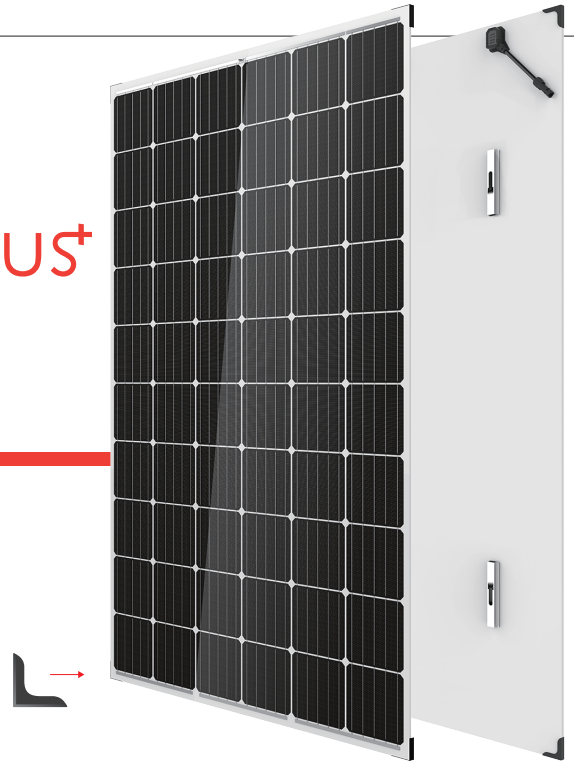


THE DUOMAX^M PLUS⁺

DUAL GLASS 60-CELL MODULE



60 CELL
MONOCRYSTALLINE MODULE

280-315W
POWER OUTPUT RANGE

19.2%
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 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.

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



Highly reliable due to stringent quality control

- PID resistant and free of snail trails
- Increased module robustness to minimize micro-cracks
- 100% EL double inspection



Enhanced safety

- Fire class A certified by TUV Rheinland according to fire test IEC 61730-2/MST 23
- Certified for fire type13 (UL 1703)



Increased value

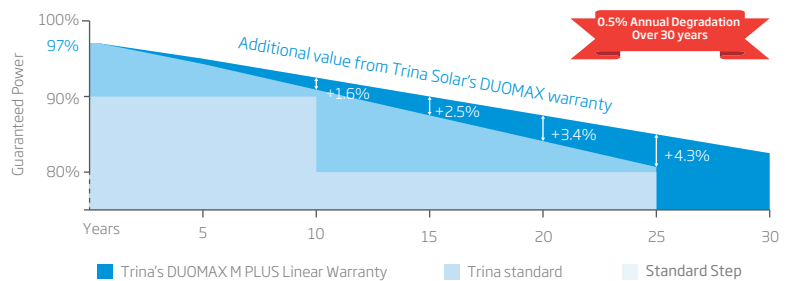
- Higher maximum system voltage reduces BOS costs
- 30 year linear warranty
- 0.5% annual degradation
- Low thermal coefficients for more energy production at higher temperatures



Certified to withstand the most challenging environmental conditions

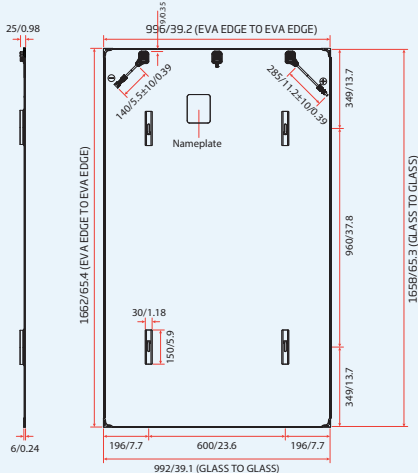
- Module coating resistant to sand, acid, and alkali
- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

Trina Solar's DUOMAX M PLUS Linear Performance Warranty

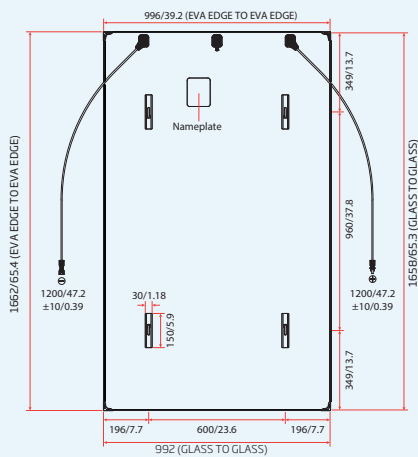


PRODUCTS	INSTALLATION METHOD	POWER RANGE
TSM-DEG5(II)	Clamp	280-315W
TSM-DEG5.40(II)	Gecko Grip	280-315W
TSM-DEG5.07(II)	Clamp	280-310W
TSM-DEG5.47(II)	Gecko Grip	280-310W

