

TOPCON N-TYPE BI-FACIAL BF

144 CELLS 560-590 Wp 182.00 MM

MODULE CODE: SSPXXXS8T-144NT



TOPCON



REVOLUTIONARY EFFICIENCY UP TO 22.84%

HIEFFICIENCY technology is a guarantee of the highest performance and power as well as lower BOS cost

INNOVATIVE PHOTOVOLTAIC TOPCON CELLS

TOPCON N-TYPE cells feature an additional, ultra-thin silicon layer and even higher efficiency

BIFACIAL MEANS UP TO 30% MORE POWER

BiFacial technology uses solar energy reflected from the surface, increasing the power from 10% to 30%

EXCELLENT PERFORMANCE IN UNFAVORABLE WEATHER CONDITIONS

Outstanding performance under low sunlight and extreme temperature conditions

EXTREME DURABILITY

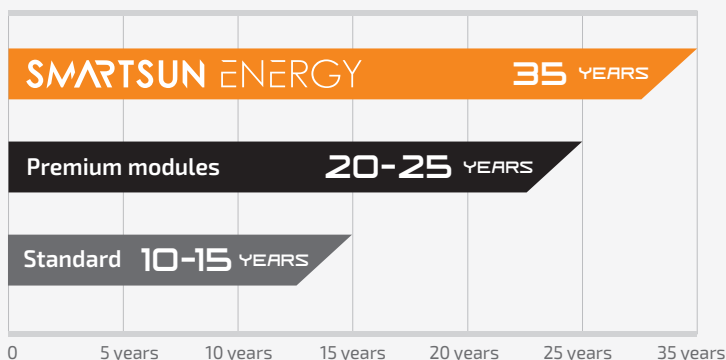
Hurricane wind resistance (2400 Pa) and very high snow loads (5400 Pa)

TÜV SÜD CERTIFIED RESISTANCE

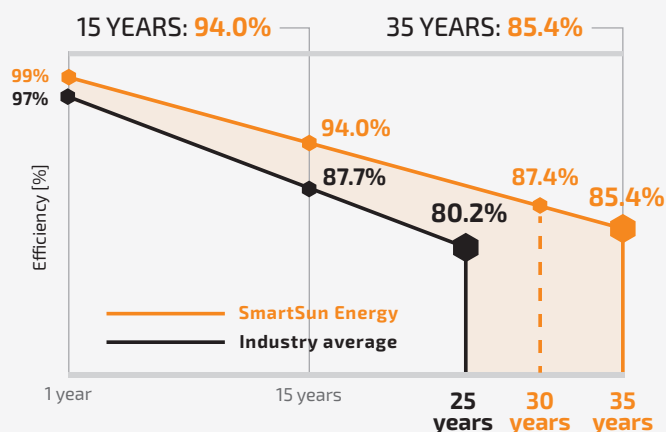
TÜV SÜD certificates confirming salt mist and ammonia resistance as well as PID

PRODUCT WARRANTY: 35 YEARS

SMARTSUN ENERGY VS OTHER MODULES:



LINEAR POWER WARRANTY:



PRODUCT SPECIFICATION (STC)

MODULE CODE: SSPxxxS8T-144NT

Maximum power	560 W	565 W	570 W	575 W	580 W	585 W	590 W
Maximum power voltage	42.20 V	42.40 V	42.60 V	42.80 V	43.00 V	43.20 V	43.40 V
Maximum power current	13.28 A	13.33 A	13.39 A	13.44 A	13.49 A	13.54 A	13.59 A
Open circuit voltage	50.40 V	50.60 V	50.80 V	51.00 V	51.20 V	51.40 V	51.60 V
Short circuit current	14.04 A	14.09 A	14.14 A	14.19 A	14.24 A	14.29 A	14.34 A
Module efficiency	21.68 %	21.87 %	22.07 %	22.26 %	22.45 %	22.65 %	22.84 %
Maximum system voltage	DC 1500 V (TÜV) / DC 1000 V (TÜV)						
Maximum series fuse rating	30 A						

Electrical parameters at standard test conditions (STC: AM=1.5; 1000 W/m2; Cells temperature: 25°C)

PRODUCT SPECIFICATION (NMOT)

