

SUNO-U520F-12X12UW



Power output range **520 W**

Power Tolerance **0-5 W**

520 Watt

144 Half Cell Monocrystalline Module



Ultra-light: Glass free module weighs 7.7 kg, 70% lighter than conventional glass modules.



Fast Installation: Through "Quick-Bonding" installation, SUNO[®]UL requires no penetration, reduces time on roof saves installation costs.



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



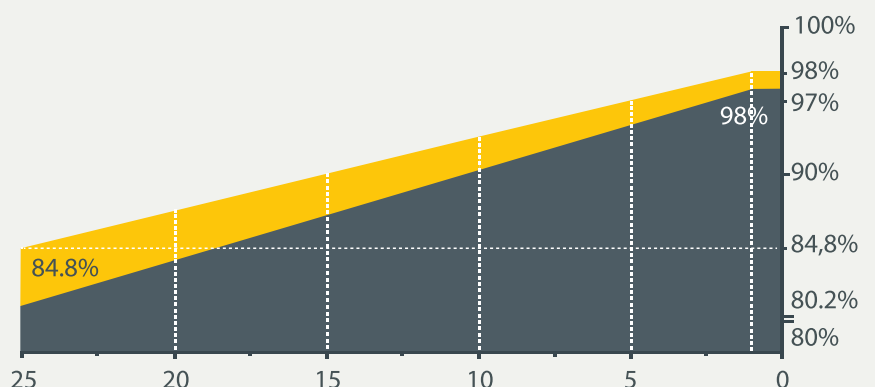
Durable: TSOe is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 6215:2016, IEC61730:2016 and UL61730 (USA). SUNO[®]UL has also passed PID, salt mist and ammonia corrosion tests.

LINEAR PERFORMANCE WARRANTY

CAUTION: Read installation manual before using the product.

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- SUNO-UL linear power warranty
- Standard linear power warranty



Added value from TSO's linear power warranty

12 Year Product Warranty

25 Year Linear Power Warranty

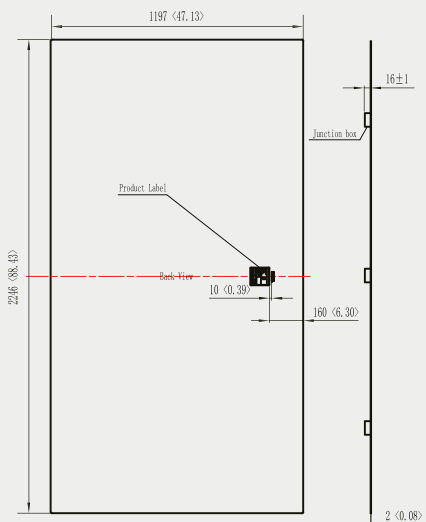


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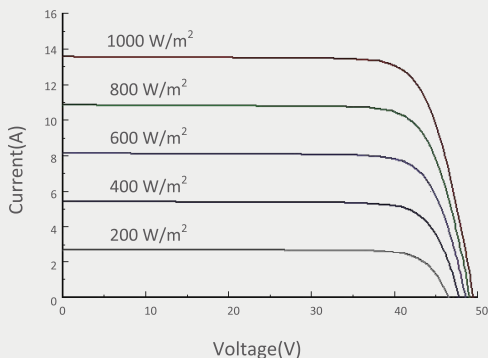
"Innovating for Solar Energy"



DIMENSIONS



I-V CURVE (520)



TEMPERATURE CHARACTERISTICS



Nominal Module Operating Temperature (NMOT) **41 ± 2°C**

Temperature Coefficient of P_{max} **-0.34 %/°C**

Temperature Coefficient of V_{oc} **-0.26 %/°C**

Temperature Coefficient of I_{sc} **0.026 %/°C**

ELECTRICAL CHARACTERISTICS

STC	SUNO-U520DF-12X12UW
Maximum Power (P _{max})	520
Maximum Power Voltage (V _{mp})	42.3
Maximum Power Current (I _{mp})	12.31
Open-circuit Current (V _{oc})	49.5
Short-circuit Current (I _{sc})	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/m², Cell temperature 25 C, AM=1.5. Tolerances of P_{max}, V_{oc} and I_{sc} are within ±5%

NMOT	SUNO-U520DF-12X12UW
Maximum Power (P _{max})	429.2
Maximum Power Voltage (V _{mp})	41.8
Maximum Power Current (I _{mp})	10.26
Open-circuit Current (V _{oc})	49.8
Short-circuit Current (I _{sc})	10.82

NMOT: Irradiance 800W/m², 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 (12x12)
Module Diimensions	2246x1197x2 mm
Weight	7.7kg
Backsheet	White
Frame	Frameless
J-box	IP 68 rated
Output Cables	Photovoltaic cable 4.0 mm ² , (+)450 / (-)450 mm
Connector	MC4 compatible

PACKAGING CONFIGURATION

	20'GP	40'HC
Module per pallet	66	66
Pieces per container	264	528