DIMENSIONS OF PV MODULE (mm/inches)

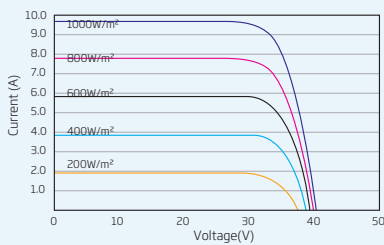


Back View (Portrait)

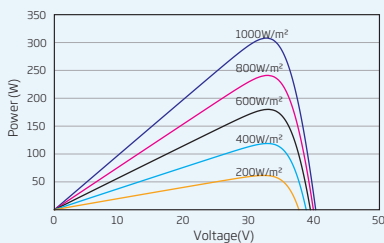


Back View (Landscape)

I-V CURVES OF PV MODULE(305W)



P-V CURVES OF PV MODULE(305W)



ELECTRICAL DATA (STC)

Parameter	280	285	290	295	300	305	310	315
Peak Power Watts- P_{MAX} (Wp)*	280	285	290	295	300	305	310	315
Power Output Tolerance- P_{MAX} (W)	0 ~ +5							
Maximum Power Voltage- V_{MPP} (V)	31.7	31.8	32.2	32.5	32.7	32.9	33.1	33.3
Maximum Power Current- I_{MPP} (A)	8.84	8.96	9.02	9.08	9.18	9.26	9.37	9.46
Open Circuit Voltage- V_{OC} (V)	38.4	38.5	38.7	39.4	39.8	40.0	40.2	40.4
Short Circuit Current- I_{SC} (A)	9.44	9.49	9.59	9.75	9.81	9.84	9.86	9.88
Module Efficiency η_m (%)	17.0	17.3	17.6	17.9	18.2	18.5	18.8	19.2

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

ELECTRICAL DATA (NOCT)

Parameter	209	212	216	220	223	227	231	235
Maximum Power- P_{MAX} (Wp)	209	212	216	220	223	227	231	235
Maximum Power Voltage- V_{MPP} (V)	29.4	29.5	29.9	30.1	30.3	30.5	30.7	30.9
Maximum Power Current- I_{MPP} (A)	7.10	7.20	7.25	7.30	7.38	7.44	7.53	7.60
Open Circuit Voltage- V_{OC} (V)	35.7	35.8	36.0	36.6	37.0	37.2	37.4	37.5
Short Circuit Current- I_{SC} (A)	7.62	7.66	7.74	7.87	7.92	7.94	7.96	7.98

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

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6 inches)
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1658 × 992 × 6 mm (65.3 × 39.1 × 0.236 inches) 1662 × 996 × 6 mm with edge banding (65.4 × 39.2 × 0.236 inches) 1664 × 998 × 7.6 mm with corner protector (65.5 × 39.3 × 0.299 inches)*
Weight	23.5 kg (51.8 lb)
Front Glass	2.5 mm (0.10 inches), High Transmission, AR Coated Heat Strengthened Glass
EVA	White [DEG5(II), PEG5.40(II)]; Transparent [DEG5.07(II), DEG5.47(II)]
Back Glass	2.5 mm (0.10 inches), Heat Strengthened Glass
Frame	Frameless
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm ² (0.006 inches ²) Portrait: 140/285 mm (5.5/11.2 inches) Landscape: 1200/1200 mm (47.2/47.2 inches)
Connector	Trina TS4 (1500V)
Fire Type	Type 13

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	15A(Power ≤290W) 20A(Power ≥295W)

(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: 33 pieces

Modules per 40' container: 858 pieces

MORE OPTIONS

More Options

- 2.0mm Glass: 19.7 kg (43.4 lb) [Only for DEG5.40(II)/DEG5.47(II)]
- Compact AR Coating
- POE (Polyolefin Elastomer) Adhesive

*Not applicable to slide-in racking solution

Limited Warranty

Changzhou Trina Solar Energy Co., Ltd (“Trina Solar”) hereby grants the following Limited Warranty to the first customer installing (for its own use) (the “Buyer”) any of the specified (and no other) brand models listed below (the “Products”):

