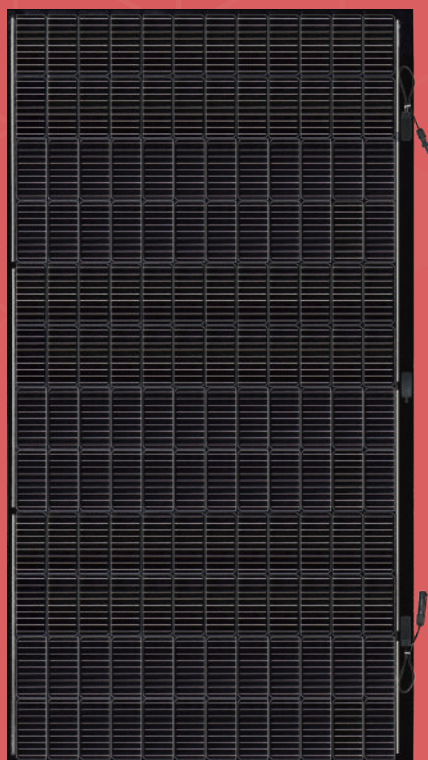


# eArc

## SMF425F-12X12UB

# 425 Watt

## 144 Half Cell Monocrystalline Module



**Ultra-light:** Glass free module weighs 6.3 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 61215:2016, IEC61730:2016 and UL61730 (USA). eArc has also passed PID, salt mist level 8 tests.

POWER OUTPUT RANGE 420~425 W

POWER TOLERANCE 0-5 W

**12 Year Product Warranty**

**25 Year Linear Power Warranty**

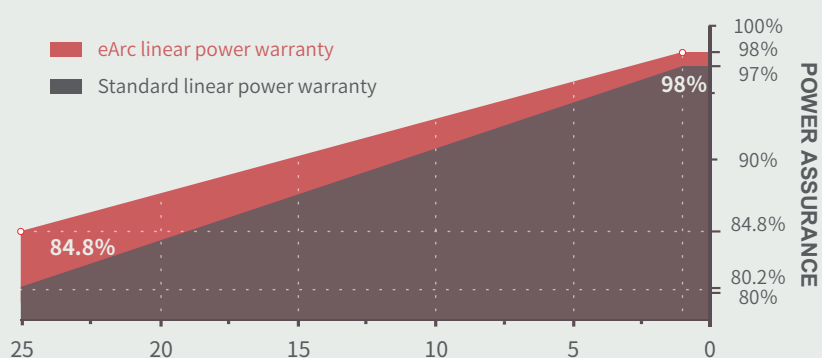


[www.sunman-energy.com](http://www.sunman-energy.com)

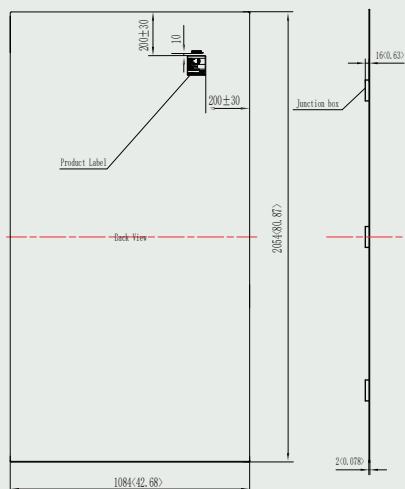
## LINEAR PERFORMANCE WARRANTY

CAUTION: Read installation manual before using the product.

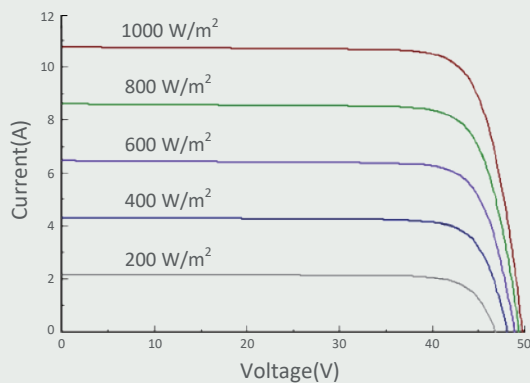
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## DIMENSIONS



## I-V CURVE (425)



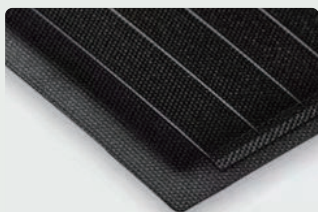
## TEMPERATURE CHARACTERISTICS

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

Temperature Coefficient of  $P_{max}$  **-0.38 %/°C**

Temperature Coefficient of  $V_{oc}$  **-0.28 %/°C**

Temperature Coefficient of  $I_{sc}$  **0.020 %/°C**



SMFUB IEC EN 2023C 6

## ELECTRICAL CHARACTERISTICS

| STC                                                                                 | SMF420F-12X12UB | SMF425F-12X12UB |
|-------------------------------------------------------------------------------------|-----------------|-----------------|
| Maximum Power (P <sub>max</sub> )                                                   | 420             | 425             |
| Maximum Power Voltage (V <sub>mp</sub> )                                            | 41.4            | 41.7            |
| Maximum Power Current (I <sub>mp</sub> )                                            | 10.14           | 10.19           |
| Open-circuit Voltage (V <sub>oc</sub> )                                             | 49.4            | 49.6            |
| Short-circuit Current (I <sub>sc</sub> )                                            | 10.64           | 10.69           |
| Module Efficiency (%)                                                               | 18.9            | 19.1            |
| Operating Temperature                                                               | -40 °C to 85 °C |                 |
| Maximum System Voltage                                                              | 1500 V DC (IEC) |                 |
| Maximum Series Fuse Rating                                                          | 20 A            |                 |
| Application Class                                                                   | Class A         |                 |
| Power Tolerance                                                                     | 0/+5 W          |                 |
| STC: Irradiance 1000W/m² , 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                                                                           | SMF420F-12X12UB | SMF425F-12X12UB |
|--------------------------------------------------------------------------------|-----------------|-----------------|
| Maximum Power ( $P_{max}$ )                                                    | 338.6           | 343             |
| Maximum Power Voltage ( $V_{mp}$ )                                             | 42.1            | 42.5            |
| Maximum Power Current ( $I_{mp}$ )                                             | 8.04            | 8.08            |
| Open-circuit Voltage ( $V_{oc}$ )                                              | 49.6            | 49.8            |
| Short-circuit Current ( $I_{sc}$ )                                             | 8.50            | 8.54            |
| NMOT: Irradiance 800W/m², Ambient temperature 20 °C, AM=1.5, Wind speed 1 m/s. |                 |                 |

## MECHANICAL CHARACTERISTICS

|                   |                                                            |
|-------------------|------------------------------------------------------------|
| Solar Cell        | Monocrystalline silicon(166mm half cell)                   |
| No. of Cells      | 144 (12×12)                                                |
| Module Dimensions | 2054×1084×2 mm                                             |
| Weight            | 6.3kg                                                      |
| Backsheet         | Black                                                      |
| Frame             | Frameless                                                  |
| J-box             | IP 68 rated                                                |
| Output Cables     | Photovoltaic technology cable 4.0 mm 2, (+)450 / (-)450 mm |
| Connector         | MC4 compatible                                             |

## PACKAGING CONFIGURATION

|                      |        |        |
|----------------------|--------|--------|
|                      | 20' GP | 40' HC |
| Module per pallet    | 66+50  | 66     |
| Pieces per container | 580    | 1320   |