

# 3SUN M40 BOLD

Powered by CORE-H Technology

430-470 W up to 24.5% efficiency.

## Enduring elegance for the most demanding customers.



Residential



### Made in Europe.

Cells and Modules designed and manufactured exclusively in Italy.



### The stylish solution.

Impeccable aesthetics to blend in with your roof.



### Exclusive warranty package.

The worry-free warranty solution.



### Trusted performance.

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



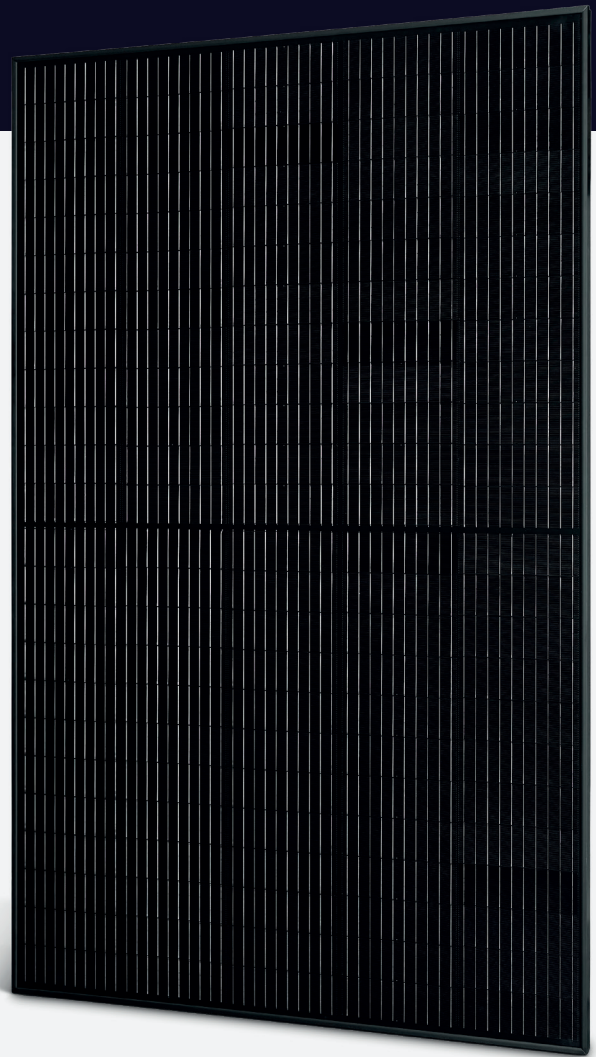
### For the harshest environments.

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



### The sustainable choice.

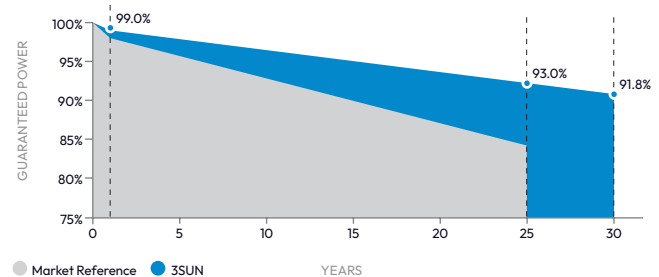
Committed to sustainability for a low carbon footprint and a traceable and transparent supply chain with a lead and fluorine free product. Reduced use of silicon and low water and energy footprint thanks to a highly automated and low temperature manufacturing process.



