3SUN B60 LE

CLASS A
ENEA register

610-640 Wp

Module efficiency up to 22.6%
and **90% bifaciality**.

Utility Scale
Commercial & Industrial

Assembled in Europe.
Modules designed and manufactured exclusively in Italy.

ENEA register.
Listed in the ENEA photovoltaic module registry.

Superior energy yield.
Heterojunction technology for enhanced energy yield.

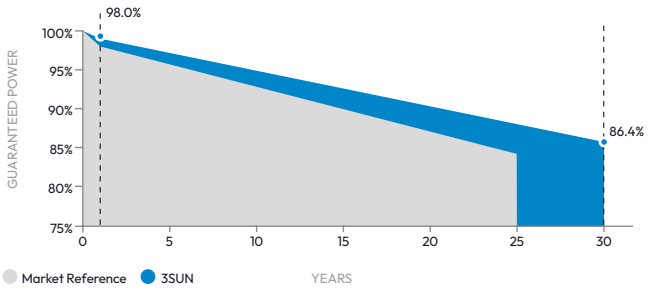
Great customer value.
Engineered for reduced BOP costs in a variety of applications.

Long-term reliability.
High quality glass-glass product with strong mechanical performances.

WARRANTY

- Dedicated aftersales
- Product Warranty **15 years**
- Performance Warranty **30 years**
  (2% first year, then 0.40% per year)

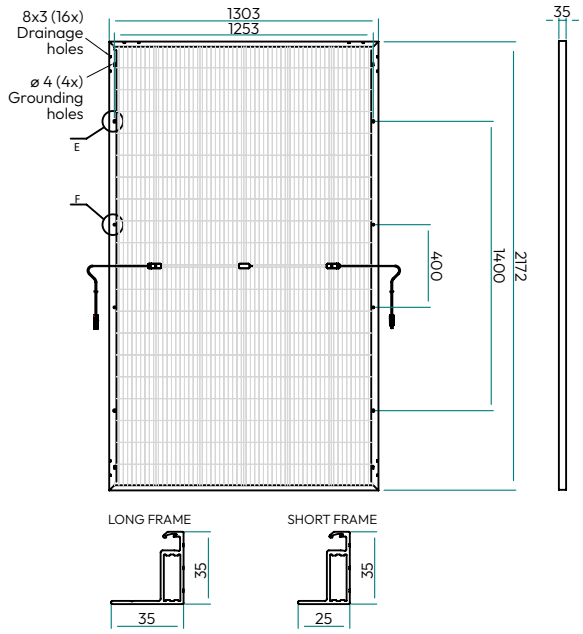
LINEAR PERFORMANCE WARRANTY



Modules manufactured by 3SUN S.r.l., Contrada Blocco Torrazze, Zona Industriale, 95121 Catania (Italy)

3SUN B60 LE

Product code **3SHBGH-CC-610-640**



MECHANICAL CHARACTERISTICS

Cell Type	Mono-crystalline, n-type Si HJT, G12 (210mm x 210mm) Cells manufactured outside the European Union.
Number of cells	120 ½ cells (6 x 10) x 2
Dimensions	2172 x 1303 x 35 mm
Weight	36 kg
Frame	Anodized aluminium
Front Cover	2.0 mm textured glass, AR coated, low iron, semi-tempered
Back Cover	2.0 mm textured glass, semi-tempered
Junction Box	IP68, 1500VDC, 3 bypass diodes
Output Cable	4 mm², (+): 1200mm, (-): 1200mm
Type of Connector	QC4.10PLUS (MC4 alternative)
Maximum static test loading*	Front: 3600 Pa (test load 5400 Pa) Rear: 1600 Pa (test load 2400 Pa)
Module Fire Performance	UL 790 - Class C UNI 9177 - Class 1

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

PACKAGING

Pallet dimensions (L x W x H)
Bi-pack: 2205 x 1373 x 2501 mm
Top: 2205 x 1373 x 1070 mm
Bottom: 2205 x 1373 x 1431 mm

Pallet weight
Bi-pack: 2273 kg
Top: 944 kg
Bottom: 1329 kg

Packing Configuration
Bi-pack: 63 pcs
Top: 26 pcs
Bottom: 37 pcs

Modules per Container (40'HQ)
504 pcs (8 bi-pack)

Modulies per semi-trailer
567 pcs (9 bi-pack)

TEMPERATURE RATINGS

Nominal Module Operating Temperature	°C	44 ± 2
P_{max} Temperature Coefficient	%/°C	-0.26
I_{sc} Temperature Coefficient	%/°C	0.055
V_{oc} Temperature Coefficient	%/°C	-0.27

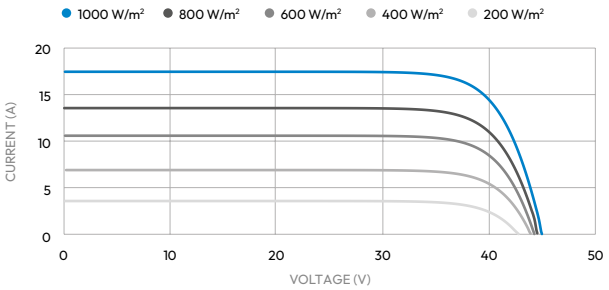
MAXIMUM RATINGS

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

BIFACIAL PERFORMANCES

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

CURRENT - VOLTAGE CURVES - 3SHBGH-CC-610-640



ELECTRICAL CHARACTERISTICS

		3SHBGH-CC-610		3SHBGH-CC-615		3SHBGH-CC-620		3SHBGH-CC-625		3SHBGH-CC-630		3SHBGH-CC-635		3SHBGH-CC-640	
	UNIT	**STC**	BNPI	**STC**	BNPI	**STC**	BNPI	**STC**	BNPI	**STC**	BNPI	**STC**	BNPI	**STC**	BNPI
P_{max} - Power at Mpp	Wp	**610**	684	**615**	690	**620**	695	**625**	701	**630**	707	**635**	712	**640**	718
V_{mp} - Voltage at Mpp	V	**37.72**	37.86	**37.92**	38.06	**38.12**	38.25	**38.32**	38.45	**38.52**	38.64	**38.72**	38.84	**38.91**	39.03
I_{mp} - Current at Mpp	A	**16.16**	18.07	**16.21**	18.12	**16.26**	18.18	**16.31**	18.23	**16.36**	18.29	**16.41**	18.34	**16.46**	18.40
V_{oc} - Open Circuit Voltage	V	**45.38**	45.60	**45.44**	45.65	**45.49**	45.70	**45,55**	45.75	**45.60**	45.80	**45.65**	45.85	**45.70**	45.90
I_{sc} - Short Circuit Current	A	**17.32**	19.39	**17.36**	19.45	**17.40**	19.50	**17.44**	19.56	**17.48**	19.61	**17.52**	19.67	**17.56**	19.72
Module efficiency	%	**21.6**	24.2	**21.7**	24.4	**21.9**	24.6	**22.1**	24.8	**22.3**	25.0	**22.4**	25.2	**22.6**	25.4

Electrical characteristics measured under:
Power tolerance ± 3%
Power tolerance Pmax: -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 + 135 W/m2 rear

IEC 61215-1:2021; IEC 61215-2:2021; IEC 61730-2:2016; UL 61730:2022