1) Warranted Products

This Limited Warranty shall only apply to the following Products:

a) Polycrystalline Duomax Products

TSM-***PDG5, TSM-***PDG5.07, TSM-***PDG5.50, TSM-***PEG40.07, TSM-***PEG5, TSM-***PEG5.07, TSM-***PEG5.50, TSM-***PEG14, TSM-***PEG14(II), TSM-***PEG40.40, TSM-***PEG40.47, TSM-***PEG5.40, TSM-***PEG5.47, TSM-***PEG14.40, TSM-***PEG14.47.

b) Monocrystalline Duomax Products

TSM-***DEG40.07(II), TSM-***DEG5(II), TSM-***DEG5.07(II), TSM-***DEG14(II), TSM-***DEG14.07(II), TSM-***DEG40.47(II), TSM-***DEG5.40(II), TSM-***DEG5.47(II), TSM-***DEG14.40(II), TSM-***DEG14.47(II)

Note: The “***” placeholder stands in each case for the power indication set out in the relevant Product Data Sheet (for example “TSM-260PEG5”).

c) Mounting Products

Mounting products contained in Trinamount 3 D10. Applicable modules are set forth above in a) and b)

d) Clamps

Trina Clamp I

2) Warranty

a) 10 Year Limited Product Warranty

Trina Solar warrants that for a period of ten years commencing on the Warranty Start Date (as defined below) the Product(s)

- will be free from defects in design, material, workmanship or manufacture that materially impede their functioning, and
- will conform to the specifications and the drawings applicable thereto.

This Limited Product Warranty covers glass breakage provided that there was no external cause of breakage (i.e. only breakage caused by the glass itself or the module is covered).

Further, this Limited Product Warranty applies to any defects of the modules caused by mechanical failure of the clamps listed under Sec. 1 d) (for example: fracture, deformation), regardless of whether such defects materially impede the Product's functioning. For sake of clarity, any defects of the modules caused by mechanical failure of clamps different than those listed under Sec. 1 d) are excluded from the application of this Limited Product Warranty.

Any deterioration in the appearance of the Product(s) (including, without limitation, any scratches, stains, mechanical wear, rust, or mold) or any other changes to the Product(s), which occur after delivery (Incoterm 2010) to the Buyer, do not constitute a defect under this Limited Product Warranty. The rights of the Buyer under Sec. 2 b) shall remain unaffected.

b) 30 Year Limited Power Output Warranty

In addition, for the Products listed under Sec. 1 a) and b), Trina Solar warrants that for a period of thirty years commencing on the Warranty Start Date, the loss of power output relating to the initial guaranteed power which is defined as Peak Power Watts Pmax(Wp) plus Peak Power Watts Pmax(Wp) multiplied by the lower limit of the Power Output Tolerance Pmax(%)—as specified in the relevant Product Data Sheet and measured at Standard Test Conditions (STC) for the Product(s) shall not exceed

- For Polycrystalline Duomax Products (as defined in Sec. 1 a): 2.5 % in the first year, thereafter 0.5% per year, ending with 83% in the 30th year after the Warranty Start Date,
- For Monocrystalline Duomax Products (as defined in Sec. 1 b): 3.0% in the first year, thereafter 0.5% per year, ending with 82.5% in the 30th year after the Warranty Start Date.

3) Warranty Start Date

The Warranty Start Date is the date of delivery (Incoterms 2010) of the Product(s) to the Buyer or 12 months after the date of production of the Product(s) as indicated in the serial number (digit no. 4 – 7 (YYMM), starting from the left side of the serial number), whichever date is earlier.

4) Exclusions and Limitations

The aforementioned “Limited Warranty” does not apply to any Products which have been subjected to

