

# eArc

## SMF520J-12X12UW

# 520 Watt

## 144 Half Cell Monocrystalline Module



**Ultra-light:** Glass free module weighs 8.6 kg, 70% lighter than conventional glass modules.



**Fast-Installation:** Through "Quick-Bonding" installation, eArc requires no penetration, reduces time on roof by 40% and eliminates the use of mounting hardware.



**Safety:** Seamless 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 61215:2016, IEC61730:2016 and UL61730 (USA). eArc has also passed PID, salt mist level 8 tests.

POWER OUTPUT RANGE 520 W

POWER TOLERANCE 0-5 W

### LINEAR PERFORMANCE WARRANTY

**12 Year Product Warranty**

**25 Year Linear Power Warranty**



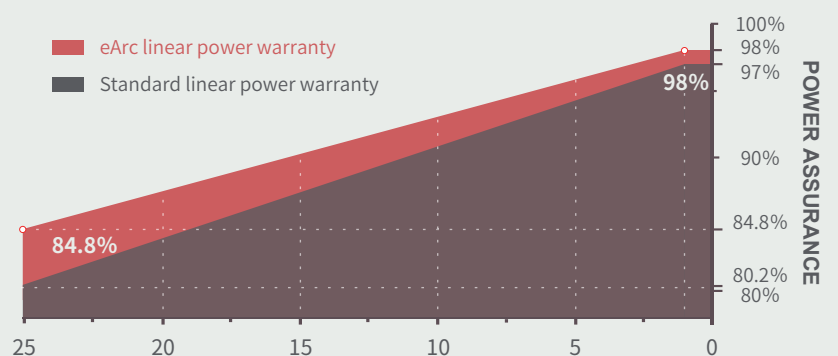
[www.sunman-energy.com](http://www.sunman-energy.com)



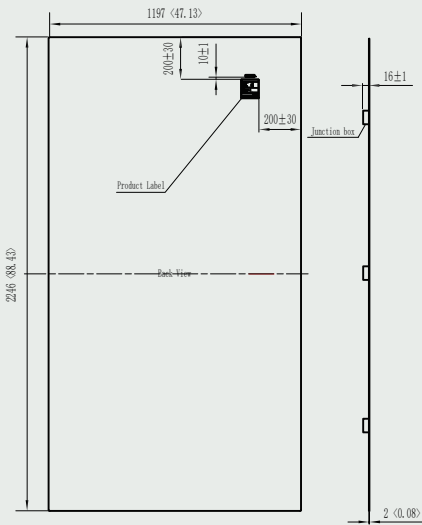
ULTRA-LIGHT & FLEXIBLE SOLAR PANEL

CAUTION: Read installation manual before using the product.

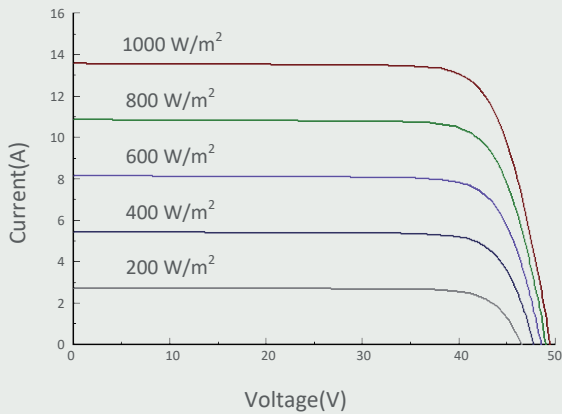
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## DIMENSIONS



## I-V CURVE (520)



## TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature(NMOT)	<b>41±2 °C</b>
Temperature Coefficient of $P_{max}$	<b>-0.34 %/°C</b>
Temperature Coefficient of $V_{oc}$	<b>-0.26 %/°C</b>
Temperature Coefficient of $I_{sc}$	<b>0.033 %/°C</b>



SMFUW/IEC EN 2023B 4

## ELECTRICAL CHARACTERISTICS

### STC SMF520J-12X12UW

Maximum Power ( $P_{max}$ )	<b>520</b>
Maximum Power Voltage ( $V_{mp}$ )	<b>42.3</b>
Maximum Power Current ( $I_{mp}$ )	<b>12.31</b>
Open-circuit Voltage ( $V_{oc}$ )	<b>49.5</b>
Short-circuit Current ( $I_{sc}$ )	<b>13.56</b>
Module Efficiency (%)	<b>19.3</b>
Operating Temperature	<b>-40 °C to 85 °C</b>
Maximum System Voltage	<b>1500 V DC (IEC)</b>
Maximum Series Fuse Rating	<b>25 A</b>
Application Class	<b>Class A</b>
Power Tolerance	<b>0/+5 W</b>

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 ( $P_{max}$ )	<b>429.2</b>
Maximum Power Voltage ( $V_{mp}$ )	<b>41.8</b>
Maximum Power Current ( $I_{mp}$ )	<b>10.26</b>
Open-circuit Voltage ( $V_{oc}$ )	<b>49.8</b>
Short-circuit Current ( $I_{sc}$ )	<b>10.82</b>

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	<b>144 (12×12)</b>
Module Dimensions	<b>2246×1197×2 mm</b>
Weight	<b>8.6kg</b>
Backsheet	<b>White</b>
Frame	<b>Frameless</b>
J-box	<b>IP 68 rated</b>
Output Cables	Photovoltaic technology cable 4.0 mm 2, (+)450 / (-)450 mm
Connector	<b>MC4 compatible</b>

## PACKAGING CONFIGURATION

	<b>20' GP</b>	<b>40' HC</b>
Module per pallet	<b>66</b>	<b>66</b>
Pieces per container	<b>264</b>	<b>1122</b>