.1(90.2) Grounding holes Barcode
Junction Box	or customized length IP68 rated (3 bypass diodes)	— 8-14x9[0.55x0.35] Mounting slots
Operating Module Temperature	-40 °C to +85 °C	(Rear View)
Maximum System Voltage	1500 V DC (IEC)	
Connectors	STP-XC4(Standard)/MC4-EVO2(Optional)	A A Junction box
Maximum Series Fuse Rating	35 A	6
Power Tolerance	0/+5 W	Section A-A
Frame	Anodized aluminum alloy frame	
Packing Configuration	36 pieces per pallet 936 pieces per container /40'HC 1796×1120×1255mm per pallet 816kg per pallet	30[1:18] Note:mm[inch]
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For tracker installation, please turn to Suntech for mechanical load information.

Electrical Characteristics

Module Type	STP450S	-H48-Nfb	STP445S	-H48-Nfb	STP440S	-H48-Nfb	STP435S	-H48-Nfb	STP430S-	H48-Nfb
Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	450	344	445	340	440	336	435	333	430	329
Optimum Operating Voltage (Vmp/V)	29.32	28.00	29.14	27.80	28.97	27.70	28.79	27.50	28.61	27.30
Optimum Operating Current (Imp/A)	15.35	12.29	15.27	12.23	15.19	12.16	15.11	12.10	15.03	12.04
Open Circuit Voltage (Voc/V)	35.71	33.90	35.50	33.80	35.29	33.60	35.08	33.40	34.87	33.20
Short Circuit Current (Isc/A)	16.01	12.91	15.93	12.84	15.85	12.78	15.77	12.72	15.69	12.65
Module Efficiency (%)	22	2.5	22	2.3	2.	2.0	2	1.8	21	.5

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; Measuring tolerance is within +/- 3%;

Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	42 ± 2 ℃
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.046%/°C

Information on how to install and operate this product is available in the installation instruction. 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.

Graphs Current-Voltage & Power-Voltage (440W)

