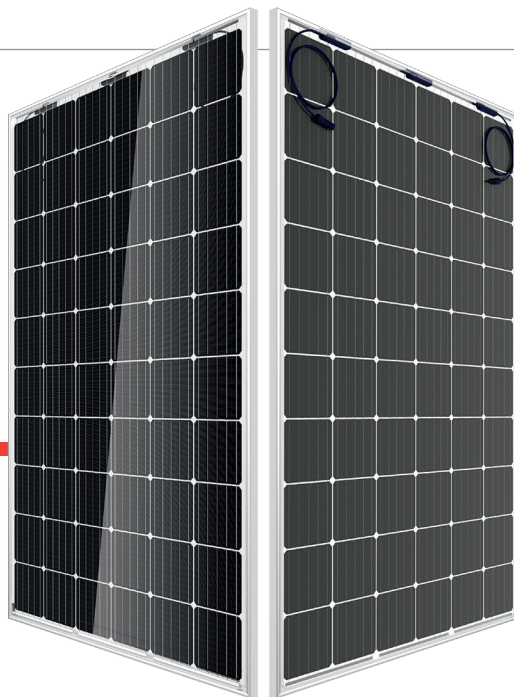


BIFACIAL DUAL GLASS FRAMED MODULE

DUOMAX^{tw}

TSM-DEG5C.27 (II)



60 CELL
MONOCRYSTALLINE MODULE

290-310W
POWER OUTPUT RANGE

18.4%
MAXIMUM EFFICIENCY

0/+5W
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. We believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina Solar is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina Solar as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

Comprehensive Product And System Certificates

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



Increased value / Low LCOE

- Maximize limited size, savings in BOS and labour cost
- 30 year linear warranty, 0.5% yearly degradation
- 1,500 V system voltage reduces BOS costs by increased string length



High power output

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



Wide application

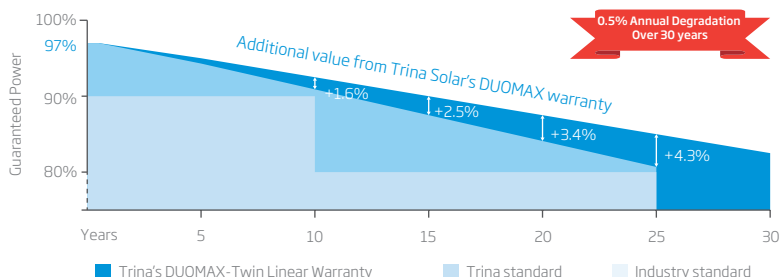
- Deployable for ground mounted utility, greenhouse and agricultural projects
- Special application like sound barriers on expressways
- Compatible with major tracker systems



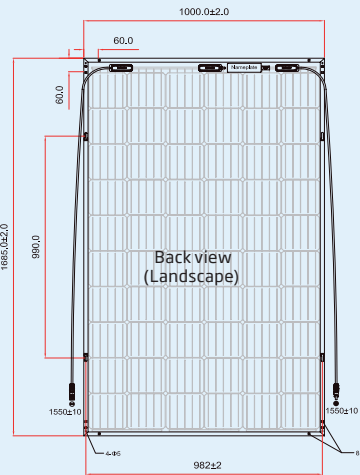
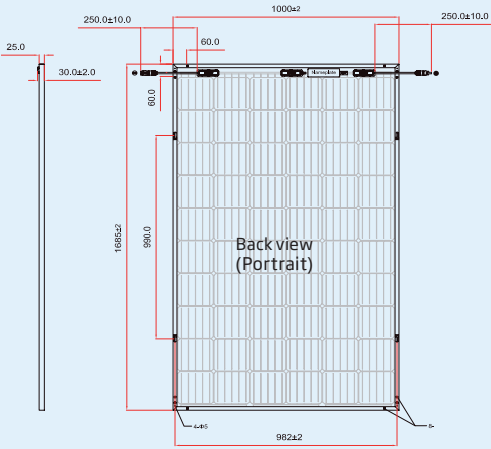
Certified to withstand challenging environmental conditions

- Module coating resistant to sand, acid, and alkali
- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

