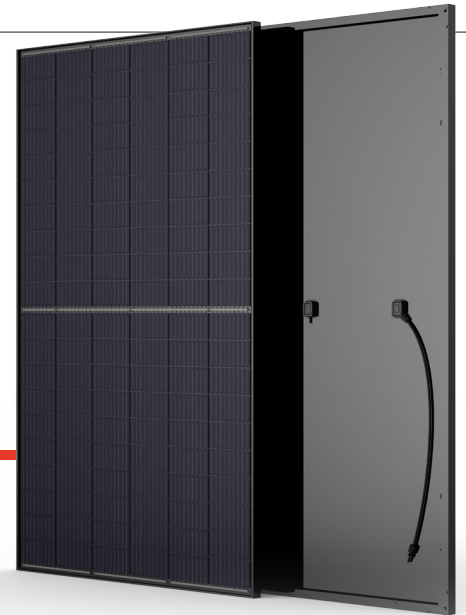


# THE HoneyBlack<sup>M</sup>

FRAMED 60 LAYOUT MODULE



**60 LAYOUT**  
MONOCRYSTALLINE MODULE

**320-340W**  
POWER OUTPUT RANGE

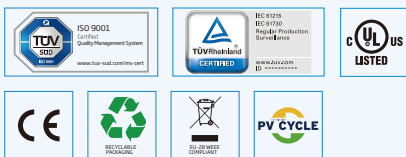
**19.9%**  
MAXIMUM EFFICIENCY

**0~+5W**  
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading total solution provider for solar energy. With local presence around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneficial collaborations with installers, developers, distributors and other partners in driving smart energy together.

## Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716  
 ISO 9001: Quality Management System  
 ISO 14001: Environmental Management System  
 ISO14064: Greenhouse Gases Emissions Verification  
 OHSAS 18001: Occupation Health and Safety Management System



### PRODUCTS

TSM-DD06M.05(II)

### POWER RANGE

320-340W



### High power output

- Combined with MBB technology, maximum 340W



### Outstanding visual appearance

- Designed with aesthetics in mind
- Thinner wires that appear all black at a distance



### Half-cell design brings higher efficiency

- Half-cell layout (120 monocrystalline)
- Low thermal coefficients for greater energy production at high operating temperature
- Low cell connection power loss due to half-cell layout (120 monocrystalline)



### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF etc)
- Internal test requirement of Trina more stringent than certification authority
- PID resistant
- 100% EL double inspection

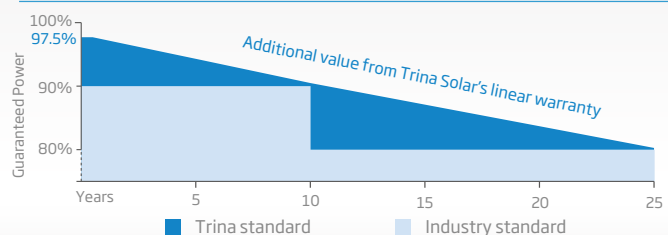


### Certified to withstand the most challenging environmental conditions

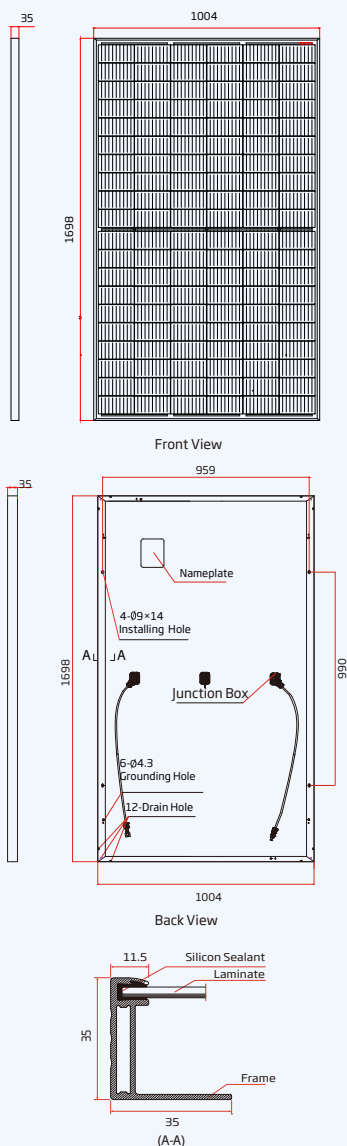
- 2400 Pa negative load
- 5400 Pa positive load
- \* 2400/5400 is the measured load, and the safety factor is 1.5 times

