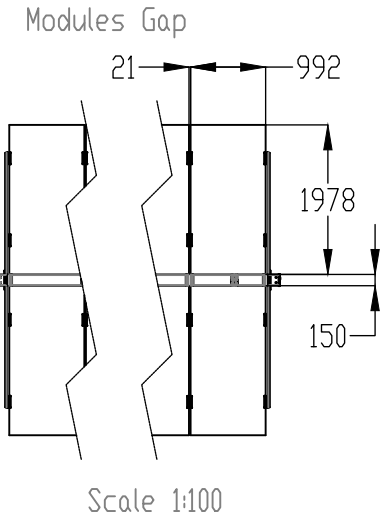


Note*
Simple Support - Standard Embedment Length
60 Degrees
1.3m (1335mm)
1.5m (1565mm)
1.7m (1763mm)
2m (2073mm)
2.3m (2330mm)
2.6m (2635mm)
3m (3085mm)



SAFETRACK HORIZON - DETTAGLI COSTRUTTIVI scala 1: 50

COMUNE DI SASSARI

OGGETTO
PROGETTO IMPIANTO AGRIVOLTAICO DA 5,53 MW, SU TRACKER DI TIPO AD INSEGUIMENTO MONOASSIALE DENOMINATO "TRUNCU REALE PV01" - COMUNE DI SASSARI

PROGETTO DEFINITIVO

ELABORATO
DETTAGLI COSTRUTTIVI - STRUTTURA FOTOVOLTAICA

NUMERO ELABORATO
OS_14
SCALA: VARIE
DATA: DICEMBRE 2023

3		Terza emissione			
2		Seconda emissione			
1		Prima emissione			
REV.	DATA	DESCRIZIONE	REDATTO	CONTROLLATO	APPROVATO
CODICE COMMESSA	NOME FILE	FASE PROGETTUALE	CATEGORIA	REV.	

3SUNB60

Powered by **CORE-H** Technology



640-680 W up to **24% efficiency** and **95% bifaciality**.

Best in class performance.
Everywhere.



The sustainable choice.

Committed to sustainability for a low carbon footprint and a traceable and transparent supply chain with a lead and fluorine free product. Reduced use of silicon and low water and energy footprint thanks to a highly automated and low temperature manufacturing process.



Made in Europe.

Cells and Modules designed and manufactured exclusively in Italy.



Unmatchable customer value.

Engineered for best LCOE and reduced BOP costs.



Superior energy efficiency.

Market-leading bifaciality factor and temperature coefficients.



Trusted performance.

Glass-glass with strong mechanical performances, low degradation, PID & LeTID free.



Long-term reliability.

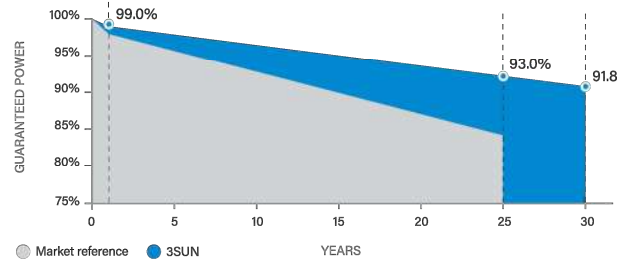
Strong mechanical performance, low degradation, PID & LeTID free.

WARRANTY

- Product Warranty **15 years***
 - Performance Warranty **30 years*** (1% first year, then 0.25% per year)
- *Upon product registration



LINEAR PERFORMANCE WARRANTY



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

3SUNB60

MECHANICAL CHARACTERISTICS

Cell Type	Mono-crystalline, n-type Si HJT, G12 (210 mm x 210 mm)
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, 3 bypass diodes
Output Cable	4 mm² diameter, (+): 400 mm, (-): 400 mm or customized length
Type of Connector	MC4 or alternative

Front side	Up to 5400 Pa
Maximum static test loading	Up to 2400 Pa
Rear side	Up to 2400 Pa
Maximum static test loading	Up to 2400 Pa
Module Fire Performance (Pending)	IEC 61730 - A Class UNI 9177 - Class 1

