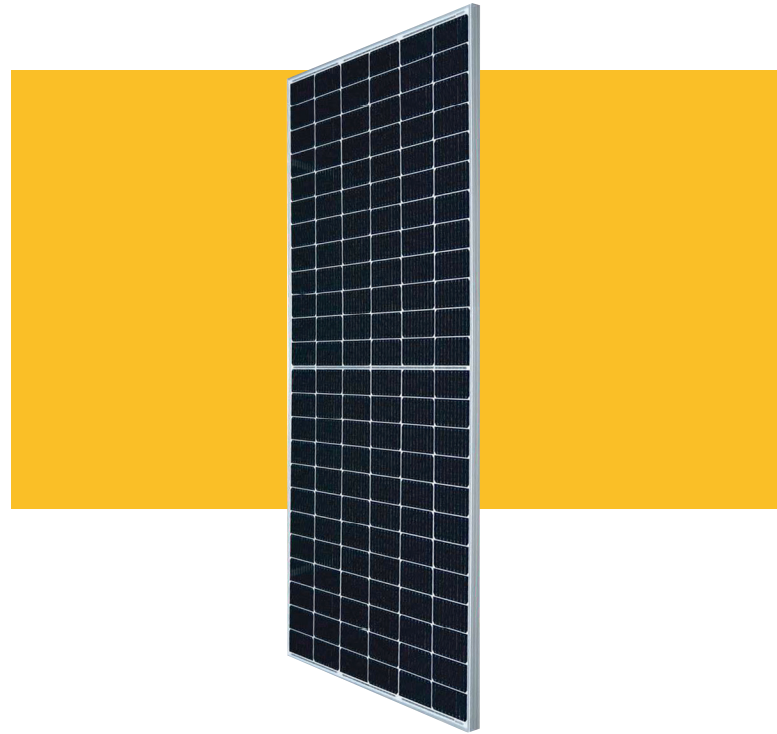









MSMDxxxAS-72 166 M6 cells half cut

425W-445W



KEY FEATURES

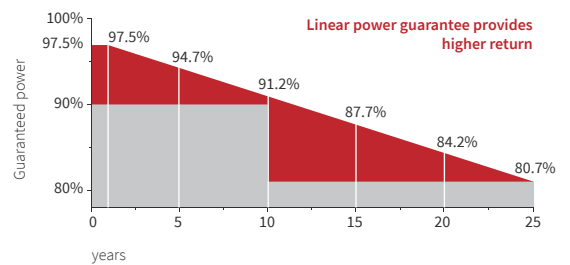
-  **Class A fire resistant (industry standard class C)**
-  **Outstanding performance in low-light conditions**
-  **Low temperature coefficient (Pmax): -0.37 % / °C**
- +5W** 0~+5W positive tolerance - to assure high output
-  **Lower internal current, lower hot spot temperature**
-  **Cell crack risk limited in small region, enhance the module reliability**
- PID FREE** Excellent anti-PID module design, TÜV SÜD certified
-  **Certified to withstand high wind loads (3600pa) and snow loads (8000pa)**
-  **Salt mist and ammonia corrosion resistant**

PRODUCT CERTIFICATES



WARRANTY

- **Our linear power guarantee**
- **Standard linear power guarantee**



15 years Enhanced product guarantee on product and workmanship

25 years Linear power output warranty

MSMDxxxAS-72

ELECTRICAL CHARACTERISTICS

| STC | 425 | 430 | 435 | 440 | 445 |
|---------------------------------|------------------|---------|---------|---------|---------|
| Maximum Power at STC (Pmax) | 425 W | 440 W | 435 W | 440 W | 445 W |
| Optimum Operating Voltage (Vmp) | 40.4 V | 40.6 V | 40.8 V | 41 V | 41.2 V |
| Optimum Operating Current (Imp) | 10.52 A | 10.6 A | 10.67 A | 10.74 V | 10.81 A |
| Open Circuit Voltage (Voc) | 48.2 V | 48.4 V | 48.6 V | 48.8 V | 49 V |
| Short Circuit Current (Isc) | 11.25 A | 11.32 A | 11.4 A | 11.47 A | 11.54 A |
| Module Efficiency | 19.5 % | 19.8 % | 20.0 % | 20.2 % | 20.4 % |
| Operating Module Temperature | -40 °C to +85 °C | | | | |
| Maximum System Voltage | 1500 V DC (IEC) | | | | |
| Maximum Series Fuse Rating | 20 A | | | | |
| Power Tolerance | 0/+5W | | | | |