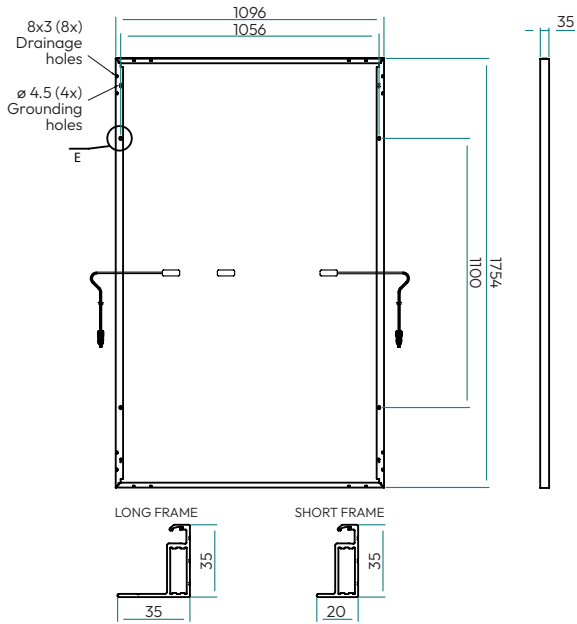
## WARRANTY

- 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**

## LINEAR PERFORMANCE WARRANTY



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



## MECHANICAL CHARACTERISTICS

<b>Cell Type</b>	Mono-crystalline, n-type Si HJT - G12 (210mm x 210mm)
<b>Number of cells</b>	120 1/3 cells (5 x 12) x 2
<b>Dimensions</b>	1754 x 1096 x 35 mm
<b>Weight</b>	21.5 kg
<b>Frame</b>	Black anodized aluminium
<b>Front Cover</b>	Glass - 3.2 mm, AR coated, Low Iron, Tempered, Textured
<b>Back Cover</b>	Black Backsheet
<b>Junction Box</b>	IP68, 1000VDC, 3 bypass diodes
<b>Output Cable</b>	4 mm <sup>2</sup> , (+): 1200mm, (-): 1200mm
<b>Type of Connector</b>	Staubli MC4
<b>Maximum static test loading</b>	Front: up to 8100 Pa Rear: up to 6000 Pa

## PACKAGING

**Pallet dimensions (L x W x H)**  
Bi-pack: 1787 x 1097 x 2446 mm  
Box: 1787 x 1097 x 1223 mm

**Pallet weight**  
Bi-pack: 1357 kg  
Box: 678 kg

**Packing Configuration**  
Bi-pack: 60 pcs  
Box: 30 pcs

**Modules per Container (40'HQ)**  
780 pcs (26 boxes)

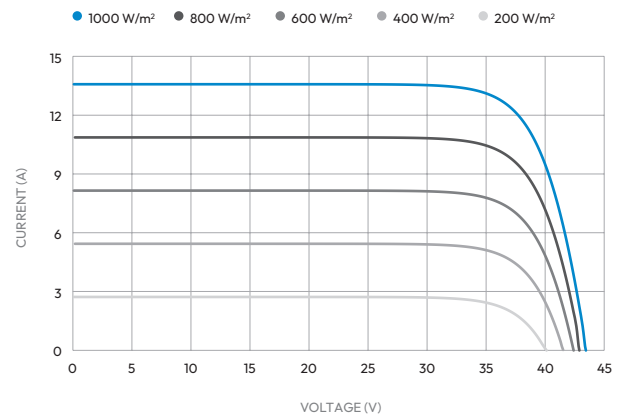
## MAXIMUM RATINGS

<b>Operating Temperature</b>	°C	-40~+85
<b>Maximum System Voltage (IEC/UL)</b>	V <sub>DC</sub>	1000
<b>Maximum Series Fuse</b>	A	20

## TEMPERATURE RATINGS

<b>Nominal Module Operating Temperature</b>	°C	44 ± 2
<b>P<sub>max</sub> Temperature Coefficient</b>	%/°C	-0.24 ± 0.04
<b>I<sub>sc</sub> Temperature Coefficient</b>	%/°C	0.044
<b>V<sub>oc</sub> Temperature Coefficient</b>	%/°C	-0.20

## CURRENT - VOLTAGE CURVES - 3SHMBT-A#-430-470



## ELECTRICAL CHARACTERISTICS

	UNIT	3SHMBT-A#-430		3SHMBT-A#-435		3SHMBT-A#-440		3SHMBT-A#-445		3SHMBT-A#-450		3SHMBT-A#-455		3SHMBT-A#-460		3SHMBT-A#-465		3SHMBT-A#-470	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
<b>P<sub>max</sub></b> - Power at Mpp	W	430	325	435	329	440	333	445	336	450	340	455	344	460	348	465	352	470	356
<b>V<sub>mp</sub></b> - Voltage at Mpp	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
<b>I<sub>mp</sub></b> - Current at Mpp	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
<b>V<sub>oc</sub></b> - 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
<b>I<sub>sc</sub></b> - 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
<b>Module efficiency</b>	%	22.4		22.6		22.9		23.2		23.4		23.7		23.9		24.2		24.5	

### Electrical Characteristics measured under:

Measurement Tolerance ± 3%

Power tolerance P<sub>max</sub>: -0+5 W

STC = AM 1.5, 1000 W/m<sup>2</sup>, Cells Temperature 25°C



IEC 61215-1:2021; IEC 61215-2:2021; IEC 61730-2:2016; UL 61730:2017