

MSMDxxxM3-30

Full Black Moudule

300W-320W

## KEY FEATURES



Class A fire resistants (industry standard class C)



Outstanding performance in low-light conditions



Low temperature coefficient (Pmax): -0.34 % / °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

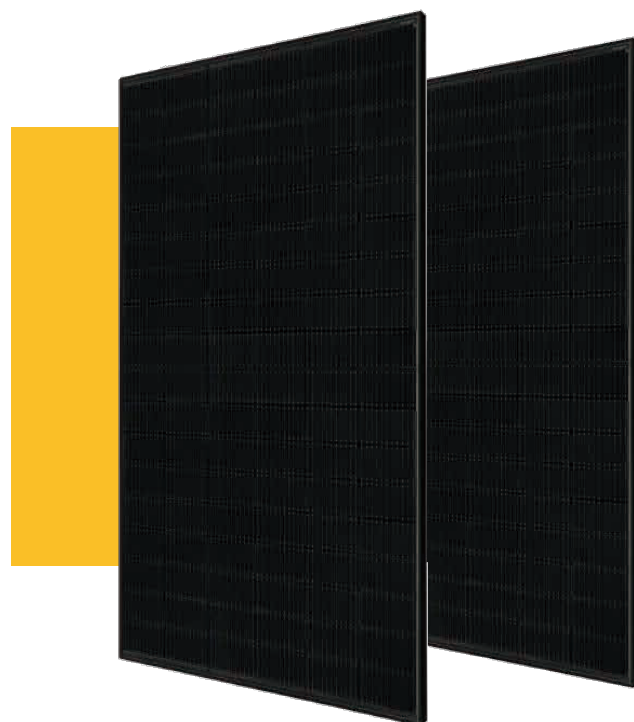


Certified to withstand high wind loads (3600pa) and snow load ( 5400pa)



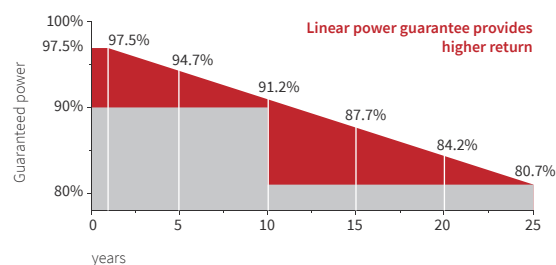
Salt mist and ammonia corrosion resistant

## 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

# MSMDxxxM3-30

## ELECTRICAL CHARACTERISTICS

| STC                             | 300                  | 305     | 310     | 315     | 320     |
|---------------------------------|----------------------|---------|---------|---------|---------|
| Maximum Power at STC (Pmax)     | 300 W                | 305 W   | 310 W   | 315 W   | 320 W   |
| Optimum Operating Voltage (Vmp) | 29.25 V              | 29.45 V | 29.65 V | 29.85 V | 30.05 V |
| Optimum Operating Current (Imp) | 10.25 A              | 10.35 A | 10.45 A | 10.55 A | 10.65 A |
| Open Circuit Voltage (Voc)      | 34.05 V              | 34.25V  | 34.45 V | 34.65 V | 34.85 V |
| Short Circuit Current (Isc)     | 10.82 A              | 10.91 A | 11.01 A | 11.09 A | 10.18 A |
| Module Efficiency               | 19.8%                | 20.0%   | 20.2%   | 20.4%   | 20.6%   |
| Operating Module Temperature    | -40 °C to +85 °C     |         |         |         |         |
| Maximum System Voltage          | 1000/1500 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                            | 300     | 305     | 310     | 315     | 320     |
|---------------------------------|---------|---------|---------|---------|---------|
| Maximum Power at NMOT (Pmax)    | 224.8 W | 228.3 W | 232.6 W | 235.8 W | 239.3 W |
| Optimum Operating Voltage (Vmp) | 26.8 V  | 27.0 V  | 27.2 V  | 27.4 V  | 27.6 V  |
| Optimum Operating Current (Imp) | 8.38 A  | 8.45 A  | 8.55 A  | 8.60 A  | 8.67 A  |
| Open Circuit Voltage (Voc)      | 31.1 V  | 31.3 V  | 31.5 V  | 31.7 V  | 31.9V   |
| Short Circuit Current (Isc)     | 9.24 A  | 9.31 A  | 9.40 A  | 9.48 A  | 9.56 A  |

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

## TEMPERATURE CHARACTERISTICS

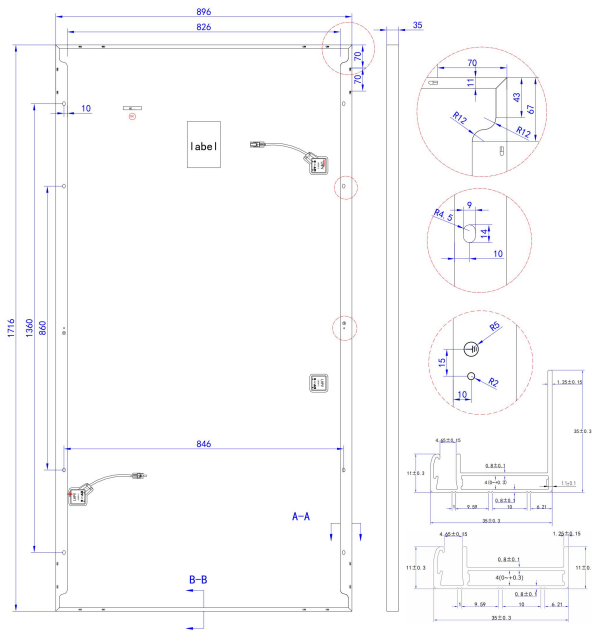
|                                             |            |
|---------------------------------------------|------------|
| Nominal Module Operating Temperature (NMOT) | 42±2°C     |
| Temperature Coefficient of Pmax             | -0.34 %/°C |
| Temperature Coefficient of Voc              | -0.27 %/°C |
| Temperature Coefficient of Isc              | 0.03 %/°C  |

## MECHANICAL CHARACTERISTICS

|               |                                                          |
|---------------|----------------------------------------------------------|
| Solar Cell    | Monocrystalline silicon                                  |
| No. of Cells  | 166x83 100 ( 10 × 10 )                                   |
| Dimensions    | 1716 × 896 × 35 mm                                       |
| Weight        | 16.4kgs                                                  |
| Front Glass   | 3.2 mm tempered glass                                    |
| Frame         | Anodized aluminium alloy                                 |
| Junction Box  | IP68 rated (3 bypass diodes)                             |
| Output Cables | 4.0 mm², symmetrical lengths (-) 1200 mm and (+) 1200 mm |
| Connectors    | MC4 compatible                                           |

## PACKING CONFIGURATION

| Container             | 20' GP | 40' HC  |
|-----------------------|--------|---------|
| Pieces per pallet     | 31     | 31      |
| Pallets per container | 12     | 26      |
| Pieces per container  | 372    | 806+156 |



Current-Voltage & Power-Voltage Curve (310)

