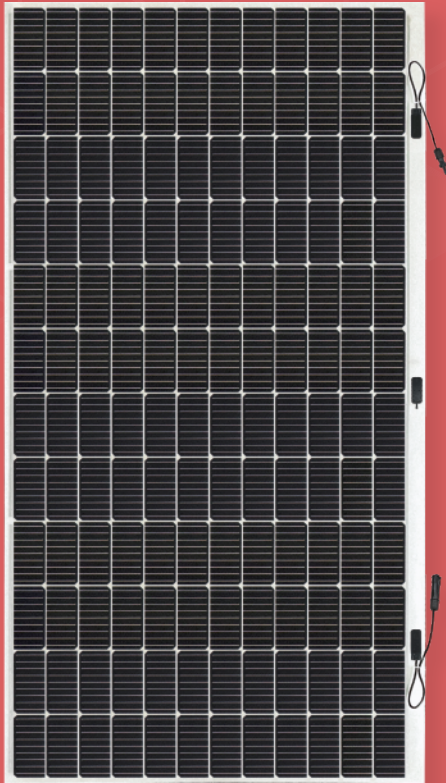


# eArc

## SMF520J-12X12UW

# 520 Watt

## 144 Half Cell Monocrystalline Module



**Ultra-light:** Glass free module weighs 7.2 kg, 70% lighter than conventional glass modules.



**Fast-Installation:** Through “Quick-Bonding” installation, eArc requires no penetration, reduces time on roof and saves installation costs.



**Safety:** Integration with underlying installation surface, ensuring the waterproof performance and safety performance of the roof.



**Durable:** eArc is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 61215:2021, IEC61730:2023 and UL61730 (USA).

POWER OUTPUT RANGE 520 W

POWER TOLERANCE 0-5 W

MADE IN CHINA

### LINEAR PERFORMANCE WARRANTY

**12 Year Product Warranty**

**25 Year Linear Power Warranty**

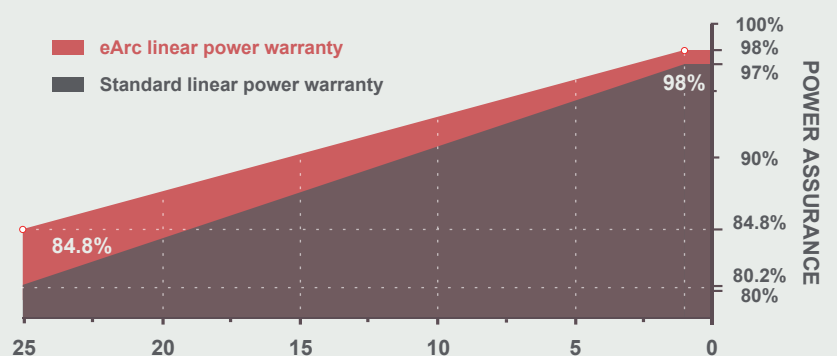


[www.sunman-energy.com](http://www.sunman-energy.com)

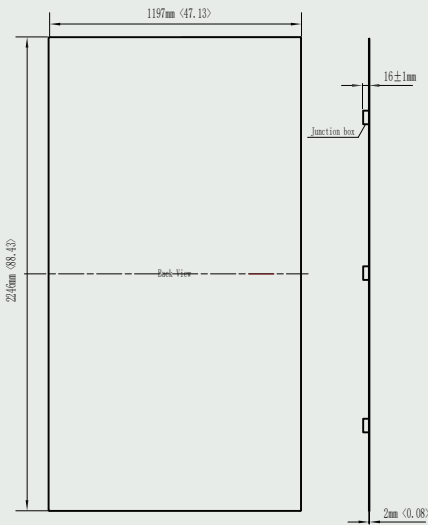
Linear power warranty: 98% in the first year, thereafter, for years two (2) through twenty-five (25), 0.55% maximum decrease from Module's nominal power output per year, ending with the 84.8% in the 25th year.

CAUTION: Read installation manual before using the product.

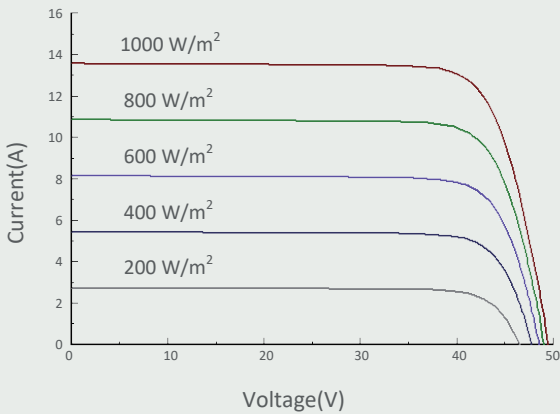
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## DIMENSIONS



## I-V CURVE (520)



## TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature(NMOT)	<b>41±2 °C</b>
Temperature Coefficient of $P_{max}$	<b>-0.3 %/°C</b>
Temperature Coefficient of $V_{oc}$	<b>-0.23 %/°C</b>
Temperature Coefficient of $I_{sc}$	<b>0.02 %/°C</b>



SMF520 IEC AU 2025A 3

## ELECTRICAL CHARACTERISTICS

STC	SMF520J-12X12UW
Maximum Power ( $P_{max}$ )	520 W
Maximum Power Voltage ( $V_{mp}$ )	42.26 V
Maximum Power Current ( $I_{mp}$ )	12.31 A
Open-circuit Voltage ( $V_{oc}$ )	49.54 V
Short-circuit Current ( $I_{sc}$ )	13.56 A
Module Efficiency (%)	19.3
Operating Temperature	-40 °C to 85 °C
Maximum System Voltage	1500 V DC (IEC)
Maximum Series Fuse Rating	25 A
Safety Class	Class II
Power Tolerance	0 - 5 W

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM=1.5.

Tolerances of  $P_{max}$ ,  $V_{oc}$  and  $I_{sc}$  are within ±5%

NMOT	SMF520J-12X12UW
Maximum Power ( $P_{max}$ )	429.2 W
Maximum Power Voltage ( $V_{mp}$ )	41.8 V
Maximum Power Current ( $I_{mp}$ )	10.26 A
Open-circuit Voltage ( $V_{oc}$ )	49.8 V
Short-circuit Current ( $I_{sc}$ )	10.82 A

NMOT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, AM=1.5, Wind speed 1 m/s.

## MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline silicon(182mm half cell)
No. of Cells	144 (12×12)
Module Dimensions	2246×1197×2 mm
Weight	7.2kg ±3%
Backsheet	White
Frame	Frameless
J-box	IP 68 rated
Output Cables	Photovoltaic technology cable 4.0 mm 2, (+)450 / (-)450 mm
Connector	Stäubli MC4-EVO2

## PACKAGING CONFIGURATION

	20' GP	40' HC
Module per pallet	66	66&50
Pieces per container	264	828