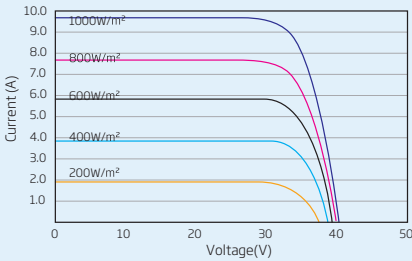
Trina Solar's DUOMAX-Twin Linear Performance Warranty



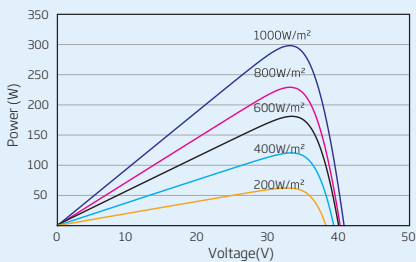
**DIMENSIONS OF PV MODULE
TSM-DEG5C.27(II)
(unit: mm)**



I-V CURVES OF PV MODULE (300W)



P-V CURVES OF PV MODULE (300W)



ELECTRICAL DATA @ STC	TSM-290 DEG5C.27(II)	TSM-295 DEG5C.27(II)	TSM-300 DEG5C.27(II)	TSM-305 DEG5C.27(II)	TSM-310 DEG5C.27(II)
Peak Power Watts-P _{MAX} (Wp)*	290	295	300	305	310
Power Output Tolerance-P _{MAX} (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-V _{MPP} (V)	32.7	32.9	33.1	33.3	33.5
Maximum Power Current-I _{MPP} (A)	8.87	8.97	9.07	9.16	9.26
Open Circuit Voltage-V _{OC} (V)	39.7	39.9	40.1	40.3	40.5
Short Circuit Current-I _{SC} (A)	9.48	9.58	9.68	9.78	9.88
Module Efficiency η _m (%)	17.2	17.5	17.8	18.1	18.4

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

BI-FACIAL OUTPUT - BACKSIDE POWER GAIN

10 %	Power Output (W)	319	325	330	336	341
	Module Efficiency (%)	18.9	19.2	19.5	19.9	20.2
15 %	Power Output (W)	334	339	345	351	357
	Module Efficiency (%)	19.8	20.1	20.4	20.8	21.1
25 %	Power Output (W)	363	369	375	381	388
	Module Efficiency (%)	21.5	21.8	22.2	22.6	23.0

ELECTRICAL DATA @ NOCT

	TSM-290 DEG5C.27(II)	TSM-295 DEG5C.27(II)	TSM-300 DEG5C.27(II)	TSM-305 DEG5C.27(II)	TSM-310 DEG5C.27(II)
Maximum Power-P _{MAX} (Wp)	215	219	222	226	230
Maximum Power Voltage-U _{MPP} (V)	30.3	30.5	30.6	30.8	31.0
Maximum Power Current-I _{MPP} (A)	7.09	7.17	7.25	7.32	7.40
Open Circuit Voltage-U _{OC} (V)	37.5	37.7	37.9	38.1	38.3
Short Circuit Current-I _{SC} (A)	7.66	7.74	7.82	7.90	7.98

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

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1685 × 1000 × 25 mm
Weight	26.0 kg
Front Glass	2.5 mm, high transparency, AR coated and heat strengthened glass
EVA	Transparent
Back Glass	2.5 mm, high transmission, low iron, heat strengthened glass
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 67 rated or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm ² Portrait: 280/280 mm, Landscape: 1550/1550 mm
Connector	UTX/MC4 EVO2/TS4

* Do not combine with slide-in solutions.

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	44°C (±2K)
Temperature Coefficient of P _{MAX}	- 0.39%/K
Temperature Coefficient of V _{OC}	- 0.29%/K
Temperature Coefficient of I _{SC}	0.05%/K

MAXIMUM RATINGS

Operational Temperature	-40 to +85°C
Maximum System Voltage	1500VDC (IEC) 1000VDC (UL)
Max Series Fuse Rating**	20 A

** DO NOT connect fuse in combiner box with two or more strings in parallel connection

WARRANTY

10 year Product Workmanship Warranty
30 year Linear Performance Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

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

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