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5; Tolerances of Pmax, Voc and Isc are all within +/- 5%.

| NMOT | 425 | 430 | 435 | 440 | 445 |
|---------------------------------|---------|---------|---------|---------|--------|
| Maximum Power at NMOT (Pmax) | 319.7 W | 323.8 W | 327.5 W | 331.2 W | 335 W |
| Optimum Operating Voltage (Vmp) | 37.8 V | 37.9 V | 38.1 V | 38.3 V | 38.5 W |
| Optimum Operating Current (Imp) | 8.47 A | 8.53 A | 8.59 A | 8.65 A | 8.7 A |
| Open Circuit Voltage (Voc) | 46.0 V | 46.2 V | 46.4 V | 46.6 V | 46.8 V |
| Short Circuit Current (Isc) | 8.96 A | 9.03 A | 9.08 A | 9.14 A | 9.19 A |

NMOT: Irradiance 800 W/m², ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.

TEMPERATURE CHARACTERISTICS

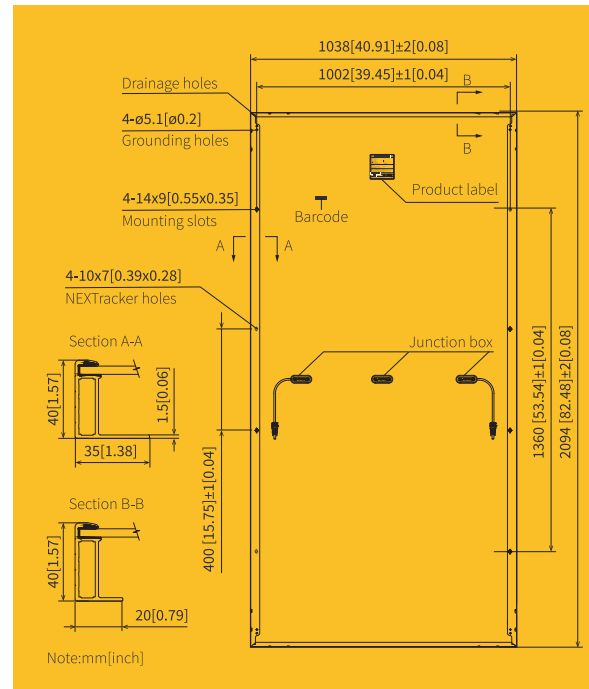
| | |
|---|-------------|
| Nominal Module Operating Temperature (NMOT) | 42±2°C |
| Temperature Coefficient of Pmax | -0.37 %/°C |
| Temperature Coefficient of Voc | -0.304 %/°C |
| Temperature Coefficient of Isc | 0.050 %/°C |

MECHANICAL CHARACTERISTICS

| | |
|---------------|---|
| Solar Cell | Monocrystalline silicon 166 mm (9BB) |
| No. of Cells | 144 (6 × 24) |
| Dimensions | 2115 × 1052 × 40 mm |
| Weight | 24 kgs |
| Front Glass | 3.2 mm tempered glass |
| Frame | Anodized aluminium alloy |
| Junction Box | IP68 rated (3 bypass diodes) |
| Output Cables | 4.0 mm ² , symmetrical lengths (-) 1400 mm and (+) 1400 mm |

PACKING CONFIGURATION

| Container | 20' GP | 40' HC |
|-----------------------|--------|--------|
| Pieces per pallet | 26 | 26+1 |
| Pallets per container | 5 | 22 |
| Pieces per container | 130 | 594 |



Current-Voltage & Power-Voltage Curve (445S)

