

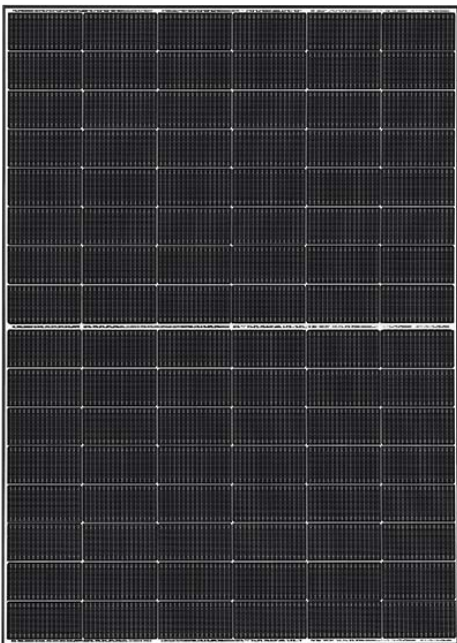
Ultra V Pro mini

HALF-CELL N-Type TOPCon

Glass-Glass MONOFACIAL MODULE

TYPE: STPXXXS-H48-Nkh+

440-460W **23.0%**
POWER OUTPUT MAX EFFICIENCY



High module conversion efficiency

Module efficiency up to **23.0%** 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



Superior load-bearing capability

Module certified to withstand **5400 Pa** front side max static test load and **2400 Pa** rear side max static test load *



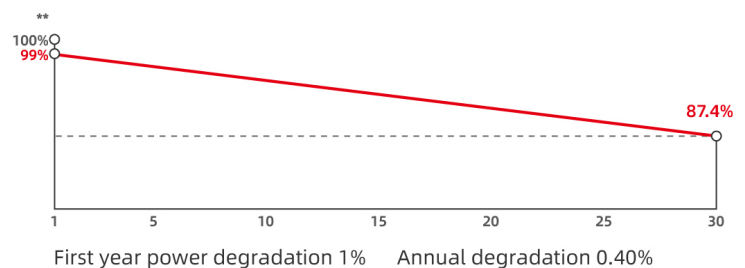
Tier1
Bloomberg
NEW ENERGY FINANCE

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



30 years of linear warranty
25 years of product warranty



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

*** WEEE only for EU market.

** Please refer to Suntech Limited Warranty for details.

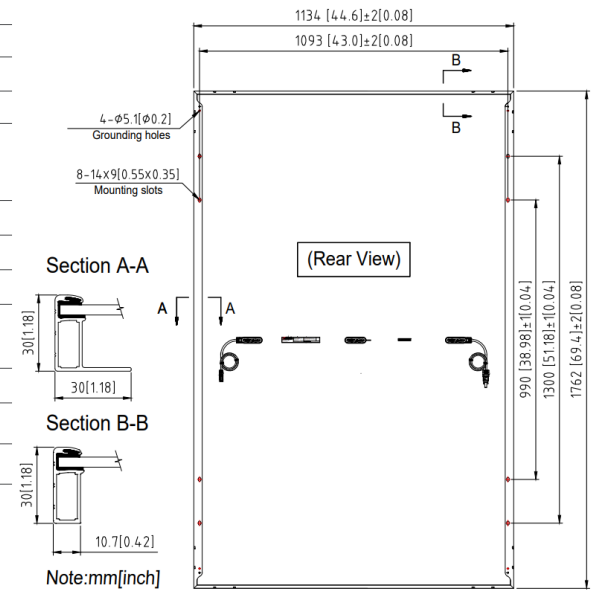
**** Suntech reserves the right to the final.

Ultra V Pro STPXXXS-H48-Nkh+ 440-460W

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 mm ² , (-) 1400mm (+) 1400mm in length or customized length |
| Junction Box | IP68 rated (3 bypass diodes) |
| Operating Module Temperature | -40 °C to +70 °C (T98th) |
| Maximum System Voltage | 1500 V DC (IEC) |
| Connectors | Wuxi Suntech STP-XC4-4 (Default)/ Staubli PV-KST4-EVO2A/xy (Optional) |
| Maximum Series Fuse Rating | 35 A |
| Power Tolerance | 0/+5 W |
| Frame | Anodized aluminum alloy frame |
| Packing Configuration | 36 pieces per pallet 936 pieces per container /40'HC 1796×1120×1255mm per pallet 816kg per pallet |

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



Electrical Characteristics (STC)

| Module Type | STP460S-H48-Nkh+ | STP455S-H48-Nkh+ | STP450S-H48-Nkh+ | STP445S-H48-Nkh+ | STP440S-H48-Nkh+ |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|
| Maximum Power (Pmax/W) | 460 | 455 | 450 | 445 | 440 |
| Optimum Operating Voltage (Vmp/V) | 30.38 | 30.21 | 30.04 | 29.86 | 29.68 |
| Optimum Operating Current (Imp/A) | 15.14 | 15.06 | 14.98 | 14.90 | 14.82 |
| Open Circuit Voltage (Voc/V) | 35.77 | 35.57 | 35.37 | 35.17 | 34.97 |
| Short Circuit Current (Isc/A) | 16.08 | 16.00 | 15.92 | 15.84 | 15.76 |
| Module Efficiency (%) | 23.0 | 22.8 | 22.5 | 22.3 | 22.0 |

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5; Measuring tolerance of Pmax, Voc, Isc is within +/- 3%;

Temperature Characteristics

| | |
|---------------------------------|-----------|
| 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.

Graphs Current-Voltage & Power-Voltage (450W)

