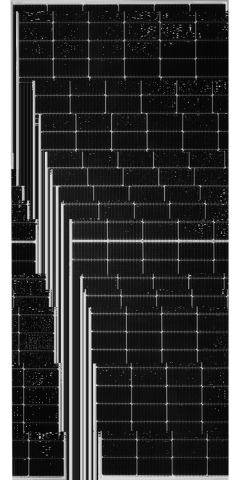


# Ultra V Plus

## HALF-CELL BIFACIAL MODULE

TYPE: STPXXXS - C78/Pmh+



POWER OUTPUT

570-590W

MAX EFFICIENCY

21.1%

### Features



#### High module conversion efficiency

Module efficiency up to  $\eta$  achieved through advanced cell technology and manufacturing process



#### Lower operating temperature

Lower operating temperature and temperature coefficient increases the power output



#### Suntech current sorting process

Up to  $\eta$  power loss caused by current mismatch could be diminished by current sorting technique to maximize system power output



#### Extended wind and snow load tests

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



#### Excellent weak light performance

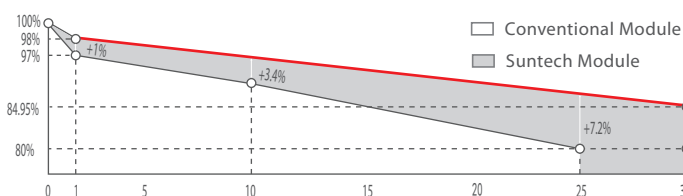
More power output in weak light condition, such as cloudy, morning and sunset



#### Withstanding harsh environment

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

### Industry-leading Warranty \*\*



- ◆ First year power degradation: 2%
- ◆ Annual degradation: 0.45%
- ◆ Product warranty: 12 years
- ◆ linear warranty: 30 years

### Certifications and Standards

CE IEC 61730 IEC 61215  
 SA 8000 Social Responsibility Standards  
 ISO 9001 Quality Management System  
 ISO 14001 Environment Management System  
 ISO 45001 Occupational Health and Safety  
 IEC TS 62941 Guideline for module design qualification and type approval



Munich RE \*\*\*\*

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

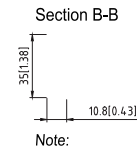
\*\*\* WEEE only for EU market.  
 \*\*\*\* Suntech reserves the right to the final interpretation of the warranty by Munich RE.



## Mechanical Characteristics

|                              |   |
|------------------------------|---|
| Solar Cell                   | Monocrystalline silicon 182 mm  |
| No. of Cells                 | 156 (6 × 26)  |
| Dimensions                   | 2465 × 1134 × 35 mm (97.0 × 44.6 × 1.4 inches)  |
| Weight                       | 35.5 kgs (78.3 lbs.)  |
| Front \ Back Glass           | 2.0+2.0 mm (0.079+ 0.079inches) semi-tempered glass   |
| Output Cables                | 4.0 mm <sup>2</sup> ,<br>(-) 350 mm and (+) 160 mm in length<br>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   | 25 A  |
| Power Tolerance              | 0/+5 W  |
| Refer. Bifaciality Factor    | (70 ± 5)%   |
| Packing Configuration        | Packaging box dimensions (mm) : 2495×1130×1269<br>Packaging box weight (kg) : 1176<br>31 Pieces per pallet<br>558 Pieces per container / 40 'HC |

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



## Electrical Characteristics

| Module Type                       | STP590S-C78/Pmh+ |       | STP585S-C78/Pmh+ |       | STP580S-C78/Pmh+ |       | STP575S-C78/Pmh+ |       | STP570S-C78/Pmh+ |       |
|-----------------------------------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|
|                                   | STC              | NMOT  | STC              | NMOT  | STC              | NMOT  | STC              | NMOT  | STC              | NMOT  |
| Testing Condition                 | STC              | NMOT  | STC              | NMOT  | STC              | NMOT  | STC              | NMOT  | STC              | NMOT  |
| Maximum Power (Pmax/W)            | 590              | 445.4 | 585              | 441.7 | 580              | 438.0 | 575              | 434.3 | 570              | 430.5 |
| Optimum Operating Voltage (Vmp/V) | 45.36            | 41.9  | 45.18            | 41.7  | 45.00            | 41.6  | 44.82            | 41.4  | 44.64            | 41.2  |
| Optimum Operating Current (Imp/A) | 13.01            | 10.63 | 12.95            | 10.58 | 12.89            | 10.54 | 12.83            | 10.49 | 12.77            | 10.44 |
| Open Circuit Voltage (Voc/V)      | 53.79            | 50.5  | 53.61            | 50.4  | 53.44            | 50.2  | 53.26            | 50.0  | 53.08            | 49.9  |
| Short Circuit Current (Isc/A)     | 13.91            | 11.18 | 13.85            | 11.13 | 13.79            | 11.09 | 13.73            | 11.04 | 13.67            | 10.99 |
| Module Efficiency (%)             | 21.1             |       | 20.9             |       | 20.7             |       | 20.6             |       | 20.4             |       |

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5; NMOT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM=1.5, wind speed 1 m/s; Tolerance of Pmax is within +/- 3%;

## Different Rearside Power Gain Reference to 540S Front

| Rearside Power Gain               | 5%    | 15%   | 25%   |
|-----------------------------------|-------|-------|-------|
| Maximum Power at STC (Pmax)       | 609.0 | 667.0 | 725.0 |
| Optimum Operating Voltage (Vmp/V) | 45.0  | 45.0  | 45.1  |
| Optimum Operating Current (Imp/A) | 13.53 | 14.82 | 16.11 |
| Open Circuit Voltage (Voc/V)      | 53.4  | 53.4  | 53.5  |
| Short Circuit Current (Isc/A)     | 14.48 | 15.86 | 17.24 |
| Module Efficiency (%)             | 21.8  | 23.9  | 25.9  |

## Graphs Current-Voltage & Power-Voltage (590S)

## Temperature Characteristics

|   |           |
|---|-----------|
| Nominal Module Operating Temperature (NMOT) | 42 ± 2 °C |
| Temperature Coefficient of Pmax             | -0.34%/°C |
| Temperature Coefficient of Voc              | -0.26%/°C |
| Temperature Coefficient of Isc              | 0.050%/°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.