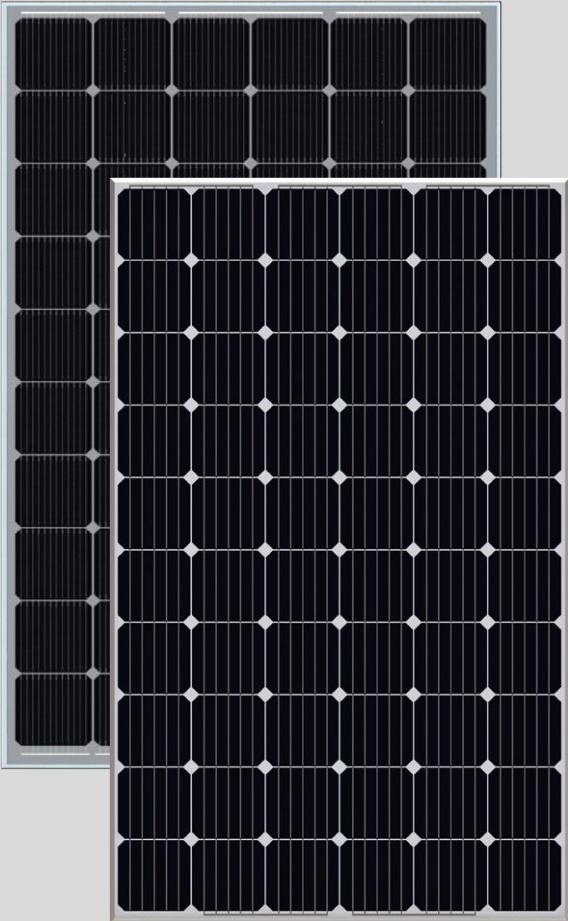


## SF-60M

## MORE BRIGHT FUTURE FROM

## SUNFUTURE



**MONO 280W 285W 290W  
300W 310W 315W 320W**



### Higher Durability

The multi-busbar design can decrease the risk of the cell micro-cracks and fingers broken.



### High Power Density

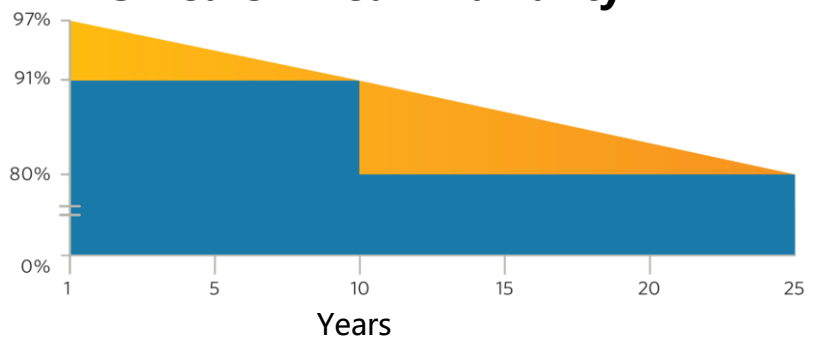
High conversion efficiency and more power output per square meter, by lower series resistance and improved light harvesting.



### PID Resistant

Tested in accordance to the IEC 62804 standard, SF modules have demonstrated resistance against PID (Potential Induced Degradation), which translates to security for the investment.

## 25 Years Linear Warranty



- SF's Linear Performance Warranty
- Industry Standard Warranty

**22.36%**

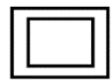
CELL EFFICIENCY

**12 YEAR**

PRODUCT WARRANTY

**0-5W**

POWER TOLERANCE



## ELECTRICAL PERFORMANCE

### Electrical parameters at Standard Test Conditions (STC)

Module type	SF***-60M								
Power output	$P_{max}$	W	280	285	290	300	310	315	320
Module efficiency	$\eta_m$	%	17.38	17.70	18.01	18.63	19.25	19.59	19.87
Voltage at $P_{max}$	$V_{mp}$	V	31.50	31.80	31.80	32.10	32.40	32.40	32.70
Current at $P_{max}$	$I_{mp}$	A	8.89	8.96	9.12	9.35	9.57	9.72	9.79
Open-circuit voltage	$V_{oc}$	V	37.80	37.99	38.16	38.52	38.88	38.88	39.24
Short-circuit current	$I_{sc}$	A	9.33	9.49	9.58	9.81	10.05	10.21	10.28

STC: 1000W/m<sup>2</sup> irradiance, 25° C cell temperature, AM1.5g spectrum according to EN 60904-3.

Average relative efficiency reduction of 3.0% at 200W/m<sup>2</sup> according to EN 60904-1.

### Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	$P_{max}$	W	206.5	210.2	213.9	221.3	228.7	232.3	236.0
Voltage at $P_{max}$	$V_{mp}$	V	29.02	29.29	29.29	29.57	29.85	29.85	30.12
Current at $P_{max}$	$I_{mp}$	A	7.11	7.17	7.30	7.48	7.65	7.78	7.83
Open-circuit voltage	$V_{oc}$	V	35.21	35.39	35.54	35.88	36.22	36.22	36.55
Short-circuit current	$I_{sc}$	A	7.46	7.59	7.66	7.85	8.04	8.17	8.22

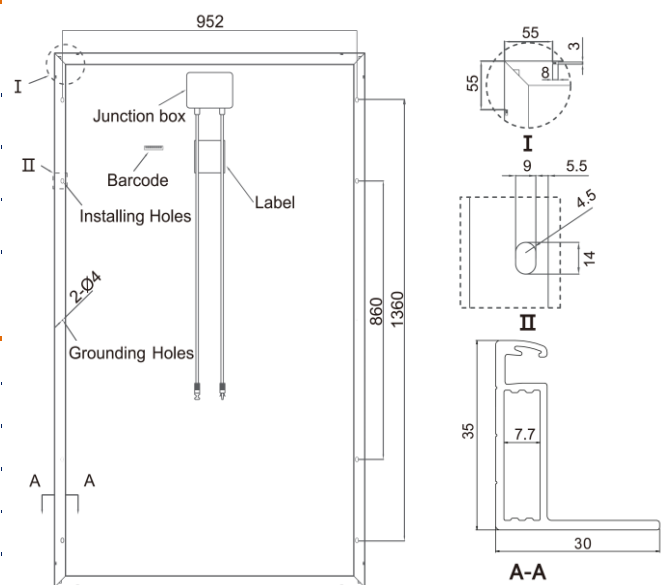
NOCT: open-circuit module operation temperature at 800W/m<sup>2</sup> irradiance, 20°C ambient temperature, 1m/s wind speed.

## THERMAL CHARACTERISTICS

Nominal operating cell temperature (NOCT)	45°C ± 2
Temperature coefficient of $P_{max}$	-0.41%/°C
Temperature coefficient of $V_{oc}$	-0.33%/°C
Temperature coefficient of $I_{sc}$	+0.059%/°C

## OPERATING CONDITIONS & DIMENSION

Max. system voltage	1500V <sub>DC</sub>
Max. series fuse rating	15A
Operating temperature range	-40°C to 85°C
Max. static load, front (e.g., snow)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Dimension(mm)	1640×992×35/40
Weight	17.5kg
Frame colour	Silver/Black



Back View

Unit: mm

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