

Ultra T 1.0

HALF-CELL N-TYPE TOPCon

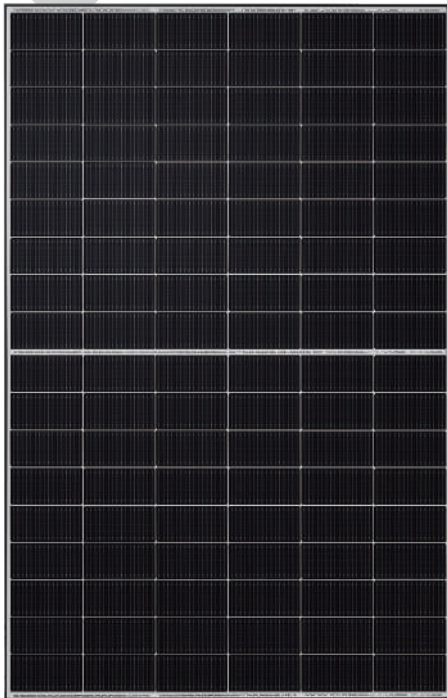
BLACK FRAME BIFACIAL DOUBLE-GLASS MODULE

TYPE: STPXXXS-I54-Nsh+

435-455W **22.8%**

POWER OUTPUT

MAX EFFICIENCY



High module conversion efficiency

Module efficiency up to **22.8%** 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 *

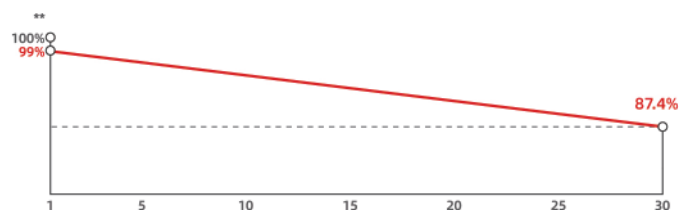


ISO 14001 Environment Management System
 ISO 45001 Occupational Health and Safety
 ISO 9001 Quality Management System
 SA 8000 Social Responsibility Standards
 IEC TS 62941 Guideline for Module Design

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



First year power degradation 1% Annual degradation 0.40%

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

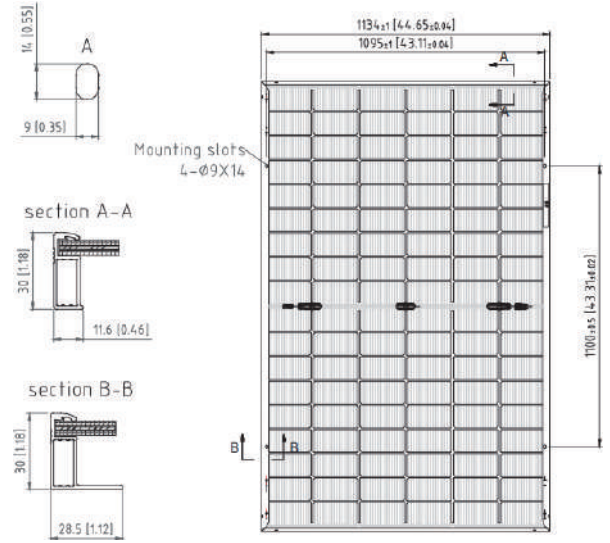
** Please refer to Suntech Limited Warranty for details.

*** WEEE only for EU market.

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

Mechanical Characteristics

Solar Cell	N-type Monocrystalline silicon
No. of Cells	108 (6 × 18)
Dimensions	1762 × 1134 × 30 mm (69.37 × 44.6 × 1.2 inches)
Weight	24.5 kg (54.01 lb.)
Front/Back Glass	2.0+2.0 mm (0.079+ 0.079inches) semi-tempered glass
Output Cables	4.0 mm ² , (-) 1200 mm and (+) 1200 mm in length or customized length
Junction Box	IP68 rated (3 bypass diodes)
Operating Module Temperature	-40°C- +70°C
Maximum System Voltage	1500 V DC (IEC)
Connectors	STP-XC4(Standard)/MC4 EVO2(Optional)
Maximum Series Fuse Rating	30 A
Power Tolerance	0/+5 W
Refer. Bifaciality Factor	(80 ± 5)%
Frame	Black anodized aluminum alloy frame
Packing Configuration	36 pieces per pallet 936 pieces per container /40'HC 928 kg per pallet



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

Electrical Characteristics (STC)

Module Type	STP455S-I54-Nsh+	STP450S-I54-Nsh+	STP445S-I54-Nsh+	STP440S-I54-Nsh+	STP435S-I54-Nsh+
Maximum Power (Pmax/W)	455	450	445	440	435
Optimum Operating Voltage (Vmp/V)	33.07	32.89	32.71	32.53	32.35
Optimum Operating Current (Imp/A)	13.76	13.67	13.61	13.53	13.45
Open Circuit Voltage (Voc/V)	39.57	39.39	39.19	39.00	38.80
Short Circuit Current (Isc/A)	14.52	14.44	14.36	14.28	14.20
Module Efficiency (%)	22.8	22.5	22.3	22.0	21.8

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

Electrical Characteristics (BNPI)

Module Type	STP455S-I54-Nsh+	STP450S-I54-Nsh+	STP445S-I54-Nsh+	STP440S-I54-Nsh+	STP435S-I54-Nsh+
Maximum Power (Pmax/W)	501	495	490	485	479
Optimum Operating Voltage (Vmp/V)	33.07	32.89	32.71	32.53	32.35
Optimum Operating Current (Imp/A)	15.15	15.05	14.99	14.90	14.81
Open Circuit Voltage (Voc/V)	39.57	39.39	39.19	39.00	38.84
Short Circuit Current (Isc/A)	15.99	15.90	15.81	15.73	15.64

BNPI: Irradiance front 1000 W/m², rear 135 W/m², module temperature 25 °C, AM=1.5;

Temperature Characteristics

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	0.043%/°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)

