

THE

# Residential Module

## MULTI-BUSBAR 120 HALF-CELL BOB MODULE



### 120-Cell

MONOCRYSTALLINE MODULE

### 310-335W

POWER OUTPUT RANGE

### 19.9%

MAXIMUM EFFICIENCY

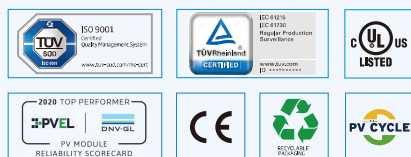
### 0~+5W

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

UL 61730  
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	BACKSHEET COLOR	POWER RANGE
TSM-DD06M.05(II)	Black	310-335W
FRAME COLOR: Black		



### High power output

- Reduce BOS cost with high power bin and module efficiency
- New cell string layout and split J-box location reduces the energy loss caused by inter-row shading
- Lower resistance of half-cut cells and increased MBB (Multi Busbar) reflectance ensure higher power



### High energy generation, low LCOE

- Excellent 3rd party validated IAM and low light performance with cell process and module material optimization
- Low Pmax temp coefficient (-0.36%) increases energy production
- Better anti-shading performance and lower operating temperature



### Outstanding visual appearance, easy to install

- Designed for superior rooftop aesthetics
- Thinner wires give a eye catching all black look
- Safe and easy to transport, handle, and install

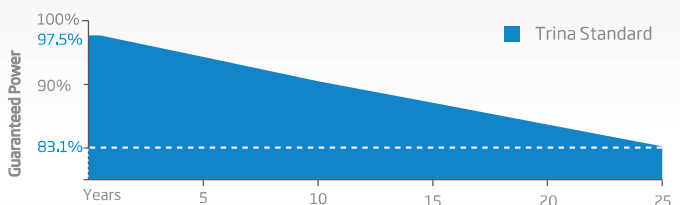


### Certified to perform in highly challenging environments

- High PID resistance through cell process and module material control
- Resistant to salt, acid, sand, and ammonia
- Over 30 in-house tests (UV, TC, HF etc)
- Certified to 5400 Pa positive load and 2400 Pa negative load

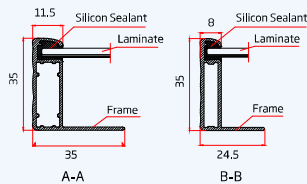
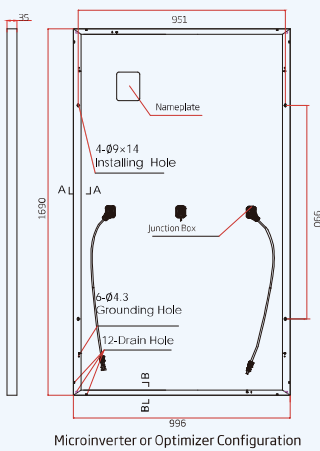
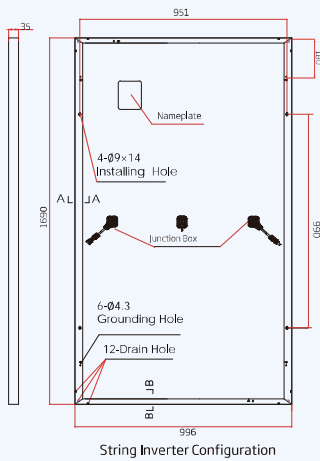
### PERFORMANCE WARRANTY

25 Year Product Warranty · 25 Year Power Warranty

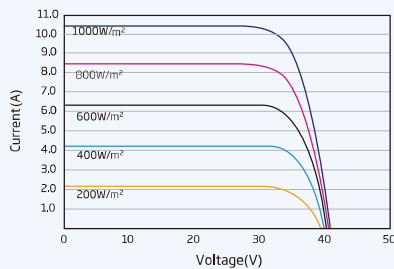


From the 2nd year to the 25th year, the average annual power decline will be no more than 0.6%.

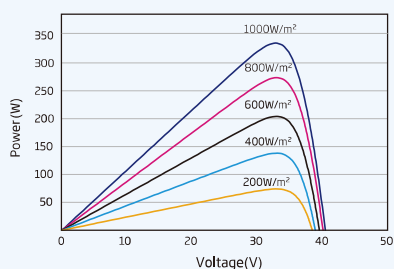
### DIMENSIONS OF PV MODULE(mm)



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



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



### ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ (Wp)*	310	315	320	325	330	335
Power Output Tolerance- $P_{MAX}$ (W)	0 ~ +5					
Maximum Power Voltage- $V_{MPP}$ (V)	33.0	33.2	33.4	33.6	33.8	34.0
Maximum Power Current- $I_{MPP}$ (A)	9.40	9.49	9.58	9.67	9.76	9.85
Open Circuit Voltage- $V_{OC}$ (V)	39.9	40.1	40.3	40.4	40.6	40.7
Short Circuit Current- $I_{SC}$ (A)	10.03	10.12	10.20	10.30	10.40	10.50
Module Efficiency $\eta$ (%)	18.4	18.7	19.0	19.3	19.6	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- $P_{MAX}$ (Wp)	235	238	242	246	250	254
Maximum Power Voltage- $V_{MPP}$ (V)	31.0	31.2	31.4	31.6	31.7	31.9
Maximum Power Current- $I_{MPP}$ (A)	7.57	7.64	7.71	7.79	7.86	7.94
Open Circuit Voltage- $V_{OC}$ (V)	37.6	37.8	38.0	38.1	38.3	38.4
Short Circuit Current- $I_{SC}$ (A)	8.08	8.15	8.22	8.30	8.38	8.46

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	1690 × 996 × 35 mm (66.54 × 39.21 × 1.38 inches)
Weight	18.0kg (39.7lb)
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> ) Portrait: N 140mm/P 285mm (5.51/11.22 inches) Landscape: N 1200 mm /P 1200 mm (47.24/47.24 inches)
Connector	MC4
Fire Type	Type 2

### TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	41°C ( $\pm 3^\circ\text{C}$ )
Temperature Coefficient of $P_{MAX}$	-0.36%/°C
Temperature Coefficient of $V_{OC}$	-0.26%/°C
Temperature Coefficient of $I_{SC}$	0.04%/°C

### MAXIMUM RATINGS

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

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

### WARRANTY

25 year Product Workmanship Warranty

25 year Power Warranty

(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

Modules per pallet: 31 pieces

Modules per 40' container: 806 pieces

Pallet dimensions (L x W x H): 1735 x 1140 x 1148 mm

Pallet weight: 603.5kg (1,331lb)