

# Ultra S

144 HALF-CELL BIFACIAL MODULE

# 435-455W

STPXXXS - B72/Pnh+



## Features



### High module conversion efficiency

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



### Suntech current sorting process

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



### Excellent weak light performance

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



### Lower operating temperature

Lower operating temperature and temperature coefficient increases the power output



### Extended wind and snow load tests

Module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 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
- Rigorous quality control meeting the highest international standards: ISO 9001, ISO 14001 and ISO17025
- Regular independently checked production process from international accredited institute/company
- Tested for harsh environments (IEC 61701, IEC 62716, DIN EN 60068-2-68) \*\*\*\*\*
- Long-term reliability tests
- 2 x 100% EL inspection ensuring defect-free modules

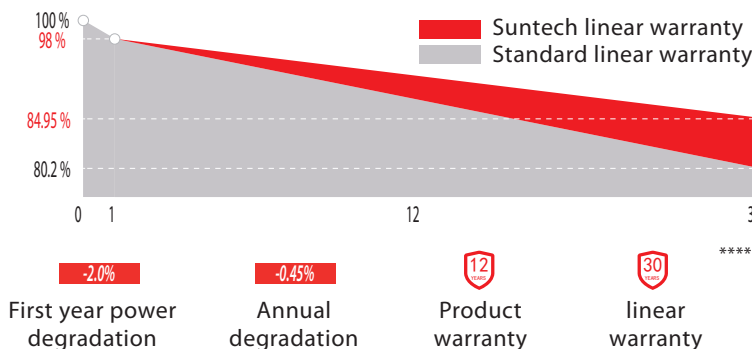
## High efficiency Bifacial cell



9 BB

By using bifacial cell and double glass technology, the frontside power can reach to 455 W, and the backside power generation can increase up to 25%.

## Industry-leading Warranty based on nominal power



## 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.

\* Please refer to Suntech Standard Module Installation Manual for details. \*\* Suntech reserves the right to the final interpretation of the warranty by Munich Re.  
\*\*\* 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

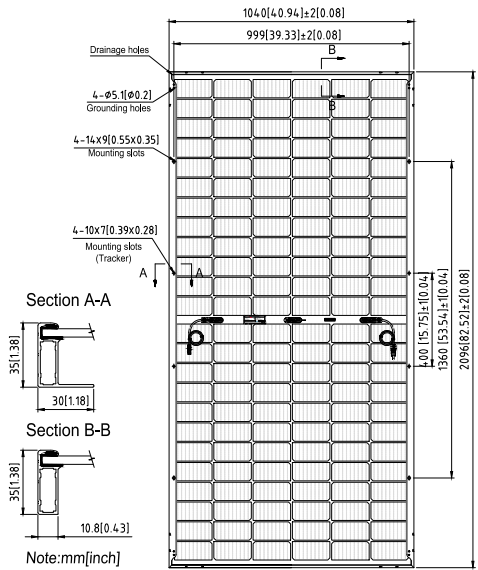
| STC                             | STPXXXS-B72/Pnh+ |        |        |        |        |
|---------------------------------|------------------|--------|--------|--------|--------|
| Maximum Power at STC (Pmax)     | 455W             | 450W   | 445W   | 440W   | 435W   |
| Optimum Operating Voltage (Vmp) | 41.6V            | 41.4V  | 41.2V  | 41.0V  | 40.8V  |
| Optimum Operating Current (Imp) | 10.94A           | 10.87A | 10.81A | 10.74A | 10.67A |
| Open Circuit Voltage (Voc)      | 49.4V            | 49.2V  | 49.0V  | 48.8V  | 48.6V  |
| Short Circuit Current (Isc)     | 11.67A           | 11.61A | 11.54A | 11.47A | 11.40A |
| Module Efficiency               | 20.9%            | 20.6%  | 20.4%  | 20.2%  | 20.0%  |
| 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           |        |        |        |        |

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

For tracker installation, the module could withstand maximum 1600Pa at both front and rear side.

| NMOT                            | STPXXXS-B72/Pnh+ |        |        |        |        |
|---------------------------------|------------------|--------|--------|--------|--------|
| Maximum Power at NMOT (Pmax)    | 343.1W           | 339.4W | 335.8W | 332.7W | 328.9W |
| Optimum Operating Voltage (Vmp) | 38.4V            | 38.2V  | 38.0V  | 37.8V  | 37.7V  |
| Optimum Operating Current (Imp) | 8.94A            | 8.89A  | 8.84A  | 8.78A  | 8.73A  |
| Open Circuit Voltage (Voc)      | 46.3V            | 46.2V  | 46.0V  | 45.8V  | 45.7V  |
| Short Circuit Current (Isc)     | 9.42A            | 9.37A  | 9.31A  | 9.25A  | 9.20A  |

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



Note: mm [inch]

### Electrical Characteristics with Different Rearside Power Gain (Reference to 445 W Front)

| Rearside Power Gain             | 5%     | 15%    | 25%    |
|---------------------------------|--------|--------|--------|
| Maximum Power at STC (Pmax)     | 467W   | 512W   | 556W   |
| Optimum Operating Voltage (Vmp) | 41.2V  | 41.2V  | 41.3V  |
| Optimum Operating Current (Imp) | 11.35A | 12.43A | 13.51A |
| Open Circuit Voltage (Voc)      | 49.0V  | 49.0V  | 49.1V  |
| Short Circuit Current (Isc)     | 12.12A | 13.27A | 14.43A |
| Module Efficiency               | 21.4%  | 23.5%  | 25.5%  |

### 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

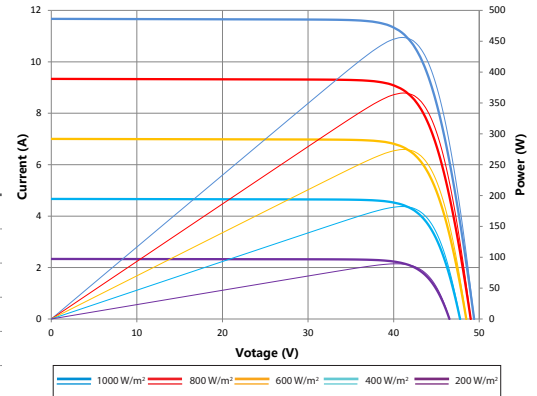
|                           |  |
|---------------------------|--|
| Solar Cell                | Monocrystalline silicon 166 mm   |
| No. of Cells              | 144 (6 × 24)   |
| Dimensions                | 2096 × 1040 × 35 mm (82.5 × 40.9 × 1.4 inches)   |
| Weight                    | 28.1 kgs (61.9 lbs.)   |
| Front \Back Glass         | 2.0+2.0 mm (0.079 +0.079 inches) semi-tempered glass   |
| Frame                     | Anodized aluminium alloy   |
| Junction Box              | IP68 rated   |
| Output Cables             | 4.0 mm <sup>2</sup> ,<br>Portrait: (-) 350 mm and (+) 160 mm in length<br>or customized length |
| Connectors                | MC4 EVO2, Cable 015  |
| Refer. Bifaciality Factor | (70 ± 5) %   |

### 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     | 926 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.

### Current-Voltage & Power-Voltage Curve (455W)



### Dealer information

