

THE DUOMAX^{tw}

BIFACIAL DUAL GLASS 60-LAYOUT FRAMED MODULE



60 LAYOUT
MONOCRYSTALLINE MODULE

295-310W
POWER OUTPUT RANGE

18.4%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

PRODUCTS	COLOR OF FRAME	POWER RANGE
TSM-DE-G5C.20(II)	Silver	295-310 W

High power output



- Increased total power output through generation from front and back side
- Backside power gain up to 25% depending on albedo
- Unique J-box design and installation method to avoid shading on the back side

Low LCOE



- Maximize limited space, savings in BOS and labour cost
- Higher power generation from same installation footprint as standard modules

Wide application



- Deployable for ground mounted utility, greenhouse and agricultural projects
- Special application like sound barriers on expressways
- Compatible with major tracker systems

Environmental conditions



- Module coating resistant to sand, acid, and alkali
- 30 year linear warranty, 0.5% annual degradation

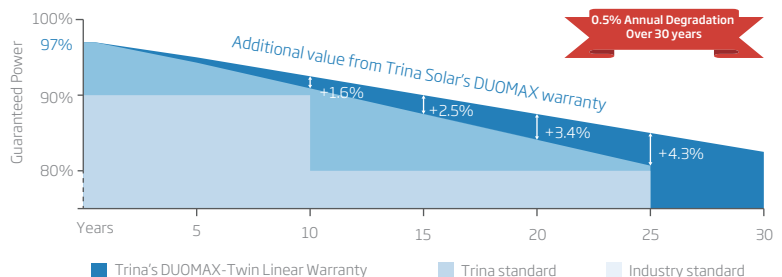
As a leading global manufacturer of next generation photovoltaic products, we believe close cooperation with our partners is critical to success. With local presence around the globe, Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable 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.

Comprehensive Products And System Certificates

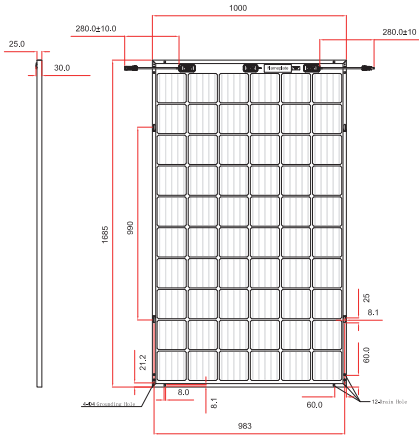
IEC61215/IEC61730/UL1703/IEC61701/IEC62716
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse gases Emissions Verification
 OHSAS 18001: Occupation Health and Safety Management System



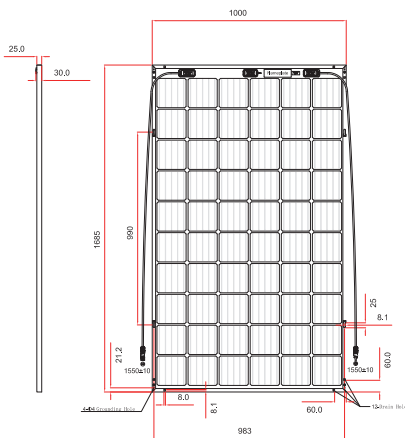
Trina Solar's DUOMAX-Twin Linear Performance Warranty



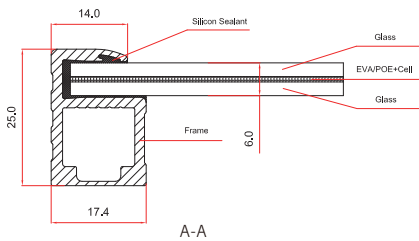
DIMENSIONS OF PV MODULE(mm)



Back View (Portrait)

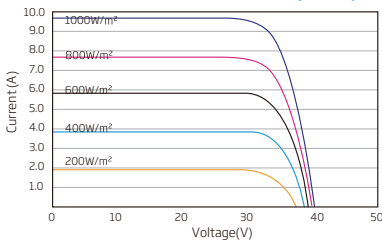


Back View (Landscape)

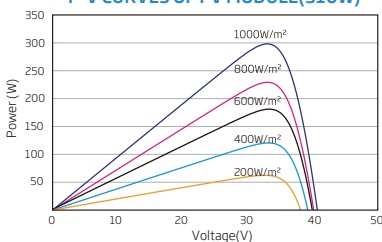


A-A

I-V CURVES OF PV MODULE(310W)



P-V CURVES OF PV MODULE(310W)



ELECTRICAL DATA (STC)

Parameter	295	300	305	310
Peak Power Watts- P_{MAX} (Wp)*	295	300	305	310
Power Output Tolerance- P_{MAX} (W)	0 ~ +5			
Maximum Power Voltage- V_{MPP} (V)	32.7	32.9	33.1	33.3
Maximum Power Current- I_{MPP} (A)	9.01	9.11	9.21	9.30
Open Circuit Voltage- V_{OC} (V)	39.7	39.9	40.1	40.3
Short Circuit Current- I_{SC} (A)	9.62	9.72	9.82	9.92
Module Efficiency η_m (%)	17.5	17.8	18.1	18.4

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
*Measurement tolerance: ±3%.

BI-FACIAL OUTPUT - Backside Power Gain

Gain	Parameter	295	300	305	310
10%	Power Output(W)	325	330	336	341
	Module Efficiency(%)	19.2	19.5	19.9	20.2
15%	Power Output(W)	339	345	351	356
	Module Efficiency(%)	20.1	20.4	20.8	21.6
25%	Power Output(W)	369	375	381	387
	Module Efficiency(%)	21.8	22.2	22.6	22.9

ELECTRICAL DATA (NOCT)

Parameter	219	222	226	230
Maximum Power- P_{MAX} (Wp)	219	222	226	230
Maximum Power Voltage- V_{MPP} (V)	30.3	30.5	30.7	30.9
Maximum Power Current- I_{MPP} (A)	7.20	7.28	7.36	7.43
Open Circuit Voltage- V_{OC} (V)	37.5	37.7	37.9	38.1
Short Circuit Current- I_{SC} (A)	7.77	7.85	7.93	8.01

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

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6.17 inches)
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1685 × 1000 × 25 mm(66.34 × 39.37 × 0.98 inches)
Weight	26kg(57.20 lb)
Front Glass	2.5 mm (0.10 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA(Transparent)
Back Glass	2.5 mm (0.10 inches) white grid coated ,Heat Strengthened Glass
Frame	25mm (0.98 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm ² (0.006 inches ²) Portrait: 280/280 mm(11.02/11.02 inches) Landscape:1550/1550 mm(61.02/61.02 inches)
Connector	MC4 EV02/TS4

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of P_{MAX}	- 0.39%/°C
Temperature Coefficient of V_{OC}	- 0.29%/°C
Temperature Coefficient of I_{SC}	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V 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

- 10 year Product Workmanship Warranty
- 30 year Linear Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

- Modules per box: 38 pieces
- Modules per 40' container: 912 pieces

