



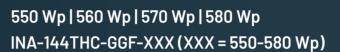


# **PLATINUM**

High Efficiency N-type TOPCon M10R Glass to Glass Module



550 - 580 Wp

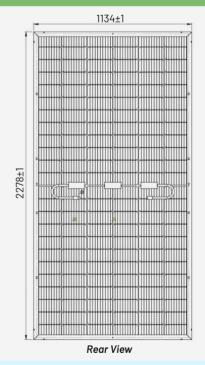


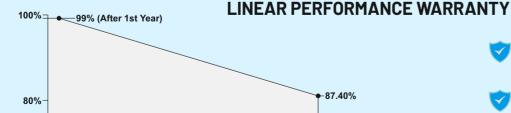


APPLICATION: RESIDENTIAL | COMMERCIAL | INDUSTRIAL | SOLAR PARK

### **KEY FEATURES**

- 1. LCOE is reduced with lower BOS costs, improving the product's value proposition and ensuring a competitive ROI.
- 2. Two peak performance periods for the optimal utilization of bifacial generation.
- 3. Hassle-free installation with the ability to be mounted vertically in the East-West direction, offering improved resistance to soiling.
- 4. Lower internal resistance boosts module power, helping to minimize power loss.
- 5. Excellent PID performance guarantees limited power degradation.
- 6. Reliable quality ensures better sustainability even in harsh environments such as deserts, farms, and coastlines with ammonia exposure.
- 7. Cylindrical tabbing wire is used to minimize shading on the cell's active area.
- 8. A higher number of busbars makes PV modules less prone to efficiency loss and increases tolerance to microcracks.
- 9. Positive Power Tolerance.





12-Year Product Warranty on Materials and Workmanship\*



30-Year Warranty for Linear Performance\*

#### **CERTIFICATIONS & STANDARDS:**

IS:14286/IEC 61215, IS/IEC 61730-1, IS/IEC 61730-2, IEC 62716, IEC 62804,IEC 60068-2-68, IEC 61853, IEC 61701, IEC TS 63342, IEC TS 63209-1



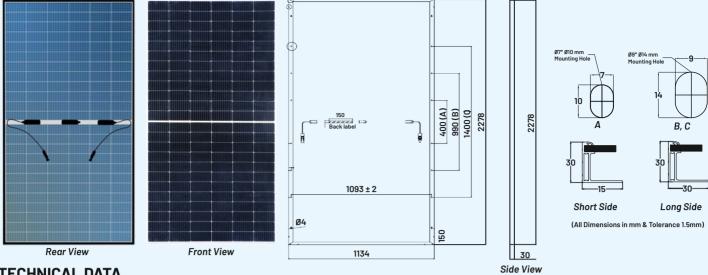








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#### **TECHNICAL DATA**

\*STC: Irradiance 1000 W/m² module temperature 25°C, Am=1.5;

\*NOCT: Irradiance 800 W/m², ambient teperature 20°C, Am=1.5, Wind speed 1m/sec. Average power reduction of 4.5% at 200 W/m². Measuring Uncertainty 0~3%

| Module Type                                | Unit        | STC           | NOCT  | STC                | NOCT                                      | STC   | NOCT    | STC      | NOCT                     |  |
|--|-------------|---------------|-------|--------------------|---|-------|---------|----------|--------------------------|--|
| Peak Power -Pmax                           | Wp          | 550           | 415   | 560                | 419                                       | 570   | 427     | 580      | 435                      |  |
| Maximum voltage (Vmpp)                     | V           | 43.79         | 41.13 | 44.13              | 41.29                                     | 44.47 | 41.67   | 44.79    | 42.03                    |  |
| Maximum current (Impp)                     | Α           | 12.58         | 10.11 | 12.70              | 10.16                                     | 12.82 | 10.26   | 12.95    | 10.35                    |  |
| Open circuit voltage (Voc)                 | V           | 51.77         | 48.81 | 52.13              | 49.01                                     | 52.49 | 49.40   | 52.85    | 49.79                    |  |
| Short circuit current (Isc)                | Α           | 13.29         | 10.76 | 13.43              | 10.81                                     | 13.57 | 10.91   | 13.71    | 11.01                    |  |
| Module Efficiency                          | %           | % 21.31       |       | 21.74 22.0         |   | .06   | 6 22.45 |          |                          |  |
| Operating temperature range (°C)           |             | -40 to +85°C  |       |                    | Power Tolerance                           |       |         |          | Positive Power Tolerance |  |
| Maximum system voltage                     |             | DC1500V (IEC) |       |                    | Nominal operating cell temperature (NOCT) |       |         |          | 45 ± 2 °C                |  |
| Maximum series fuse rating                 |             | 30A           |       |                    | Application                               |       |         |          | Class-A                  |  |
| Temperature coefficients of lsc $(\alpha)$ | 0.0465%/°C  |               |       | Safety Class       |   |       |         | Class II |                          |  |
| Temperature coefficients of Pmax (γ)       | -0.3023%/°C |               |       | Application Rating |   |       |         | Class A  |                          |  |
| Temperature coefficients of Voc $(\beta)$  | -0.2114%/°C |               |       |                    |   |       |         |          |                          |  |

