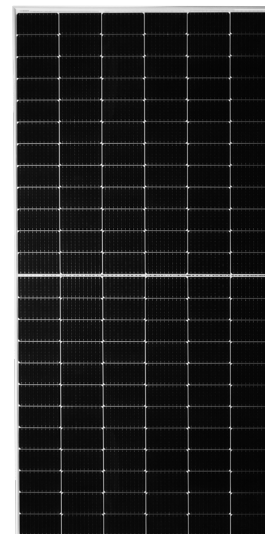


# Ultra S

## HALF-CELL BIFACIAL MODULE

TYPE: STPXXXS - B72/Pnh+



POWER OUTPUT  
**435-455W**

MAX EFFICIENCY  
**20.9%**

### Features



**High module conversion efficiency**  
Module efficiency up to **20.9%** 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 **2%** 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**) \*

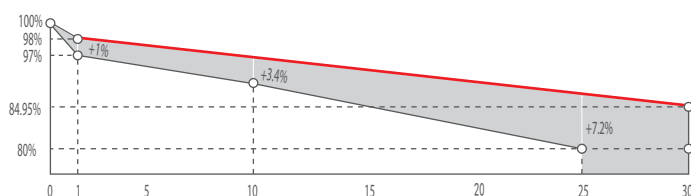


**Excellent weak light performance**  
More power output in weak light condition, such as cloudy, morning and sunset



**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.

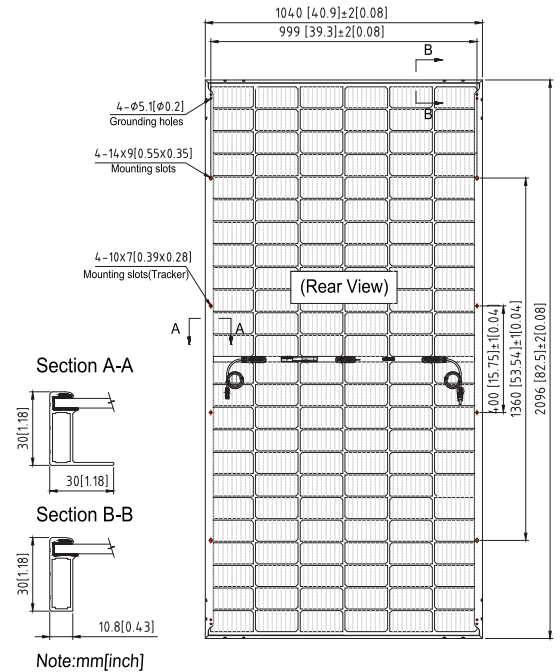
\*\*\* WEEE only for EU market.  
\*\*\*\* Suntech reserves the right to the final interpretation of the warranty by Munich RE.

# Ultra S STPXXXS - B72/Pnh+ 435-455W

## Mechanical Characteristics

Solar Cell	Monocrystalline silicon 166 mm
No. of Cells	144 (6 × 24)
Dimensions	2096 × 1040 × 30 mm (82.5 × 40.9 × 1.2 inches)
Weight	28.1 kgs (61.9 lbs.)
Front \ Back Glass	2.0+2.0 mm (0.079+ 0.079inches) semi-tempered glass
Output Cables	4.0 mm <sup>2</sup> , (-) 350 mm and (+) 160 mm in length 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)
Connectors	MC4 EVO2, Cable01S, STP-XC4
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) : 1067 36 Pieces per pallet 180 Pieces per container / 20' GP 792 Pieces per container / 40' HC

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



## Electrical Characteristics

Module Type	STP455S-B72/Pnh+		STP450S-B72/Pnh+		STP445S-B72/Pnh+		STP440S-B72/Pnh+		STP435S-B72/Pnh+	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	455	343.1	450	339.4	445	335.8	440	332.7	435	328.9
Optimum Operating Voltage (Vmp/V)	41.6	38.4	41.4	38.2	41.2	38.0	41.0	37.8	40.8	37.7
Optimum Operating Current (Imp/A)	10.94	8.94	10.87	8.89	10.81	8.84	10.74	8.78	10.67	8.73
Open Circuit Voltage (Voc/V)	49.4	46.3	49.2	46.2	49.0	46.0	48.8	45.8	48.6	45.7
Short Circuit Current (Isc/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		20.6		20.4		20.2		20.0	

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 445S Front

Rearside Power Gain	5%	15%	25%
Maximum Power at STC (Pmax)	467.3	511.8	556.3
Optimum Operating Voltage (Vmp/V)	41.2	41.2	41.3
Optimum Operating Current (Imp/A)	11.35	12.43	13.51
Open Circuit Voltage (Voc/V)	49.0	49.0	49.1
Short Circuit Current (Isc/A)	12.12	13.27	14.43
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

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 (455S)

