

3SUN M40

Powered by **CORE-H** Technology



440-480 W up to 25% efficiency.

Superior technology made for every roof.



The secure & sustainable choice.

Committed to a transparent supply chain with preferred nations and a low carbon footprint free of lead and fluorine.

Reduced use of silicon, water and energy thanks to a highly automated and low temperature manufacturing process.



Made in Oklahoma. Designed in Italy.

Cells and modules made in Oklahoma, designed in Catania, Italy.



Extensive warranty package.

Built to last: 91.8% performance after 30 years.



Long-term reliability.

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



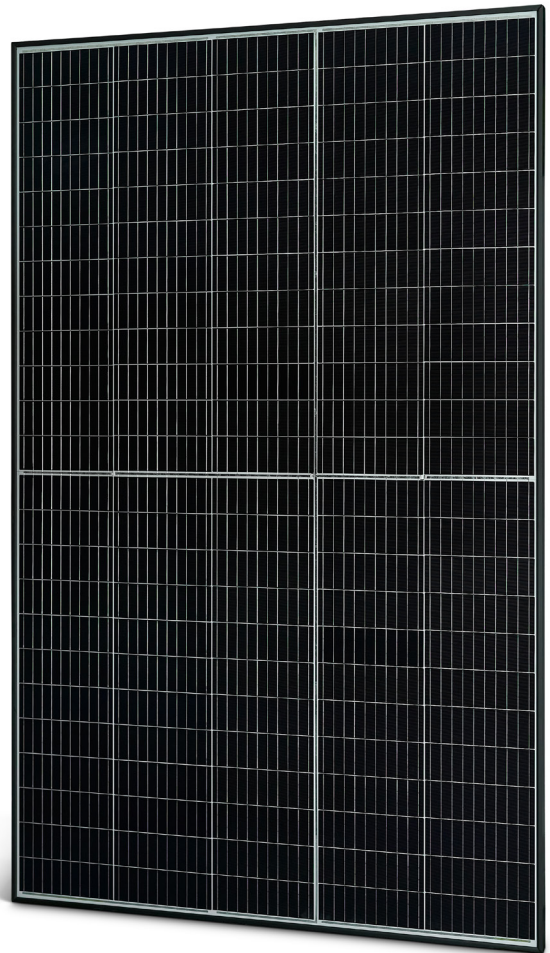
Trusted performance.

High energy yield year after year even in hot environments and low light conditions.



More energy in less space.

Engineered for rooftops for reduced BOS costs.

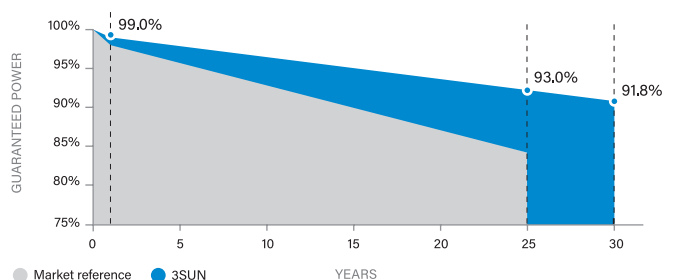


WARRANTY

- Dedicated Aftersales & Labour Warranty
- Product Warranty **25 years***
- Performance Warranty **30 years***
(1% first year, then 0.25% per year)