<sup>\*</sup>BIFACIAL OUTPUT – BACKSIDE POWER GAIN @STC\* [Bifaciality Factor: 80% ± 10%]

[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component rating should be selected as per actual Bifacial gain at site (module currents indicated below)]
\*\*Power gain from rear side depends upon the ground reflectance (Albedo) 8 Bifaciality factor.

| <b>Bifacial Gain</b> | Measurement          | Unit | 550   | 560    | 570    | 580    |
|----------------------|----------------------|------|-------|--------|--------|--------|
|                      | Maximum Power (Pmax) | Wp   | 577.5 | 588.00 | 598.50 | 609.00 |
| 5%                   | Module Efficiency    | %    | 22.36 | 22.76  | 23.17  | 23.58  |
|                      | Maximum Power (Pmax) | WP   | 605   | 616.00 | 627.00 | 638.00 |
| 10%                  | Module Efficiency    | %    | 23.42 | 23.85  | 24.27  | 24.70  |
|                      | Maximum Power (Pmax) | WP   | 687.5 | 700.00 | 712.50 | 725.00 |
| 25%                  | Module Efficiency    | %    | 26.61 | 27.10  | 27.58  | 28.07  |

#### **MECHANICAL SPECIFICATIONS**

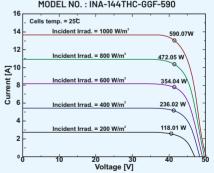
| Cell type            | Half-Cut N-type TOPCon M10R Bifacial Solar cells                                   |
|----------------------|--|
| Dimensions           | 2278(L) x 1134(W)  |
| Weight(kg)           | 32±0.5 Kg  |
| Front Glass          | 2.0mm AR-coating heat-strengthened glass   |
| Cell Encapsulant     | EPE/POE (Expanded polyethylene foam/Polyolefin Elastomer)                          |
| Rear Glass           | 2.0mm heat-strengthened glass  |
| Junction Box         | 30A Split Junction Box (3 nos. with individual Bypass Diode) – Weatherproof (IP68) |
| Solar Cable          | 4sq mm, 300 mm length x 2 Nos.   |
| Connectors           | MC4 Compatible Connector IEC/UL Crtiefied  |
| Frame Material       | Anodized aluminum alloy, silver color  |
| Mechanical Load Test | 5400 Pa (Snow load), 2400 Pa (Wind load)   |
| Hail Test            | Max. diameter of 25 mm with velocity 23 m/s  |
|                      |  |

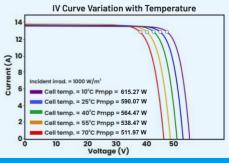
CAUTION: READ SAFETY AND DETAIL INSTALLATION MANUAL BEFORE USING THE PRODUCT (Refer to our Website).

Note: • The specificaations included in this datasheet are subject to change without notice.

• The electrical data given here is for reference purpose only. • Please confirm your exact requirements with the sales representative while placing your order. All models sold will be as per INA QAP.

#### I-V CHARACTERISTICS AT DIFFERENT IRRIDANCE MODEL NO.: INA-144THC-GGF-590





## INSOLATION ENERGY LTD.

<sup>\*\*</sup> Warranty: Please read INA solar warranty documents thoroughly.