- a) Failure to pay the purchase price towards Trina Solar or its subsidiaries which have put the modules on the market even though (i), the payment was due and (ii) the direct customer who has obtained the modules from Trina Solar or its subsidiary („Direct Customer“) is not entitled to withhold the purchase price or parts of the purchase price. Trina Solar must inform the Buyer about the non-payment and provide the name and the full address of the Direct Customer which has failed to pay the modules. In case that Trina Solar can reject the claim under this warranty based on this provision, the Buyer can deposit the amount not paid in order to trigger the warranty claims;
- b) Failure to comply with Trina Solar’s installation manual applicable during the Validity of this Limited Warranty pursuant to Sec 10;
- c) Service by service technicians who are not qualified under the relevant law and/or applicable regulations at the place of installation;
- d) The Product's type, nameplate or module serial number is changed, erased or made illegible (other than by any act or omission of Trina Solar);
- e) The Product’s installation on mobile units (except photovoltaic tracking system), such as vehicles, ships or offshore-structures;
- f) Exposure to voltage in excess to the maximum system voltage or power surges;
- g) Defective components in the construction on which the module is mounted;
- h) exposure to mold discoloration or similar external effects;
- i) exposure to any of the following: extreme thermal or environmental conditions or rapid changes in such conditions, corrosion, oxidation, unauthorized modifications or connections, unauthorized opening, servicing by use of unauthorized spare parts, accident, force of nature (such as lightning strike, earthquake), influence from chemical products or other acts beyond Trina Solar’s reasonable control (including damage by fire, flood, etc.);
- j) use of the Products in such a manner as to infringe Trina Solar’s or any third party’s intellectual property rights (e.g. patents, trademarks). Parallel importation, which is defined as subsequent sale without the consent of Trina Solar from the country in which the Product(s) were first put on the market to another country, is regarded as an infringement of Trina Solar’s intellectual property rights. This does not apply for sales within the European Union: such sales from one Member State to another Member State do not require the consent of Trina Solar; whereas sales from outside the European Union into the European Union require such consent of Trina Solar
- k) Only for buyers located in Australia applies: The "Limited Warranty" is only valid for products from authorized Australian resellers. Buyers may contact the Customer Support office in their region (as detailed in clause 7) for details of authorized Australian resellers.
- l) Only for buyers located in the US applies: The "Limited Warranty" is only valid for products from authorized US resellers. Buyers may contact the Customer Support office in their region (as detailed in clause 7) for details of authorized US resellers.

5) Repair, Replacement or Refund Remedy

a) As Buyer's sole and exclusive remedy under this Limited Warranty (though Buyer should note paragraph 5(d) below regarding the potential existence of other statutory rights and paragraph 5(e) below for Australian Buyers) Trina Solar will, at its sole discretion, either, with regard to the applicable Product (or component thereof in the case of Mounting Product):

- i) refund the current market price of the relevant Product(s) (or its successor product); or
- ii) repair the defective Product(s) at no charge (subject to the following paragraph); or
- iii) replace the defective Product(s) or part thereof by a new or remanufactured equivalent at no charge (subject to the following paragraph).

In the event that Trina Solar opts for options ii) or iii), Trina Solar shall bear all insurance and transportation charges (except air freight), customs clearance and any other costs for returning the defective Product(s) to Trina Solar and shipping the repaired or replaced Product(s) to Buyer (a Buyer may claim reimbursement by Trina for these charges by providing proof to Trina Solar that these charges were incurred, e.g. an invoice from the relevant service provider). The costs and expenses for the removal, installation or reinstallation shall remain with Buyer.

b) The warranty period(s) as defined in Sec. 2 a) and b) shall not extend or renew upon the repair or replacement of a defective Product by Trina Solar. The warranty period for replaced or repaired Product(s) is the remainder of the warranty on the original new Product(s).

c) All other claims under this Limited Warranty against Trina Solar shall be excluded. Under this Limited Warranty, Trina Solar is not responsible for any special, incidental or consequential damages (including loss of profits, harm to goodwill or business reputation, or delay damages) whether such claims are based in contract, warranty, negligence or strict tort. This exclusion applies to the extent permissible by law, and even if the remedies set forth below herein are deemed to have failed of their essential purpose.

d) YOU MAY HAVE SPECIFIC LEGAL RIGHTS OUTSIDE THIS WARRANTY, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. THIS LIMITED WARRANTY DOES NOT AFFECT ANY ADDITIONAL RIGHTS YOU HAVE UNDER LAWS IN YOUR JURISDICTION GOVERNING THE SALE OF CONSUMER GOODS, INCLUDING WITHOUT LIMITATION, NATIONAL LAWS IMPLEMENTING EC DIRECTIVE 99/44 OR PURSUANT TO THE MAGNUSON MOSS WARRANTY ACT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE LIMITATIONS OR EXCLUSIONS IN THIS LIMITED WARRANTY STATEMENT MAY NOT APPLY.

e) The following statement applies to customers that are 'consumers' within the meaning of the Australian Consumer Law:

"Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any

other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.”

6) Rights and Remedies against Third Parties

This Limited Warranty shall be construed as a separate warranty and independent from any other contractual arrangement with third parties relating to the Product(s). It shall not affect any rights, obligations and remedies of the Buyer, if any, with regard to third parties for defects or non-conformity or non-compliance of the Products, notwithstanding its legal basis. The rights and remedies provided hereunder are in addition to any other rights and remedies against third parties to which Buyer may be entitled by agreements with such third parties or by law.

