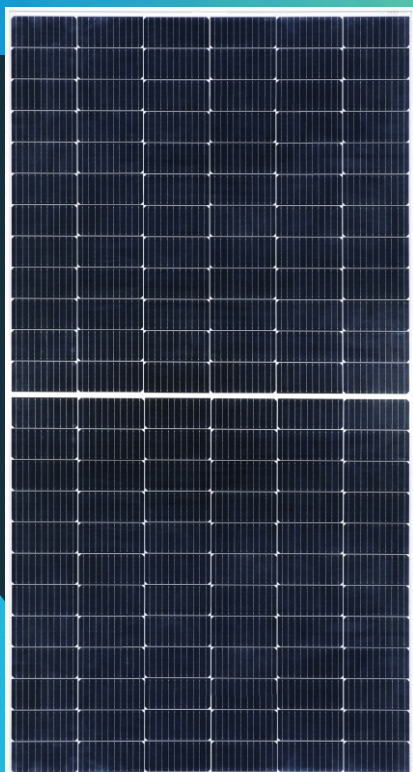




# PLATINUM SERIES

144 Half Cut TOPCon

Solar Cell Size - 182.2 x 91.87 mm

**580 - 600 WP**  
MONOFACIAL & BIFACIAL

580 WP | 595 WP | 600 WP

INA-144THC-WF-XXX (XXX = 580-600 WP)

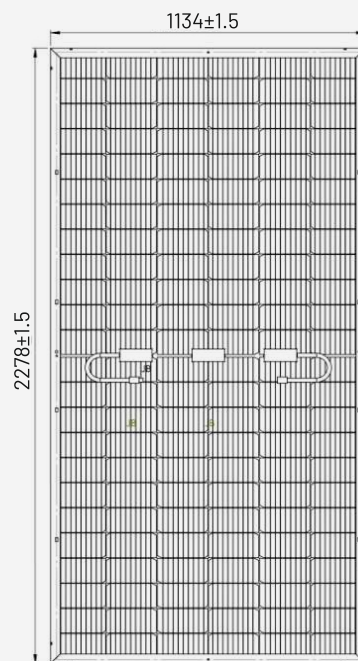
INA-144THC-TF-XXX (XXX = 580-600 WP)



APPLICATION : RESIDENTIAL | COMMERCIAL | INDUSTRIAL  
SOLAR PUMP | SOLAR PARK

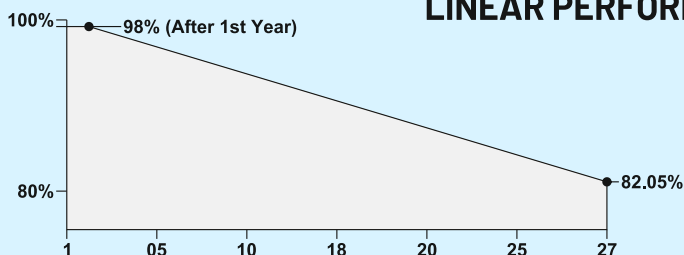
## KEY FEATURES

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. Only Positive Power Tolerance.



Rear View

## LINEAR PERFORMANCE WARRANTY



12 Years Product Warranty on  
Materials and Workmanship\*



30 Years Warranty for  
Linear Performance\*

## CERTIFICATIONS & STANDARDS:

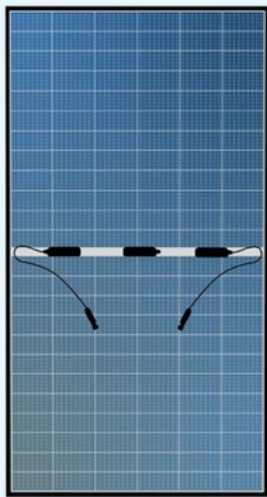
IS: 14286/IEC 61215, IEC 61730-1 and IEC 61730-2, IEC 62716,  
IEC 62804, IEC 60068-2-68, IEC 61853, IEC 61701

(Certifications are under process)

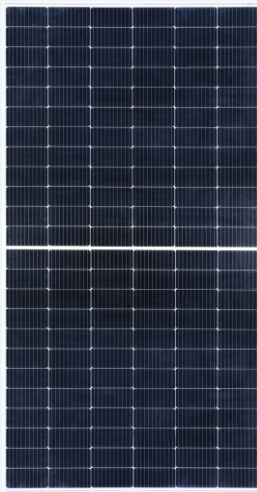
Caution: Please read safety and installation instructions before using the product. \*Warranty: Linear performance warranty for 30 years, with degradation up to 2% in 1st year and 0.6 %/year from year 2 to year 30. Please read Insolation Energy Ltd. warranty documents thoroughly.

