

# MT5-Pro

# 520-540W

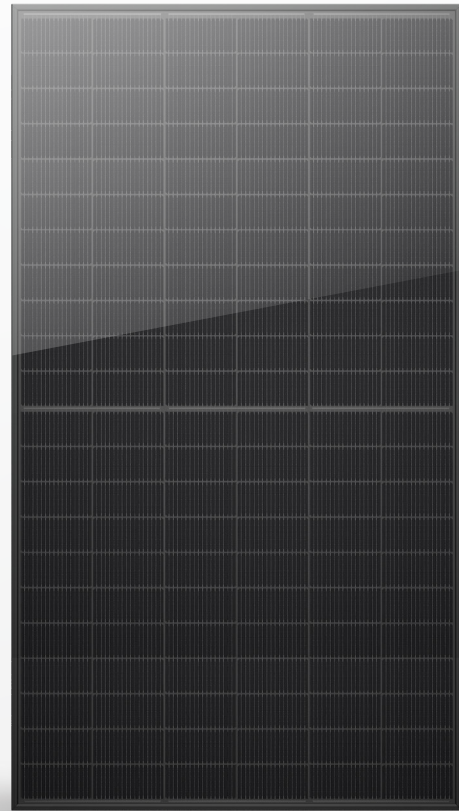
N-type TOPCon  
Full Black Solar Module

## Qualidade Garantida

**25-Year** Warranty for Materials and Processing  
**30-Year** Warranty for Extra Linear Power Output

22.74%

Max. Module Efficiency



MS-66H

## 10-30% Additional Power Generation

30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.

## ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.

## Higher Reliability

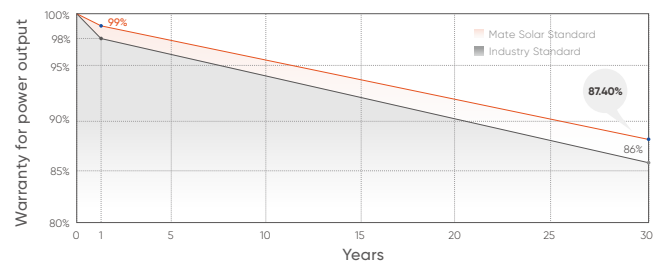
Adopted Mate Solar latest S-TOPCo 2.0 technology,  
No polysilicon wrap around, Full electrical isolation,  
Zero leakage current; Much Safer for roof.

## Better Weak Illumination Response

Higher power output even under low-light environments like on cloudy or foggy days.

## Better Temperature Coefficient

Higher power generation under working conditions, thanks to passivating contact cell technology.



\* Please refer to Mate Solar standard warranty for details

## Quality Management System And Product Certification

IEC61215/61730, IEC62804(PID), IEC61701(Salt).

IEC62716 (Ammonia), IEC60068-2-68(Sand).

ISO 9001:2015/quality management system.

ISO 14001:2015/environmental management system.

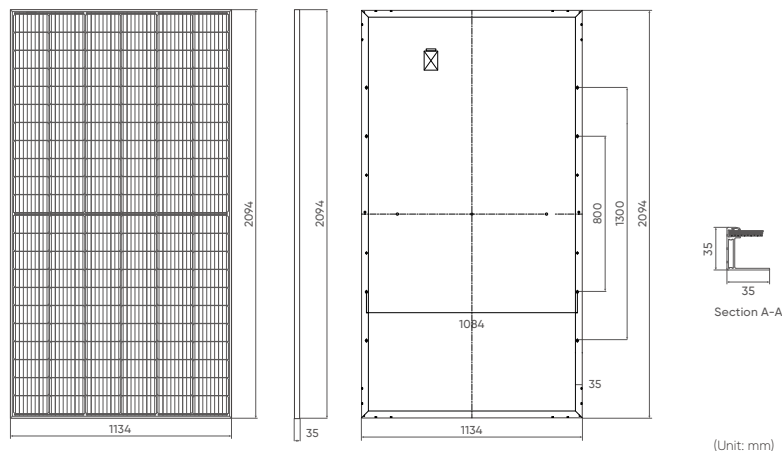
ISO 45001:2018/occupation health safety management system

ISO 50001:2011/energy management system.

IEC TS 62941-2016/PV industry quality management system .



