

TOPCON N-TYPE BI-FACIAL FULL BLACK

108 CELLS 420-440 Wp 182.00 MM

MODULE CODE: SSPXXS8BT-108NT



TOPCON



REVOLUTIONARY EFFICIENCY UP TO 22.53%
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

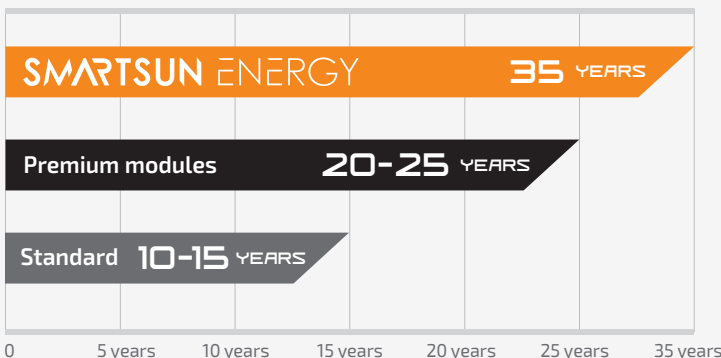
BIFACIAL MEANS UP TO 30% MORE POWER
 BiFacial technology uses solar energy reflected from the surface, increasing the power from 5% to 30%

EXCELLENT PERFORMANCE IN UNFAVORABLE WEATHER CONDITIONS
 Outstanding performance under low sunlight and extreme temperature conditions

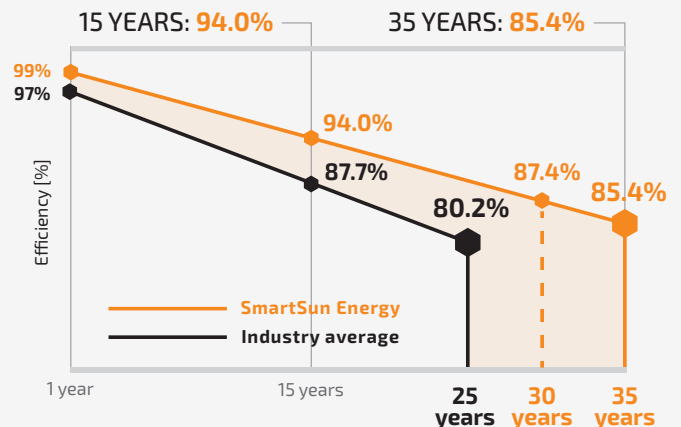
EXTREME DURABILITY
 Hurricane wind resistance (2400 Pa) and very high snow loads (5400 Pa)

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: SSP_{xxx}S8BT-108NT

	420 W	425 W	430 W	435 W	440 W
Maximum power	420 W	425 W	430 W	435 W	440 W
Maximum power voltage	31.80 V	32.00 V	32.20 V	32.40 V	32.60 V
Maximum power current	13.21 A	13.29 A	13.36 A	13.43 A	13.50 A
Open circuit voltage	38.00 V	38.20 V	38.40 V	38.60 V	38.80 V
Short circuit current	13.94 A	14.00 A	14.06 A	14.12 A	14.18 A
Module efficiency	21.51 %	21.76 %	22.02 %	22.28 %	22.53 %
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)

	316 W	320 W	324 W	328 W	331 W
Maximum power	316 W	320 W	324 W	328 W	331 W
Maximum power voltage	29.90 V	30.10 V	30.30 V	30.50 V	30.70 V
Maximum power current	10.57 A	10.64 A	10.70 A	10.75 A	10.81 A
Open circuit voltage	36.10 V	36.30 V	36.50 V	36.70 V	36.90 V
Short circuit current	11.29 A	11.34 A	11.39 A	11.44 A	11.49 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 (420 W)

	+5%	+15%	+30%
Power gain	+5%	+15%	+30%
Maximum power	441 W	483 W	546 W
Maximum power voltage	31.80 V	31.80 V	31.80 V
Maximum power current	13.87 A	15.19 A	17.17 A
Open circuit voltage	38.00 V	38.00 V	38.00 V
Short circuit current	14.64 A	16.03 A	18.12 A

MECHANICAL DATA

Dimensions	1722 x 1134 x 30 mm
Weight	20.5 kg
Glass	Single glass; 3.2 mm tempered with AR Coating
Output cables	Length: 2 x 120 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	108 cells
Frame corners	Mechanically clamped
Frame	Anodized aluminum
Bypass diodes	3 pcs.

TEST, CERTIFICATIONS AND WARRANTIES

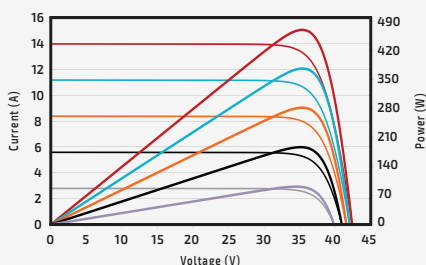
Standard tests	IEC 61215, IEC 61730, IEC 61701 IEC 62716, Utility class „A“ Protection class „II“, LID < 0.5% PPP 58042B
Fire resistance	Class C
System certs	ISO 9001, ISO 14001, ISO 45001
Certifications	TÜV SÜD, CE, WEEE
Extreme wind and snow loads testing	Wind: 2400 Pa Snow: 5400 Pa
Power tolerance	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	36
Pallets per container	26	Pieces per container	936

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	+41 ± 3°C
Operating temperature	from -40 to +85°C		



DIMENSIONS AND STRUCTURE (MM)