## LINEAR PERFORMANCE WARRANTY

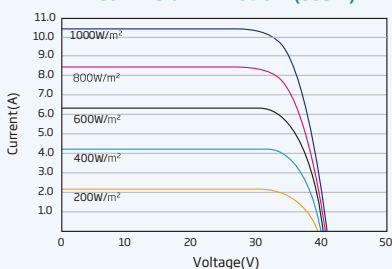
10 Year Product Warranty · 25 Year Linear Power Warranty



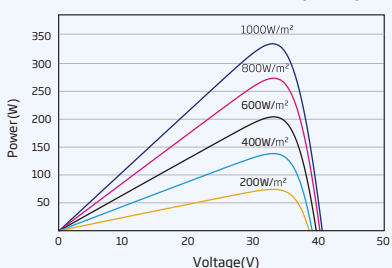
### DIMENSIONS OF PV MODULE(mm)



### I-V CURVES OF PV MODULE(335W)



### P-V CURVES OF PV MODULE(335W)



### ELECTRICAL DATA (STC)

|                                 |        |       |       |       |       |
|---------------------------------|--------|-------|-------|-------|-------|
| Peak Power Watts-PMAX (Wp)*     | 320    | 325   | 330   | 335   | 340   |
| Power Output Tolerance-PMAX (W) | 0 ~ +5 |       |       |       |       |
| Maximum Power Voltage-VMPP (V)  | 33.4   | 33.6  | 33.8  | 34.0  | 34.2  |
| Maximum Power Current-IMPP (A)  | 9.58   | 9.67  | 9.76  | 9.85  | 9.94  |
| Open Circuit Voltage-VOC (V)    | 40.3   | 40.4  | 40.6  | 40.7  | 41.1  |
| Short Circuit Current-ISC (A)   | 10.20  | 10.30 | 10.39 | 10.48 | 10.55 |
| Module Efficiency $\eta_m$ (%)  | 18.8   | 19.1  | 19.4  | 19.7  | 19.9  |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance:  $\pm 3\%$ .

### ELECTRICAL DATA (NMOT)

|                                |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|
| Maximum Power-PMAX (Wp)        | 241  | 245  | 249  | 253  | 256  |
| Maximum Power Voltage-VMPP (V) | 31.1 | 31.3 | 31.5 | 31.7 | 32.0 |
| Maximum Power Current-IMPP (A) | 7.75 | 7.84 | 7.90 | 7.96 | 8.02 |
| Open Circuit Voltage-VOC (V)   | 38.0 | 38.1 | 38.2 | 38.3 | 38.7 |
| Short Circuit Current-ISC (A)  | 8.23 | 8.31 | 8.38 | 8.45 | 8.50 |

NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

### MECHANICAL DATA

|                      |   |
|----------------------|---|
| Solar Cells          | Monocrystalline   |
| Cell Orientation     | 120 cells (6 × 20)  |
| Module Dimensions    | 1698 × 1004 × 35 mm (66.85 × 39.53 × 1.38 inches)   |
| Weight               | 18.7kg (41.2lb)   |
| Glass                | 3.2mm (0.13 inches), High Transmission, AR Coated Tempered Glass  |
| Encapsulant Material | EVA   |
| Backsheet            | Black   |
| Frame                | 35 mm (1.38 inches) Anodized Aluminium Alloy  |
| J-Box                | IP 68 rated   |
| Cables               | Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ),<br>Portrait: N 140mm/P 285mm(5.51/11.22inches)<br>Landscape: N 1200 mm /P 1200 mm (47.24/47.24 inches) |
| Connector            | TS4/MC4   |

### TEMPERATURE RATINGS

|   |                                |
|---|--------------------------------|
| NMOT (Nominal Module Operating Temperature) | 41°C ( $\pm 3^\circ\text{C}$ ) |
| Temperature Coefficient of PMAX             | - 0.37%/°C                     |
| Temperature Coefficient of VOC              | - 0.29%/°C                     |
| Temperature Coefficient of ISC              | 0.05%/°C                       |

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

### MAXIMUM RATINGS

|                         |                                 |
|-------------------------|---------------------------------|
| Operational Temperature | -40~+85°C                       |
| Maximum System Voltage  | 1000V DC (IEC)<br>1000V DC (UL) |
| Max Series Fuse Rating  | 20A                             |

### WARRANTY

|                                      |
|--------------------------------------|
| 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: 720 pieces |