

# eArc

## SMF430F-12X12UW

# 430 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 by 40% and eliminates the use of mounting hardware.



**Aesthetic:** Seamless integration with underlying installation surface.



**Durable:** eArc is the first glassless module to pass the same durability tests as conventional glass modules, including IEC 61215:2016, IEC61730:2016 and UL1703 (USA). eArc has also passed PID, salt mist and ammonia corrosion tests.

POWER OUTPUT RANGE 425~430 W

POWER TOLERANCE 0-5 W

**12 Year Product Warranty**

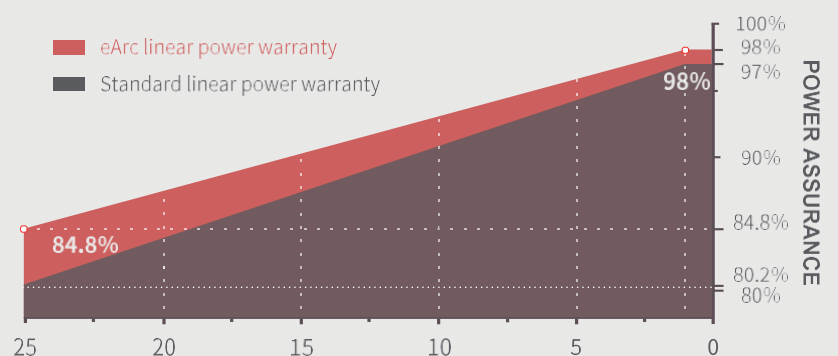
**25 Year Linear Power Warranty**



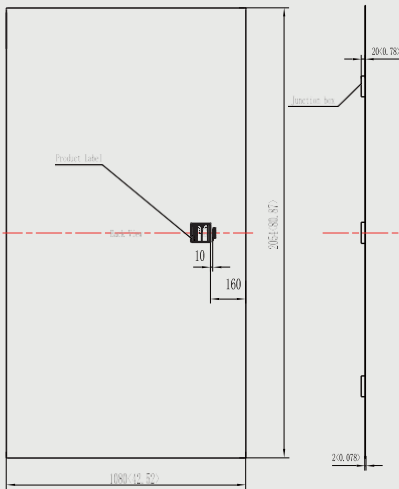
### LINEAR PERFORMANCE WARRANTY

CAUTION: Read installation manual before using the product.

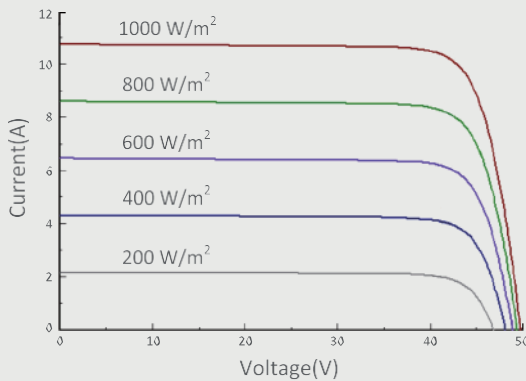
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## DIMENSIONS



## I-V CURVE (430)



## 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 |



SMF-UW IEC EN 2022C

## ELECTRICAL CHARACTERISTICS

| STC                                | SMF425F-12X12UW | SMF430F-12X12UW |
|------------------------------------|-----------------|-----------------|
| Maximum Power ( $P_{max}$ )        | 425             | 430             |
| Maximum Power Voltage ( $V_{mp}$ ) | 41.8            | 42.0            |
| Maximum Power Current ( $I_{mp}$ ) | 10.17           | 10.24           |
| Open-circuit Voltage ( $V_{oc}$ )  | 49.6            | 49.8            |
| Short-circuit Current ( $I_{sc}$ ) | 10.67           | 10.74           |
| Module Efficiency (%)              | 19.2            | 19.4            |
| Operating Temperature              | -40 °C to 85 °C |                 |
| Maximum System Voltage             | 1000 V DC (IEC) |                 |
| Maximum Series Fuse Rating         | 20 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  $P_{max}$ ,  $V_{oc}$  and  $I_{sc}$  are within ±5%

| NMOT                               | SMF425F-12X12UW | SMF430F-12X12UW |
|------------------------------------|-----------------|-----------------|
| Maximum Power ( $P_{max}$ )        | 321.4           | 325.1           |
| Maximum Power Voltage ( $V_{mp}$ ) | 38.6            | 38.8            |
| Maximum Power Current ( $I_{mp}$ ) | 8.33            | 8.38            |
| Open-circuit Voltage ( $V_{oc}$ )  | 46.6            | 46.8            |
| Short-circuit Current ( $I_{sc}$ ) | 8.64            | 8.69            |

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 (166mm half cell)                              |
| No. of Cells      | 144 (12×12)  |
| Module Dimensions | 2054×1080×2 mm   |
| Weight            | 7.2kg  |
| Backsheet         | White  |
| Frame             | Frameless  |
| J-box             | IP 68 rated  |
| Output Cables     | Photovoltaic technology cable 4.0 mm <sup>2</sup> , (+)450 / (-)450 mm |
| Connector         | MC4 compatible   |

## PACKAGING CONFIGURATION

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