

# MS-200W / 24V

## 200W Monocrystalline Photovoltaic Module | 24V System

**MS-200W (24V version)** is a high-efficiency monocrystalline photovoltaic module designed for 24V battery systems and higher-voltage MPPT inverter configurations. Manufactured with Grade A monocrystalline silicon cells and advanced encapsulation technology, the MS-200W delivers stable performance under a wide range of environmental conditions.

The 24V configuration ( $V_{mp}$  36V,  $I_{mp}$  5.55A) reduces wiring losses over long distances and provides excellent compatibility with modern MPPT charge controllers and hybrid inverters. With dimensions of 1290 × 760 × 30 mm and certifications under TUV, CE and ROHS international standards, this module is ideal for medium-scale residential, agricultural and off-grid solar installations.



### KEY FEATURES

Maximum Power

**200 W**

System Voltage

**24 V**

$V_{mp}$  /  $I_{mp}$

**36 V / 5.55 A**

Certifications

**TUV / CE / ROHS**

Warranty

**5 years product / 25 years power**

### PRODUCT FEATURES

- High-efficiency Grade A monocrystalline silicon cells
- Designed for 24V battery systems and MPPT inverters
- Higher operating voltage reduces cable losses
- Anti-reflective tempered glass with high light transmission
- Anodized aluminum frame for corrosion resistance
- Sealed junction box with bypass diodes
- Maximum system voltage up to 1000 V DC
- Pre-drilled mounting holes for easy installation

### APPLICATIONS

- 24V off-grid residential and rural systems
- MPPT charge controllers and hybrid inverters
- Grid-tie installations with series strings
- Solar water pumping and irrigation systems
- Long-distance wiring installations
- Hybrid solar-battery 24V backup setups
- Cabin, refuge and remote dwelling power
- Agricultural and livestock applications

### ELECTRICAL CHARACTERISTICS (STC)

| Parameter              | Symbol    | Value       | Unit |
|------------------------|-----------|-------------|------|
| Maximum Power          | $P_{max}$ | <b>200</b>  | W    |
| Maximum Power Voltage  | $V_{mp}$  | <b>36.0</b> | V    |
| Maximum Power Current  | $I_{mp}$  | <b>5.55</b> | A    |
| Open Circuit Voltage   | $V_{oc}$  | <b>43.2</b> | V    |
| Short Circuit Current  | $I_{sc}$  | <b>5.95</b> | A    |
| Power Tolerance        | —         | <b>± 3</b>  | %    |
| Nominal System Voltage | —         | <b>24</b>   | V    |
| Maximum System Voltage | $V_{max}$ | <b>1000</b> | V DC |

| TEMPERATURE COEFFICIENTS |            | OPERATING CONDITIONS |                |
|--------------------------|------------|----------------------|----------------|
| Coeff. of Pmax           | -0.41 %/°C | Operating Temp.      | -40°C to +85°C |
| Coeff. of Voc            | -0.31 %/°C | Storage Temp.        | -40°C to +85°C |
| Coeff. of Isc            | +0.05 %/°C | Relative Humidity    | 0 – 100%       |
| NOCT                     | 45 ± 2 °C  | Max. Snow Load       | 5400 Pa        |

MECHANICAL CHARACTERISTICS

|                        |                                               |
|------------------------|-----------------------------------------------|
| Dimensions (L × W × H) | 1290 × 760 × 30 mm                            |
| Weight                 | ≈ 13.0 kg                                     |
| Cell Type              | Monocrystalline silicon                       |
| Front Glass            | Tempered, anti-reflective, high transmission  |
| Frame                  | Anodized aluminum alloy                       |
| Encapsulant            | EVA (Ethylene Vinyl Acetate)                  |
| Back Sheet             | TPT / Composite film, UV-resistant            |
| Junction Box           | Sealed with bypass diodes                     |
| Application Class      | Class A                                       |
| Certifications         | TUV, CE, ROHS                                 |
| Output Cables          | 4 mm² PV cable with MC4-compatible connectors |

WARRANTY

- 5 years limited product warranty against manufacturing defects.
- 10 years performance warranty: ≥ 90% of nominal power output.
- 25 years performance warranty: ≥ 80% of nominal power output.

CERTIFICATIONS

- IEC 61215 — Crystalline silicon PV modules
- IEC 61730 — PV module safety qualification
- CE — European conformity
- RoHS — Restriction of hazardous substances
- ISO 9001 — Quality management
- ISO 14001 — Environmental management

**Standard Test Conditions (STC):** Irradiance 1000 W/m², cell temperature 25°C, AM 1.6 spectrum. Electrical specifications may vary by ± 3% from the values shown. Values measured under controlled laboratory conditions; field performance may vary based on installation, orientation, irradiance and ambient conditions.

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