

3SUN B48

Powered by **CORE-H®** Technology

Made in Italy

460-480 Wp



Commercial
& Industrial



Residential



Proprietary HJT technology.

Heterojunction cells and modules designed and manufactured in Italy.



High Bifaciality.

A high bifaciality factor captures and converts rear-side reflected light, boosting the system's energy yield.



Versatile module format.

Optimized dimension for rooftop installations.



Premium build.

High-quality glass-glass product with a black frame.



Proven performance.

PID and LeTID free.



WARRANTY

Product

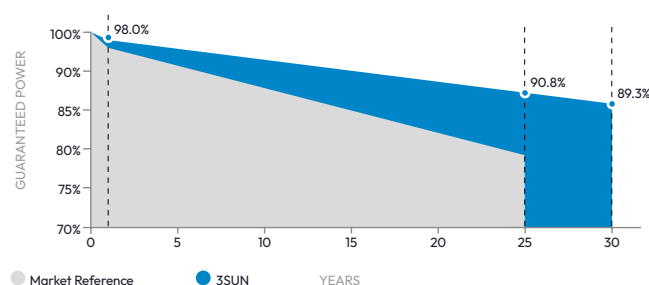
25
YEARS

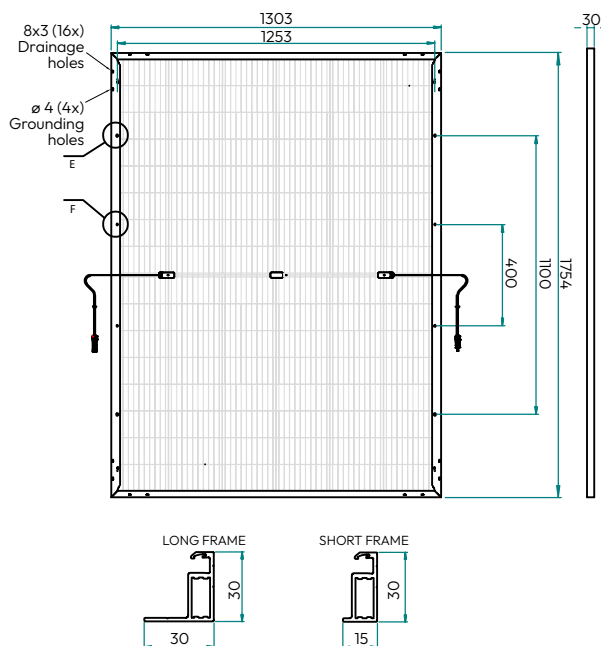
Performance*

30
YEARS

*2% first year, then 0.30% per year

LINEAR PERFORMANCE WARRANTY





MECHANICAL CHARACTERISTICS

Cell Type	Mono-crystalline, n-type Si HJT - G12 (210mm x 210mm)
Number of cells	96 ½ cells (6 x 8) x 2
Dimensions	1754 x 1303 x 30 mm
Weight	29 kg
Frame	Black anodized aluminium
Front Cover	Textured Glass - 2.0 mm, AR coated, Low Iron, Semi-Tempered
Back Cover	Textured Glass - 2.0 mm, Semi-Tempered
Junction Box	IP68, 1500VDC, 3 bypass diodes
Output Cable	4 mm ² , (+): 1400mm, (-): 1400mm
Type of Connector	Stäubli MC4 EVO 2
Maximum static test loading*	Front: up to 5400 Pa Rear: up to 2400 Pa
Module Fire Performance	IEC 61730/UL 790 - C Class UNI 9177 - 1 Class UNI EN 13501-1 - E Class

*under certain mounting configurations, refer to the installation and maintenance manual for details

PACKAGING

Pallet dimension [L x W x H] Bi-pack: 1782 x 1063 x 2861 mm	Pallet weight Bi-pack: 1981 kg	Packing Configuration Bi-pack (33 pcs/top + 33 pcs/bottom)	Modules per semi-trailer truck 924 pcs (14 bi-packs)
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TEMPERATURE RATINGS

Nominal Module Operating Temperature (NMOT)	°C	44 ± 2
P_{max} Temperature Coefficient	%/°C	-0.24 +/- 0.04
I_{sc} Temperature Coefficient	%/°C	0.044
V_{oc} Temperature Coefficient	%/°C	-0.20

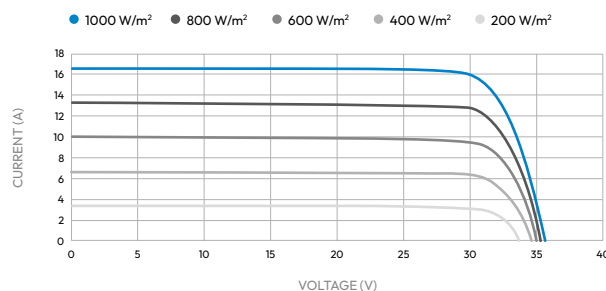
BIFACIAL COEFFICIENTS

Maximum power bifaciality coefficient	90 % ± 10%
I_{sc} bifaciality coefficient	90 % ± 10%
V_{oc} bifaciality coefficient	100 % ± 5%

MAXIMUM RATINGS

Operating Temperature	°C	-40~+70
Maximum System Voltage	V	1500
Maximum Series Fuse	A	35

CURRENT - VOLTAGE CURVES - 3SHBGA-AF-460-480



ELECTRICAL CHARACTERISTICS

	UNITÀ	3SHBGA-AF-460		3SHBGA-AF-465		3SHBGA-AF-470		3SHBGA-AF-475		3SHBGA-AF-480	
		STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
P_{max} - Power at Mpp*	Wp	460	516	465	521	470	527	475	533	480	538
V_{mp} - Voltage at Mpp	V	29,31	29,42	29,53	29,64	29,75	29,86	29,97	30,08	30,19	30,30
I_{mp} - Current at Mpp	A	15,70	17,53	15,75	17,59	15,80	17,65	15,85	17,71	15,90	17,76
V_{oc} - Open Circuit Voltage	V	35,25	35,41	35,35	35,51	35,45	35,61	35,55	35,71	35,65	35,81
I_{sc} - Short Circuit Current	A	16,52	18,53	16,56	18,57	16,60	18,62	16,64	18,66	16,68	18,71
Module efficiency	%	20,1%	22,6%	20,3%	22,8%	20,6%	23,1%	20,8%	23,4%	21,0%	23,6%

Electrical characteristics measured under:

Measurement Tolerance ± 5%

Power Class Sorting: -0+5 W

STC = AM 1.5, 1000 W/m², Cells Temperature 25°C

BNPI = Bifacial NamePlate Irradiance according to IEC 61215:2021

BNPI = AM 1.5, 1000W/m² front side + 135 W/m² rear side

Measurement tolerance BNPI Pmax: ± 10%



IEC 61215-1:2021; IEC 61215-2:2021; IEC 61730-2:2023; UL 61730:2022;

*Contact 3Sun to verify availability and certificates for the power classes