MAXIMUM RATINGS

Operating Temperature	°C	-40~+85
Warehousing Storage Temperature	°C	-20~+50
Maximum System Voltage (IEC/UL)	V _{oc}	1500
Maximum Series Fuse	A	35

BIFACIAL PERFORMANCES

Bifaciality Factor		95 % ± 5%								
Power @STC	W	640	645	650	655	660	665	670	675	680
Power @BSTC	W	722	728	733	739	745	750	756	762	767

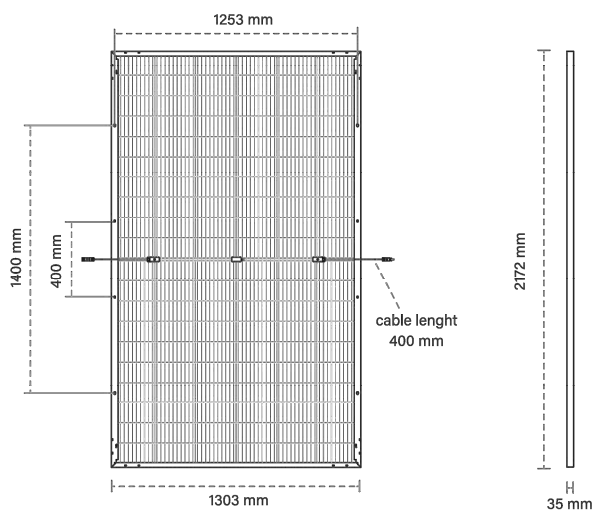
Bifacial Characteristics measured under:
STC = AM 1.5, 1000 W/m², Cells Temperature 25°C
BSTC = Bifacial Standard Test Condition according to IEC 60904-1-2:2019

ELECTRICAL CHARACTERISTICS

	UNIT	3SHBGH-AA-640	3SHBGH-AA-645	3SHBGH-AA-650	3SHBGH-AA-655	3SHBGH-AA-660	3SHBGH-AA-665	3SHBGH-AA-670	3SHBGH-AA-675	3SHBGH-AA-680
P _{max} - Power at Maximum Power Point	W	640	645	650	655	660	665	670	675	680
V _{oc} - Voltage at Maximum Power Point	V	35.81	34.07	35.90	34.16	35.99	34.24	36.08	34.33	36.17
I _{mp} - Current at Maximum Power Point	A	17.87	14.20	17.98	14.27	18.06	14.35	18.15	14.42	18.25
V _{oc} - Open Circuit Voltage	V	43.32	41.20	43.44	41.31	43.55	41.42	43.66	41.52	43.77
I _{sc} - Short Circuit Current	A	19.00	15.33	19.10	15.41	19.20	15.49	19.30	15.57	19.40
Module efficiency	%	22.6	22.8	23.0	23.1	23.3	23.5	23.7	23.9	24.0

Electrical Characteristics measured under:
Measurement Tolerance ± 5%
Power tolerance Pmax: -0+5 W

Product code **3SHBGH-AA-640-680**



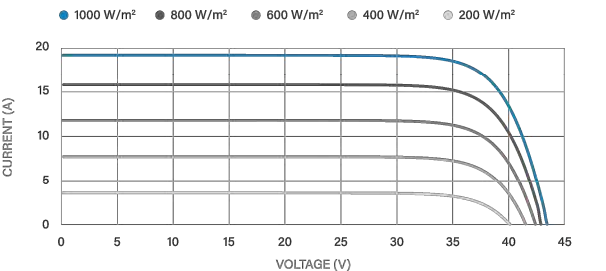
PACKAGING

Packing Configuration	Bi-pack (26 pcs/top box + 37 pcs/bottom box)
Quantity per Pallet	63 pcs
Modules per Container (40'HQ)	504 pcs (16 boxes)

TEMPERATURE RATINGS

Nominal Module Operating Temperature	°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

CURRENT - VOLTAGE CURVES - 3SHBGH-AA-660



IEC 61215-1:2021; IEC 61215-2:2021; IEC 61730-2:2023; UL 61730:2017 PENDING

SCHEDE TECNICHE - PANNELLO FOTOVOLTAICO