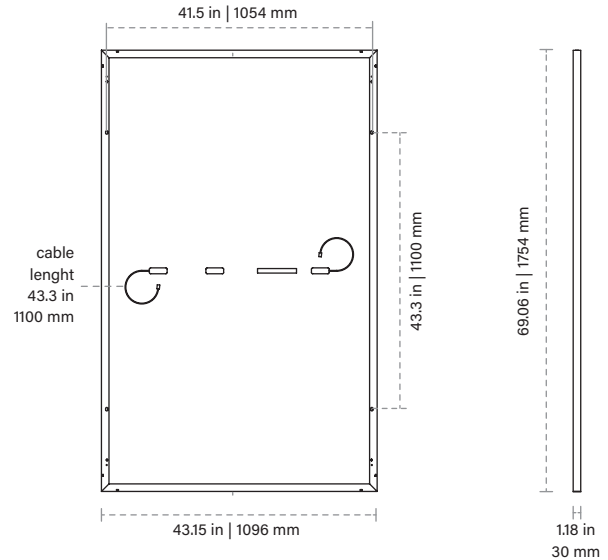
*Upon product registration

LINEAR PERFORMANCE WARRANTY



MECHANICAL CHARACTERISTICS

Cell Type	Mono-crystalline, n-type Si HJT, G12 (8.27x8.27 in 210 mm x 210 mm)
Number of cells	120 1/3 cells (5 x 12) x 2
Dimensions	69.06 x 43.15 x 1.18 in 1754 x 1096 x 30 mm
Weight	46.3 lbs 21 kg
Frame	Anodized aluminium (Black on request)
Front Cover	0.13 in 3.2 mm textured glass, AR coated, low iron, tempered
Back Cover	White backsheet
Junction Box	IP68, 3 bypass diodes
Output Cable	0.006 in ² 4 mm ² , (+): 43.3 in (1100 mm), (-): 43.3 in (1100 mm)
Type of Connector	MC4 or MC4 compatible
Front side Maximum static test loading	Up to 5400 Pa
Rear side Maximum static test loading	Up to 2400 Pa



MAXIMUM RATINGS

Operating Temperature	°C	-40~+85
Warehousing Storage Temperature	°C	-20~+50
Maximum System Voltage (IEC/UL)	V _{DC}	1000
Maximum Series Fuse	A	20 (25 optional)

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

ELECTRICAL CHARACTERISTICS

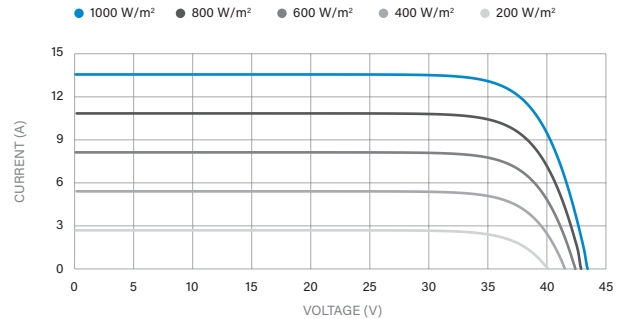
	UNIT	3SHMBT-WA-440		3SHMBT-WA-445		3SHMBT-WA-450		3SHMBT-WA-455		3SHMBT-WA-460		3SHMBT-WA-465		3SHMBT-WA-470		3SHMBT-WA-475		3SHMBT-WA-480	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
P_{max} - Power at Maximum Power Point	W	440	333	445	336	450	340	455	344	460	348	465	352	470	355	475	359	480	363
V_{mp} - Voltage at Maximum Power Point	V	35.52	33.79	35.65	33.91	35.78	34.04	35.91	34.16	36.03	34.27	36.15	34.39	36.27	34.51	36.39	34.63	36.51	34.74
I_{mp} - Current at Maximum Power Point	A	12.39	9.84	12.48	9.92	12.58	9.99	12.67	10.07	12.77	10.15	12.86	10.22	12.96	10.30	13.05	10.37	13.15	10.45
V_{oc} - Open Circuit Voltage	V	42.96	40.85	43.10	41.00	43.25	41.14	43.40	41.28	43.55	41.42	43.70	41.57	43.85	41.71	43.99	41.85	44.14	41.99
I_{sc} - Short Circuit Current	A	13.17	10.63	13.27	10.71	13.37	10.79	13.47	10.87	13.57	10.95	13.67	11.03	13.77	11.11	13.87	11.19	13.97	11.27
Module efficiency	%	22.9		23.2		23.4		23.7		23.9		24.2		24.5		24.7		25.0	

Electrical Characteristics measured under:
 Measurement Tolerance ± 5%
 Power tolerance P_{max}: -0+5 W
 STC = AM 1.5, 1000 W/m², Cells Temperature 25°C

PACKAGING

Packing Configuration	33 pcs/box
Quantity per Pallet	66 pcs
Modules per Container	53' HQ: 1122 pcs 40' HQ: 858 pcs

CURRENT-VOLTAGE CURVES - 3SHMBT-WA-460



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

3SUN_3SHMBT-WA-440-480_revision_10_US_20230803 - All rights reserved. Specifications included in this datasheet are subject to change without notice.