

# Full Black Series

144-CELL HALF CUT ALL BLACK  
MONOCRYSTALLINE SOLAR MODULE

## 430-450 Watt

STPXXXS - B72/Vnhb



### Features



#### High power output

Compared to 158.75 mm module, the power output can increase 25W-30W



#### High PID resistant

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



#### Excellent weak light performance

More power output in weak light condition, such as haze, cloudy, and morning



#### Suntech current sorting process

System output maximized by reducing mismatch losses up to 2% with modules sorted & packaged by amperage



#### Extended wind and snow load tests

Module certified to withstand front side maximum static test load (5400 Pascal) and rear side maximum static test loads (3800 Pascal) \*



#### Withstanding harsh environment

Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline

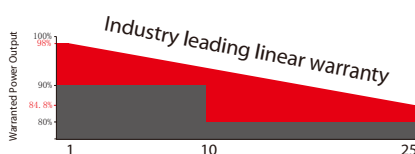
Certifications and standards:  
IEC 61215, IEC 61730, conformity to CE



### Trust Suntech to Deliver Reliable Performance Over Time

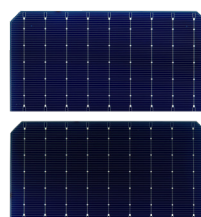
- World-class manufacturer of crystalline silicon photovoltaic modules
- Unrivalled manufacturing capacity and world-class technology
- Rigorous quality control meeting the highest international standards: ISO 9001, ISO 14001 and ISO 17025
- Regular independently checked production process from international accredited institute/company
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing testing: IEC 61701, IEC 62716, DIN EN 60068-2-68)\*\*\*
- Long-term reliability tests
- 2 x 100% EL inspection ensuring defect-free modules

### Industry-leading Warranty based on nominal power



- 98% in the first year, thereafter, for years two (2) through twenty-five (25), 0.55% maximum decrease from MODULE's nominal power output per year, ending with the 84.8% in the 25th year after the defined WARRANTY STARTING DATE.\*\*\*\*
- 12-year product warranty
- 25-year linear performance warranty

### Special Cell Design



The unique cell design leads to reduced electrodes resistance and smaller current, thus enables higher fill factor. Meanwhile, it can reduce losses of mismatch and cell wear, and increase total reflection.

### IP68 Rated Junction Box



The Suntech IP68 rated junction box ensures an outstanding waterproof level, supports installations in all orientations and reduces stress on the cables. High reliable performance, low resistance connectors ensure maximum output for the highest energy production.

\* Please refer to Suntech Standard Module Installation Manual for details. \*\*WEEE only for EU market.

\*\*\* Please refer to Suntech Product Near-coast Installation Manual for details. \*\*\*\* Please refer to Suntech Product Warranty for details.

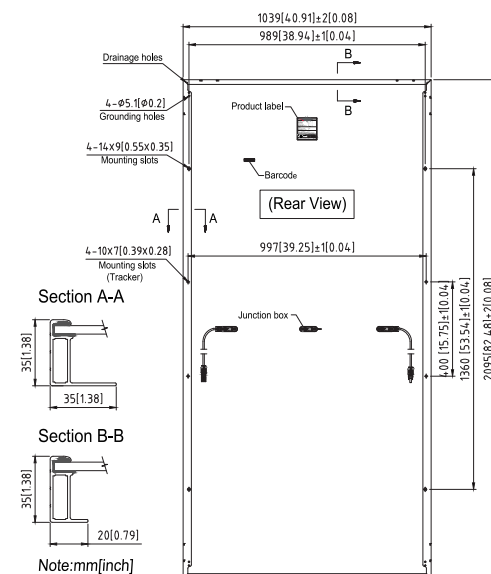
## Electrical Characteristics

STC	STPXXXS-B72/Vnhb				
Maximum Power at STC (Pmax)	450 W	445 W	440 W	435 W	430 W
Optimum Operating Voltage (Vmp)	41.4 V	41.2 V	41.0 V	40.8 V	40.6 V
Optimum Operating Current (Imp)	10.87 A	10.81 A	10.74 A	10.67 A	10.60 A
Open Circuit Voltage (Voc)	49.2 V	49.0 V	48.8 V	48.6 V	48.4 V
Short Circuit Current (Isc)	11.61 A	11.54 A	11.47 A	11.40 A	11.32 A
Module Efficiency	20.7%	20.4%	20.2%	20.0%	19.8%
Operating Module Temperature	-40 °C to +85 °C				
Maximum System Voltage	1000 V DC (IEC)				
Maximum Series Fuse Rating	20 A				
Power Tolerance	0/+5 W				

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5;  
Tolerance of Pmax is within +/- 3%.

NMOT	STPXXXS-B72/Vnhb				
Maximum Power at NMOT (Pmax)	339.4 W	335.8 W	332.7 W	327.7 W	324.6 W
Optimum Operating Voltage (Vmp)	38.2 V	38.0 V	37.8 V	37.6 V	37.5 V
Optimum Operating Current (Imp)	8.89 A	8.84 A	8.78 A	8.73 A	8.67 A
Open Circuit Voltage (Voc)	46.2 V	46.0 V	45.8 V	45.5 V	45.4 V
Short Circuit Current (Isc)	9.37 A	9.31 A	9.25 A	9.20 A	9.13 A

NMOT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.



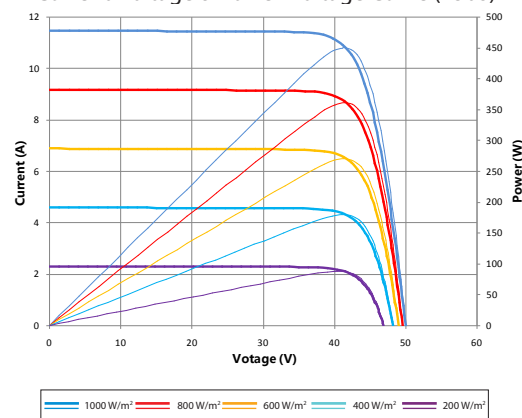
## Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	42 ± 2 °C
Temperature Coefficient of Pmax	-0.36%/°C
Temperature Coefficient of Voc	-0.304%/°C
Temperature Coefficient of Isc	0.050%/°C

## 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 Glass	3.2 mm (0.13 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm <sup>2</sup> , Portrait: (-)350 mm and (+)160 mm in length Landscape: (-)1400 mm and (+)1400 mm in length or customized length
Connectors	MC4 compatible(1000V)

## Current-Voltage & Power-Voltage Curve (450S)



## Dealer information



## Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	31	31
Pallets per container	5	22
Pieces per container	155	682
Packaging box dimensions	2125×1130×1205 mm	
Packaging box weight	812 kg	

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.