7) Claims Procedure, Notice Periods, Expiration of Warranty Claims and Limitations.

- a) Buyer shall notify Trina Solar under this Limited Warranty using Trina Solar’s Customer Service Portal at the web address <http://customerservice.trinasolar.com>; alternatively by letter or facsimile specifying each alleged claim including evidence of the claims and the serial numbers of the Product(s) at issue. The contact customer support center for the regions are:

Europe Customer Support

Trina Solar (Schweiz) AG
Richtstrasse 11,
8304 Wallisellen, Switzerland
T +41 43 299 68 00
F +41 43 299 68 10
<http://customerservice.trinasolar.com>

Americas Customer Support

Trina Solar (U.S.), Inc.
100 Century Center, Suite 501,
San Jose CA 95112, USA
T +1 800 696 7114
F +1 800 696 0166
<http://customerservice.trinasolar.com>

Australia Customer Support

Trina Solar Australia Pty Ltd
Level 35, 60 Margaret Street,
Sydney NSW 2000, Australia
T +61 (0)2 9199 8500
F +61 2 9199 8006
<http://customerservice.trinasolar.com>

Japan Customer Support

Trina Solar (Japan) Limited
World Trade Center Building 21F
4-1, Hamamatsu-cho, 2-chome,
Minato-ku, Tokyo, Japan, 105-6121
T +81-3-3437-7000
F +81-3-3437-7001
<http://customerservice.trinasolar.com>

Rest of World (ROW) Customer Support

Changzhou Trina Solar Energy Company Limited
No. 2 Trina Road, Trina PV Industrial Park,
New District, Changzhou, Jiangsu,

P.R. China, 213031

T +86 519 8548 2008

F +86 519 8517 6021

<http://customerservice.trinasolar.com>

- b) Any dispute on technical facts relating to claims brought under this Limited Warranty for defects of Products shall be determined by expert determination. Trina Solar and the Buyer will, at the Buyer's or Trina Solar's request, appoint as independent expert and appraiser a reputable researcher from a first-class international test-institute such as Fraunhofer ISE in Freiburg/Germany, TÜV (e.g. TÜV Rheinland, TÜV SUD or Shanghai TÜV) or ASU Arizona State University, and so on ("Technical Expert"). The determination by such Technical Expert shall be final, conclusive, binding and enforceable in any proceeding brought hereunder. The Technical Expert shall (i) act as an expert; (ii) allow the parties a reasonable opportunity to make representations and counter-representations; (iii) take those representations and counter-representations into account; and (iv) if required by either party give written reasons for his or her determination.
- c) Any claim for breach of this Limited Warranty must be brought within two (2) months after discovery of the breach.
- d) The return of any defective Product(s) will not be accepted unless prior written authorization has been given by Trina Solar.

8) Force Majeure

Trina Solar shall not be responsible or liable in any way to the Buyer for any non-performance or delay in performance under this Limited Warranty due to occurrences of force majeure such as, war, riots, strikes, unavailability of suitable and sufficient labor, material, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the defective Product(s) or the notification of the relevant warranty claim under this Limited Warranty.

9) Warranty Assignment

This Limited Warranty is transferrable when the Products remain installed in their original installation location.

10) Validity

This Limited Warranty shall apply to Product(s)

- a) manufactured after 1st of January 2015 and
- b) delivered to Buyer from 1st of April 2016 (Incoterms 2010).



This Limited Warranty shall be valid until a new revision is issued by Trina Solar.

11) No Other Express Warranty

Except as otherwise provided by applicable statutory law (cf. Sec. 5 d) and 5 e) above) or unless modified in writing and signed by an officer of Trina Solar, the Limited Warranty set forth herein is the only express warranty (whether written or oral) by Trina Solar applicable to the Products and no one is authorized to restrict, expand or otherwise modify this Limited Warranty.

12) Miscellaneous

If any provision of this Limited Warranty is held invalid, unenforceable or contrary to law then the validity of the remaining provisions of this Limited Warranty shall remain in full force and effect.

13) Applicable Law and Jurisdiction

The validity of this Limited Warranty, the construction of its terms and the interpretation and enforcement of the rights and duties of the Buyer and Trina Solar shall be governed by the laws of the country of the original installation location of the Product(s), to the exclusion of that country's conflicts of law rules as well as of the United Nations Convention on the International Sale of Goods dated 11 April 1980 (CISG) and of any other uniform law.

All disputes arising out of or in connection with this Limited Warranty shall be finally settled before the ordinary courts of the country of the original installation location of the Product(s).