Maximum power	421 W	425 W	429 W	433 W	437 W	441 W	445 W
Maximum power voltage	39.70 V	39.90 V	40.10 V	40.30 V	40.50 V	40.70 V	40.90 V
Maximum power current	10.61 A	10.66 A	10.70 A	10.75 A	10.80 A	10.85 A	10.90 A
Open circuit voltage	47.90 V	48.10 V	48.30 V	48.50 V	48.70 V	48.90 V	49.10 V
Short circuit current	11.37 A	11.41 A	11.45 A	11.49 A	11.53 A	11.57 A	11.61 A

Electrical parameters at standard test conditions (STC: AM=1.5; 800 W/m2; Cells temperature: 20°C, Wind speed: 1 m/s)

REAR SIDE POWER GAIN (570 W)

Power gain	+10%	+15%	+20%	+25%	+30%
Maximum power	627 W	656 W	684 W	713 W	741 W
Maximum power voltage	42.60 V	42.60 V	42.60 V	42.60 V	42.60 V
Maximum power current	14.72 A	15.40 A	16.06 A	16.74 A	17.40 A
Open circuit voltage	50.08 V	50.08 V	50.08 V	50.08 V	50.08 V
Short circuit current	15.54 A	16.25 A	16.96 A	17.67 A	18.36 A

MECHANICAL DATA

Dimensions	2278 x 1134 x 35 mm
Weight	32.0 kg
Glass	Double glass; 2.0 mm tempered with AR Coating
Output cables	Lenght: 2 x 130 cm Section: 4 mm ²
Connectors	MC4 compatible, IP68
Cell type	N-Type; Monocrystalline; Half-Cell (16 BB) 91.00 x 182.00 mm
Number of cells	144 cells
Frame corners	Mechanically clamped
Frame	Anodized aluminum
Bypass diodes	3 pcs.

TEST, CERTIFICATIONS AND WARRANTIES

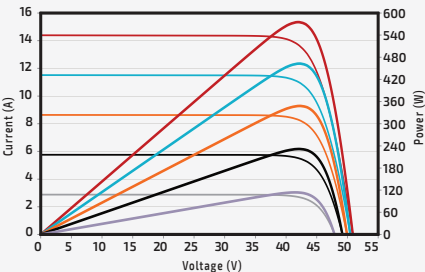
Standard tests	IEC 61215, IEC 61730, IEC 61701 IEC 62716, Utility class „A“ Protection class „II“, LID < 0.5% PPP 58042B
Fire resistance	Class C
System certs	ISO 9001, ISO 14001, ISO 45001
Certifications	TÜV SÜD, CE, WEEE
Extreme wind and snow loads testing	Wind: 2400 Pa Snow: 5400 Pa
Power tolerance	from 0 to +5W
Junction box	IP68
Warranties	35 years product warranty 35 years power warranty (85.4%)

PACKING CONFIGURATION

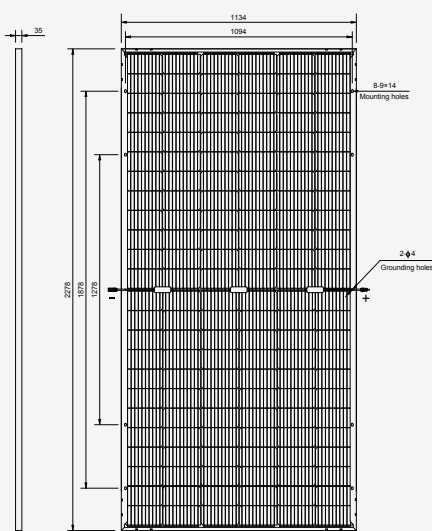
Container	40'HQ	Pieces per pallet	31
Pallets per container	20	Pieces per container	620

TEMPERATURE CHARACTERISTICS

$I_{SC}(T_K I_{SC})$	0.045 %/°C	$V_{OC}(T_K V_{OC})$	-0.25 %/°C
$P_{MPP}(T_K P_{MPP})$	-0.30 %/°C	NMOT	+43 ± 2°C
Operating temperature	from -40 to +85°C		



DIMENSIONS AND STRUCTURE (MM)



DUE TO CONTINUOUS PRODUCT IMPROVEMENT SMART SUN ENERGY RESERVES THE RIGHT TO MAKE CHANGES TO THE TECHNICAL DATA SHEET WITHOUT PRIOR NOTICE