

Ultra T 1.0

HALF-CELL N-TYPE TOPCon

BIFACIAL DOUBLE-GLASS MODULE

TYPE: STPXXXS-C78/Nsh+

630-650W **23.3%**

POWER OUTPUT

MAX EFFICIENCY



Multi busbar technology

Superior optical utilization and current collection capability, effectively improving product power and reliability



High power output

Zero LID, ultra-low LeTID, better anti-PID performance, low power attenuation, high power output



Double-sided power generation

The gain of double-sided power generation increases up to max. 25% with the light on the back side, and significantly reduce LCOE



Superior load-bearing capability

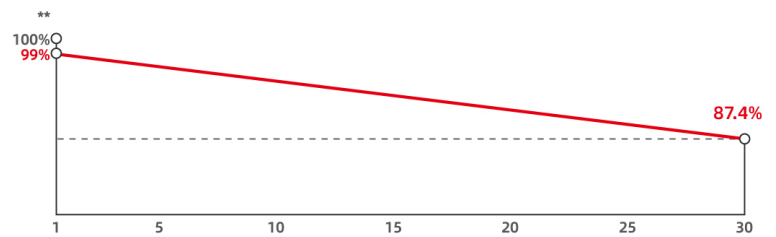
Module certified to withstand **5400 Pa** front side max static test load and **2400 Pa** rear side max static test load *



30 years of linear warranty
15 years of product warranty

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



First year power degradation 1% Annual degradation 0.40%

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

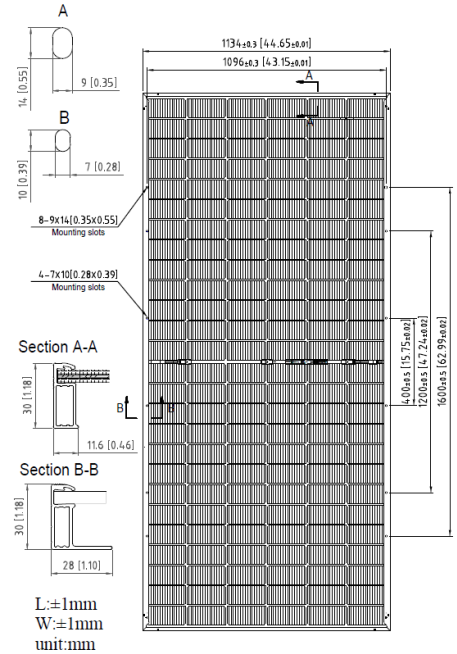
*** WEEE only for EU market.

** Please refer to Suntech Limited Warranty for details.

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

Mechanical Characteristics

Solar Cell	N-type monocrystalline silicon
No. of Cells	156 (6 × 26)
Dimensions	2465 × 1134 × 30 mm (97 × 44.6 × 1.2 inches)
Weight	34.7 kg (76.5 lbs.)
Front Glass	2.0 mm (0.079 inches), anti-reflective coating
Back Glass	2.0 mm (0.079 inches), heat strengthened glass
Output Cables	4.0 mm ² , (-) 350 mm and (+) 160 mm in length or customized length
Junction Box	IP68 rated (3 bypass diodes)
Operating Module Temperature	-40 °C to +70 °C
Maximum System Voltage	1500 V DC (IEC)
Connectors	STP-XC4 or customized connectors
Maximum Series Fuse Rating	25 A
Power Tolerance	0 ~ + 3%
Refer. Bifaciality Factor	(80 ± 5)%
Frame	Anodized aluminum alloy frame
Packing Configuration	36 pieces per pallet 576 pieces per container /40'HC 2495×1125×1260 mm per pallet 1302 kg per pallet



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

Electrical Characteristics (STC)

Module Type	STP650S-C78/Nsh+	STP645S-C78/Nsh+	STP640S-C78/Nsh+	STP635S-C78/Nsh+	STP630S-C78/Nsh+
Maximum Power (Pmax/W)	650	645	640	635	630
Optimum Operating Voltage (Vmp/V)	46.36	46.26	46.16	46.06	45.96
Optimum Operating Current (Imp/A)	14.04	13.94	13.86	13.79	13.71
Open Circuit Voltage (Voc/V)	56.48	56.33	56.18	56.03	55.88
Short Circuit Current (Isc/A)	14.68	14.61	14.54	14.47	14.40
Module Efficiency (%)	23.3	23.1	22.9	22.7	22.5

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

Electrical Characteristics (BNPI)

	720	715	709	704	698
Maximum Power (Pmax/W)					
Optimum Operating Voltage (Vmp/V)	46.40	46.30	46.20	46.10	46.00
Optimum Operating Current (Imp/A)	15.52	15.44	15.35	15.27	15.18
Open Circuit Voltage (Voc/V)	56.78	56.63	56.48	56.33	56.18
Short Circuit Current(Isc/A)	16.27	16.19	16.11	16.03	15.96

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	-0.25%/°C
Temperature Coefficient of Isc	0.046%/°C

Graphs

Current-Voltage & Power-Voltage (630W)

