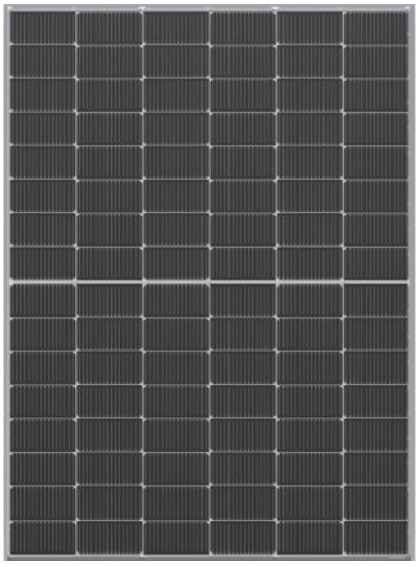
SUNTECH

Ultra V Pro mini

HALF-CELL N-Type TOPCon
Glass-Glass BIFACIAL MODULE
TYPE: STPXXXS - H48-Nth+

430-450W
POWER OUTPUT

22.5%
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)*

EUPD RESEARCH TOP BRAND PV MODULES 2023

TOP PERFORMER 2022 PVEL PV MODULE RELIABILITY SCORECARD

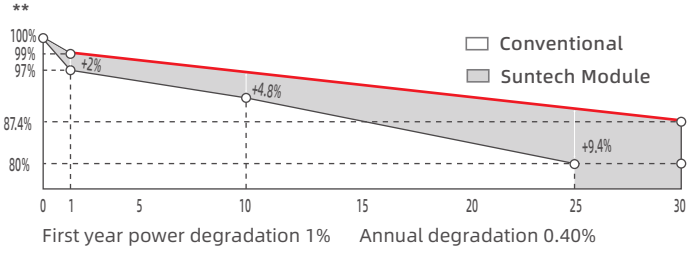
Tier 1 Bloomberg NEW ENERGY FINANCE

ISO 14001	Environment Management System
ISO 45001	Occupational Health and Safety
ISO 9001	Quality Management System
SA 8000	Social Responsibility Standards
IEC TS 62941	Guideline 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

CE *** DVE

30 years of linear warranty

15 years of product warranty



First year power degradation 1% Annual degradation 0.40%

* 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.

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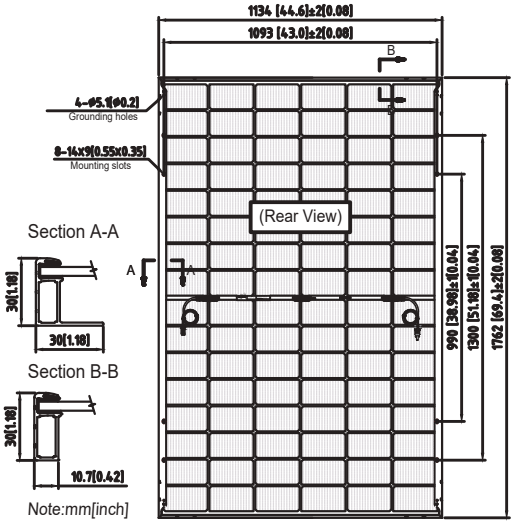
UltraV Pro STPXXXS - H48-Nth+ 430-450W

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/Back Glass	1.6+1.6 mm (0.063+ 0.063inches) semi-tempered glass
Output Cables	4.0 mm², (-) 350 mm (+) 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	STP-XC4
Maximum Series Fuse Rating	35 A
Power Tolerance	0/+5 W
Refer. Bifaciality Factor	(80 ± 5)%
Frame	Anodized aluminum alloy frame
Packing Configuration	36 Pieces per pallet 936 Pieces per container /40'HC 1796×1120×1255 816kg

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



Electrical Characteristics

Module Type	STP450S-H48-Nth+		STP445S-H48-Nth+		STP440S-H48-Nth+		STP435S-H48-Nth+		STP430S-H48-Nth+	
Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	450	344.1	445	340.2	440	336.4	435	332.6	430	328.8
Optimum Operating Voltage (Vmp/V)	29.32	28	29.14	27.8	28.97	27.7	28.79	27.5	28.61	27.3
Optimum Operating Current (Imp/A)	15.35	12.29	15.27	12.23	15.19	12.16	15.11	12.1	15.03	12.04
Open Circuit Voltage (Voc/V)	35.71	33.9	35.5	33.8	35.29	33.6	35.08	33.4	34.87	33.4
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 (%)	22.5		22.3		22.0		21.8		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%;

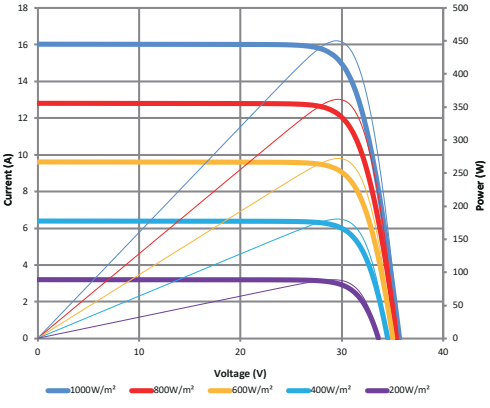
Different Rearside Power Gain

Reference to 450W Front

Rearside Power Gain	5%	15%	25%
Maximum Power at STC (Pmax)	472.5	517.5	562.5
Optimum Operating Voltage (Vmp/V)	29.3	29.3	29.4
Optimum Operating Current (Imp/A)	16.12	17.65	19.19
Open Circuit Voltage (Voc/V)	35.7	35.7	35.8
Short Circuit Current (Isc/A)	16.81	18.41	20.01
Module Efficiency (%)	23.7	25.9	28.2

Graphs

Current-Voltage & Power-Voltage (450W)



Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	42 ± 2 °C
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.