

3SUN M40 BOLD

Powered by CORE-H Technology



430-470 W up to 24.5% efficiency.

Enduring elegance for the most demanding customers.



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.



Exclusive warranty package.

The worry-free warranty solution.



For the harshest environments.

Sturdy design to weather extreme conditions: high snow (8100 Pa) and wind (6000 Pa).



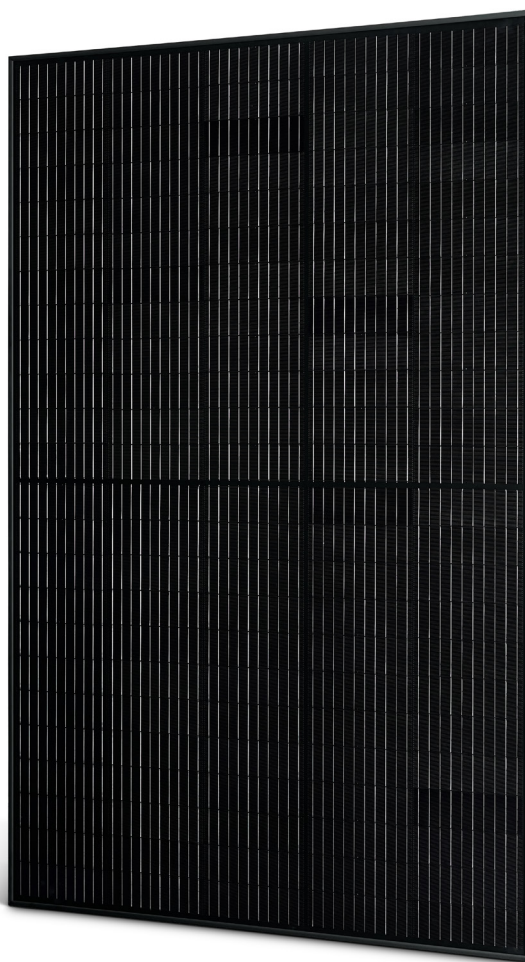
Trusted performance.

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



The stylish solution.

Impeccable aesthetics to blend in with your roof.

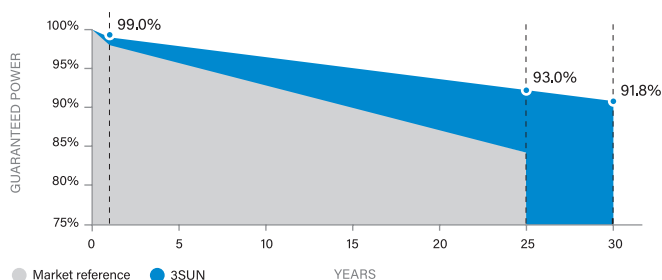


WARRANTY

- Remote inspection & Extended labour warranty
- Product Warranty **25 years***
- Performance Warranty **30 years***
(1% first year, then 0.25% per year)
- Guaranteed equivalent replacement: **5 years***

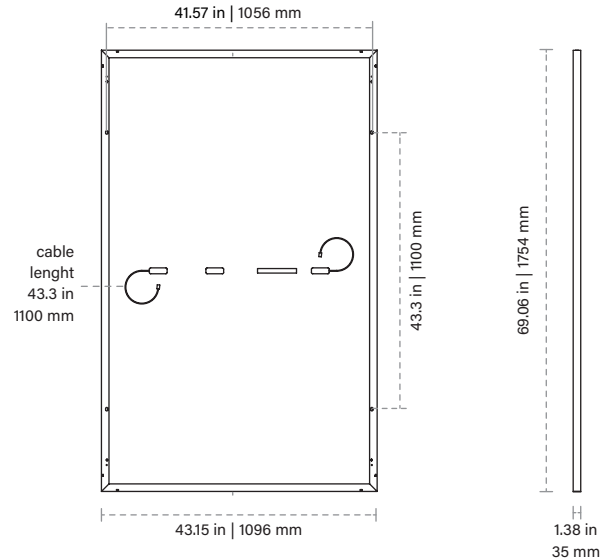
*Upon product registration

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 1.38 in 1754 x 1096 x 35 mm
Weight	47.4 lbs 21.5 kg
Frame	Black anodized aluminium
Front Cover	0.13 in (3.2 mm) textured glass, AR coated, low iron, tempered
Back Cover	Black 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 Extended 8100 Pa
Rear side Maximum static test loading	Up to 2400 Pa Extended 6000 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

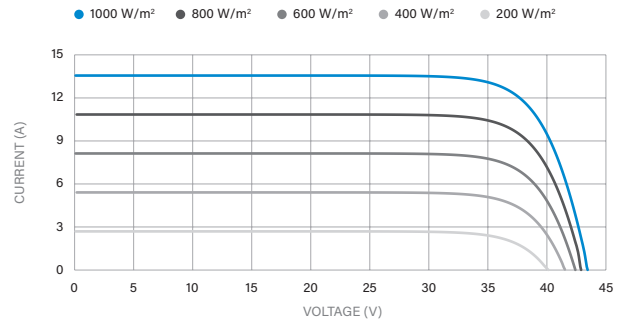
	UNIT	3SHMBT-BA-430		3SHMBT-BA-435		3SHMBT-BA-440		3SHMBT-BA-445		3SHMBT-BA-450		3SHMBT-BA-455		3SHMBT-BA-460		3SHMBT-BA-465		3SHMBT-BA-470	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
P_{max} - Power at Maximum Power Point	W	430	325	435	329	440	333	445	336	450	340	455	344	460	348	465	352	470	356
V_{mp} - Voltage at Maximum Power Point	V	35.45	33.72	35.58	33.84	35.71	33.97	35.84	34.09	35.97	34.22	36.09	34.34	36.22	34.46	36.35	34.59	36.48	34.71
I_{mp} - Current at Maximum Power Point	A	12.13	9.64	12.23	9.71	12.32	9.79	12.42	9.86	12.51	9.94	12.61	10.02	12.70	10.09	12.80	10.17	12.89	10.24
V_{oc} - Open Circuit Voltage	V	42.93	40.82	43.07	40.97	43.22	41.11	43.37	41.25	43.52	41.40	43.67	41.54	43.82	41.68	43.96	41.82	44.11	41.97
I_{sc} - Short Circuit Current	A	12.92	10.42	13.01	10.50	13.11	10.58	13.21	10.66	13.31	10.73	13.40	10.81	13.50	10.89	13.60	10.97	13.70	11.05
Module efficiency	%	22.4		22.6		22.9		23.2		23.4		23.7		23.9		24.2		24.5	

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	30 pcs/box
Quantity per Pallet	60 pcs
Modules per Container	53' HQ: 1020 pcs 40' HQ: 780 pcs

CURRENT-VOLTAGE CURVES - 3SHMBT-BA-450



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

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