

# **MODULE**



# 60 CELL

MONOCRYSTALLINE MODULE

270-290W

**POWER OUTPUT RANGE** 

17.7%
MAXIMUM EFFICIENCY

0~+5W

**POSITIVE POWER TOLERANCE** 

As a leading global manufacturer of next generation photovoltaic products, we believe close cooperation with our partners is critical to success. With local presence around the globe, Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners as the backbone of our shared success in driving Smart Energy Together.

**Trina Solar Limited** www.trinasolar.com

Trinasolar Smart Energy Together



## Maximize limited space with top-end efficiency

- Up to 177 W/m<sup>2</sup> power density
- Low thermal coefficients for greater energy production at high operating temperatures



# Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements



# Certified to withstand challenging environmental conditions

- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

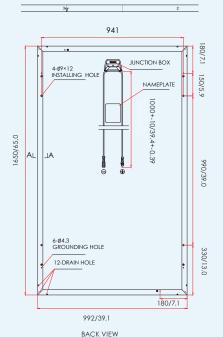


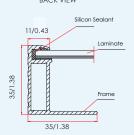


PRODUCTS POWER RANGE
TSM-DD05A.08(II) 275-290W

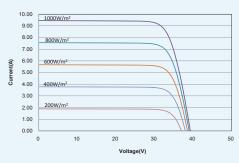
TSM-DD05A.05(II) 270-275W

#### DIMENSIONS OF PV MODULE unit:mm/in 941/37.0





#### I-V CURVES OF PV MODULE(285W)



### **CERTIFICATION**

















#### **ELECTRICAL DATA (STC)**

| Peak Power Watts-P <sub>MAX</sub> (Wp)      | 270  | 275  | 280  | 285  | 290  |
|---|------|------|------|------|------|
| Power Output Tolerance-P <sub>MAX</sub> (W) |      |      | 0~+5 |      |      |
| Maximum Power Voltage-V <sub>MPP</sub> (V)  | 31.2 | 31.4 | 31.7 | 31.8 | 32.2 |
| Maximum Power Current-Impp (A)              | 8.66 | 8.76 | 8.84 | 8.97 | 9.01 |
| Open Circuit Voltage-Voc (V)                | 38.4 | 38.7 | 39.0 | 39.3 | 39.5 |
| Short Circuit Current-Isc (A)               | 9.18 | 9.26 | 9.35 | 9.45 | 9.50 |
| Module Efficiency η <sub>m</sub> (%)        | 16.5 | 16.8 | 17.1 | 17.4 | 17.7 |

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5.

#### **ELECTRICAL DATA (NOCT)**

| Maximum Power-PMAX (Wp)                    | 201  | 205  | 209  | 212  | 216  |
|--|------|------|------|------|------|
| Maximum Power Voltage-V <sub>MPP</sub> (V) | 28.9 | 29.2 | 29.4 | 29.6 | 29.9 |
| Maximum Power Current-Impp (A)             | 6.96 | 7.02 | 7.10 | 7.17 | 7.23 |
| Open Circuit Voltage-Voc (V)               | 35.7 | 36.0 | 36.3 | 36.6 | 36.7 |
| Short Circuit Current-Isc (A)              | 7.41 | 7.48 | 7.55 | 7.63 | 7.67 |

NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

#### **MECHANICAL DATA**

| Solar cells       | Monocrystalline 156 × 156 mm (6 inches)                                    |
|-------------------|--|
| Cell orientation  | 60 cells (6 × 10)  |
| Module dimensions | 1650 × 992 × 35 mm (65.0 x 39.1 x 1.4 inches)                              |
| Weight            | 18.6 kg (41 lb)  |
| Glass             | 3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass          |
| Backsheet         | White DD05A.08 (II); Black (DD05A.05 (II)                                  |
| Frame             | Black (DD05.08 (II), DD05A.05 (II))  |
| J-Box             | IP65 or IP67 rated   |
| Cables            | Photovoltaic Technology cable 4.0mm² (0.006 inches²), 1000mm (39.4 inches) |
| Connector         | UTX Amphenol   |
| Fire Type         | Type 1 or 2  |

## TEMPERATURE RATINGS

| Nominal Operating Cell<br>Temperature (NOCT) | 44°C(± 2°C) |
|--|-------------|
| Temperature Coefficient of PMAX              | - 0.39%/°C  |
| Temperature Coefficient of Voc               | - 0.29%/°C  |
| Temperature Coefficient of Isc               | 0.05%/°C    |

10 year Product Workmanship Warranty 25 year Linear Power Warranty

(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

Modules per box: 30 pieces

Modules per 40' container: 840 pieces

# MAXIMUM RATINGS

| Operational Temperature | -40~+85°C                       |
|-------------------------|---------------------------------|
| Maximum System Voltage  | 1000V DC (IEC)<br>1000V DC (UL) |
| Max Series Fuse Rating  | 15A                             |