## Drawings



## Mechanical Parameters

|                      |                                                                    |
|----------------------|--------------------------------------------------------------------|
| Solar Cells          | N-type Mono                                                        |
| No. of Cells         | 132 (6×22)                                                         |
| Dimensions           | 2094 × 1134 × 30mm                                                 |
| Weight               | 25.5kg                                                             |
| Front Glass          | 3.2mm coated tempered glass                                        |
| Frame                | Black Anodized aluminium alloy                                     |
| Junction Box         | Ip68 rated (3 by pass diodes)                                      |
| Output Cables        | 4mm <sup>2</sup> , 300mm (+) / 300mm (-), Length can be customized |
| Connectors           | Mc4 compatible                                                     |
| Mechanical load test | 5400Pa                                                             |
| Packaging            | 36pcs/box, 180pcs/20'GP, 792pcs/40'HQ                              |

## Electrical Characteristics (STC\*)

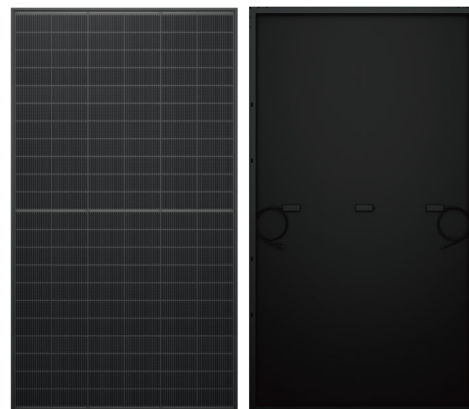
|                                                |       |       |       |       |       |
|------------------------------------------------|-------|-------|-------|-------|-------|
| Module Type: <b>MS-66H</b>                     | 520   | 525   | 530   | 535   | 540   |
| Maximum power (P <sub>max</sub> /W)            | 520   | 525   | 530   | 535   | 540   |
| Open Circuit Voltage (V <sub>oc</sub> /V)      | 47.53 | 47.67 | 47.82 | 47.97 | 48.12 |
| Short Circuit Current (I <sub>sc</sub> /A)     | 13.85 | 13.91 | 13.97 | 14.03 | 14.09 |
| Voltage at Maximum power (V <sub>mpp</sub> /V) | 39.37 | 39.57 | 39.76 | 39.96 | 40.15 |
| Current Maximum Power (I <sub>mpp</sub> /A)    | 13.21 | 13.27 | 13.33 | 13.39 | 13.45 |
| MODULE EFFICIENCY (%)                          | 21.90 | 22.11 | 22.32 | 22.53 | 22.74 |

## Electrical Characteristics (NMOT\*)

|                                               |       |       |       |       |       |
|-----------------------------------------------|-------|-------|-------|-------|-------|
| Maximum Power: P <sub>max</sub> [W]           | 391   | 395   | 399   | 403   | 407   |
| Open Circuit Voltage: V <sub>oc</sub> [V]     | 45.31 | 45.46 | 45.61 | 45.76 | 45.91 |
| Short Circuit Current: I <sub>sc</sub> [A]    | 11.07 | 11.13 | 11.19 | 11.25 | 11.31 |
| Voltage at Maximum Power: V <sub>mp</sub> [V] | 36.93 | 37.09 | 37.26 | 37.42 | 37.59 |
| Current at Maximum Power: I <sub>mp</sub> [A] | 10.59 | 10.65 | 10.71 | 10.77 | 10.83 |

- Standard Test Conditions [STC]: irradiance 1000W/m<sup>2</sup>; AM 1.5; ambient temperature 25°C according to EN 60904-3;
- Nominal Module Operating Temperature (NMOT): Irradiance 800W/m<sup>2</sup>; wind speed 1m/s, ambient temperature 20°C.
- Tolerance of P<sub>m</sub>: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of V<sub>oc</sub> [V], I<sub>sc</sub> [A], V<sub>m</sub> [V] and I<sub>m</sub> [A]: ±3%.

## Product Image



## Operating Characteristics

|                              |                |
|------------------------------|----------------|
| Operating Module Temperature | -40°C to +85°C |
| Maximum System Voltage       | 1500 DC (IEC)  |
| Maximum Series Fuse Rating   | 25A            |
| Power Tolerance              | 0/+5W          |

## Temperature Characteristics

|                                             |            |
|---------------------------------------------|------------|
| Nominal Operating Temperature (NMOT)        | 45±2°C     |
| Temperature Coefficient of P <sub>max</sub> | -0.30%/°C  |
| Temperature Coefficient of V <sub>oc</sub>  | -0.25%/°C  |
| Temperature Coefficient of I <sub>sc</sub>  | +0.046%/°C |

## I-V CURVE

