

# Dragonfly

SMH520J-12X12UW  
**520 Watt**



**Ultra-light:** By replacing the glass and optimising the framing, the module only weighs 4.1kg/m<sup>2</sup>. 60% lighter than equivalent conventional glass modules.



**Effortless installation:** Module with the mounting structure pre-integrated. Eliminating the need for a traditional panel mounting structure. Saving time and installation cost.



**Wide range of applications:** Supports removable mechanical installation for all types of roofs, enhancing flexibility in later roof maintenance or project adjustments.



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



**Durable:** eArc is the first glassless module to pass the same durability standards as conventional glass modules, including IEC 61215:2016, IEC 61730:2016 and UL61730(USA).

## LINEAR PERFORMANCE WARRANTY

**12 Year Product Warranty**

**25 Year Linear Power Warranty**



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

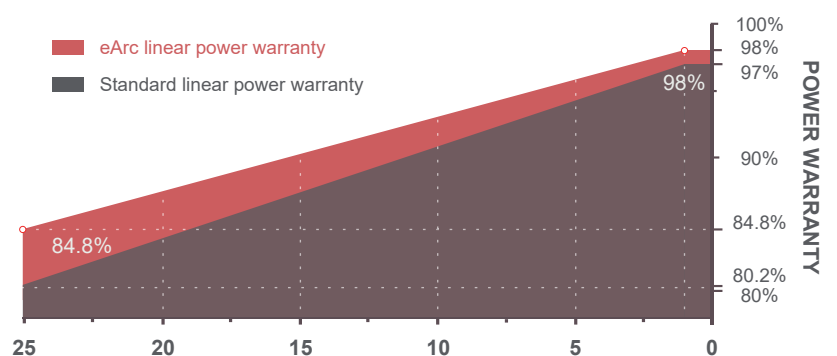
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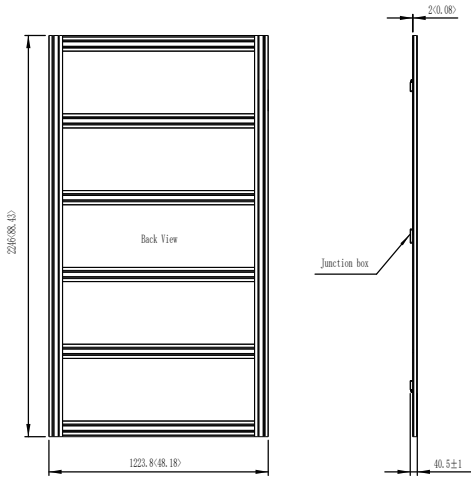


CAUTION: Read installation manual before using the product.

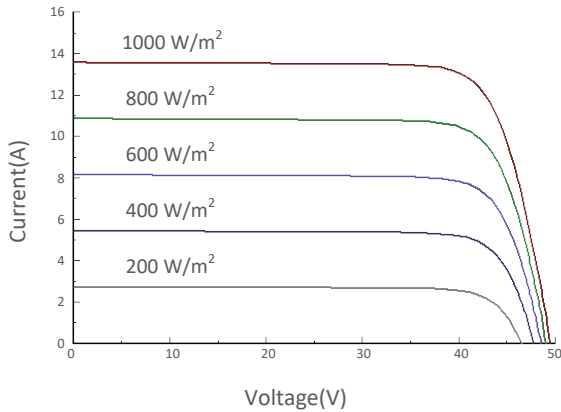
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## DIMENSIONS

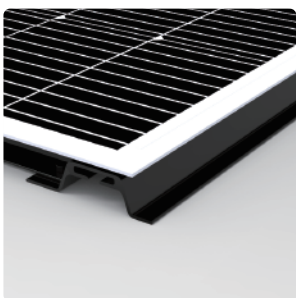


## I-V CURVE (520)



## TEMPERATURE CHARACTERISTICS

Nominal Module Operating Temperature(NMOT)	41±2 °C
Temperature Coefficient of P <sub>max</sub>	-0.34 %/°C
Temperature Coefficient of V <sub>oc</sub>	-0.26 %/°C
Temperature Coefficient of I <sub>sc</sub>	0.033 %/°C



SMH1UW IEC EN 2024B 11

## ELECTRICAL CHARACTERISTICS

STC	SMH520J-12X12UW
Maximum Power (P <sub>max</sub> )	520
Maximum Power Voltage (V <sub>mp</sub> )	42.3
Maximum Power Current (I <sub>mp</sub> )	12.31
Open-circuit Voltage (V <sub>oc</sub> )	49.5
Short-circuit Current (I <sub>sc</sub> )	13.56
Module Efficiency (%)	19.3
Operating Temperature	-40 °C to 85 °C
Maximum System Voltage	1500 V DC (IEC)
Maximum Series Fuse Rating	25 A
Application Class	Class A
Power Tolerance	0/+5 W

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM=1.5. Tolerances of P<sub>max</sub>, V<sub>oc</sub> and I<sub>sc</sub> are within ±5%

NMOT	SMH520J-12X12UW
Maximum Power (P <sub>max</sub> )	429.2
Maximum Power Voltage (V <sub>mp</sub> )	41.8
Maximum Power Current (I <sub>mp</sub> )	10.26
Open-circuit Voltage (V <sub>oc</sub> )	49.8
Short-circuit Current (I <sub>sc</sub> )	10.82

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
Product Dimensions	2246×1223.8×40.5 mm
Weight	11.1kg ±3%
Backsheet	White
J-box	IP 68 rated
Output Cables	Photovoltaic cable 4.0 mm 2, (+)450 / (-)450 mm
Connector	MC4-EVO2

## PACKAGING CONFIGURATION

	20' GP	40' HC
Module per pallet	34	34
Pieces per container	136	272