IS 14286: 2010/IEC 61215: 2005  
IS/IEC 61730 (PART 1): 2004  
IS/IEC 61730 (PART 2): 2004

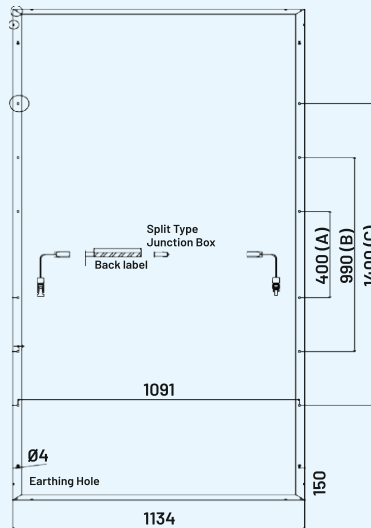




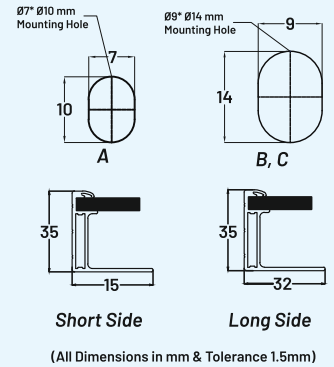
Rear View



Front View



Side View



(All Dimensions in mm & Tolerance 1.5mm)

## ELECTRICAL DATA PERFORMANCE

| Module Type                          | Unit             | STC   | NOCT                                      | STC   | NOCT  | STC                      | NOCT  |
|--------------------------------------|------------------|-------|-------------------------------------------|-------|-------|--------------------------|-------|
| Peak Power -Pmax                     | Wp               | 580   | 432                                       | 590   | 439   | 600                      | 443   |
| Maximum voltage (Vmpp)               | V                | 43.52 | 40.74                                     | 44.05 | 41.24 | 44.68                    | 41.72 |
| Maximum current (Impp)               | A                | 13.33 | 10.61                                     | 13.38 | 10.65 | 13.43                    | 10.70 |
| Open circuit voltage (Voc)           | V                | 51.19 | 48.32                                     | 51.24 | 48.37 | 51.29                    | 48.42 |
| Short circuit current (Isc)          | A                | 14.06 | 11.36                                     | 14.26 | 11.52 | 14.46                    | 11.68 |
| Module Efficiency                    | %                | 22.45 |                                           | 22.84 |       | 23.22                    |       |
| Operating Temperature range (°C)     | -40 to +85°C     |       | Power Tolerance                           |       |       | Positive Power Tolerance |       |
| Maximum system voltage               | 1500 VDC         |       | Nominal operating cell temperature (NOCT) |       |       | 45 ± 2 °C                |       |
| Maximum series fuse rating           | 30A              |       | Fire Safety                               |       |       | Class-C (Type 1)         |       |
| Temperature coefficients of Isc (α)  | 0.040%/°C ± 0.01 |       | Application                               |       |       | Class-A                  |       |
| Temperature coefficients of Pmax (γ) | -0.30%/°C ± 0.02 |       | Safety Class                              |       |       | Class II                 |       |
| Temperature coefficients of Voc (β)  | -0.26%/°C ± 0.02 |       |                                           |       |       |                          |       |

| Bifacial Gain | Measurement          | Unit | 580   | 590   | 600   |
|---------------|----------------------|------|-------|-------|-------|
| 5%            | Maximum Power (Pmax) | Wp   | 605   | 615   | 625   |
|               | Module Efficiency    | %    | 23.42 | 23.80 | 24.19 |
| 10%           | Maximum Power (Pmax) | WP   | 630   | 640   | 650   |
|               | Module Efficiency    | %    | 24.39 | 24.77 | 25.16 |
| 15%           | Maximum Power (Pmax) | WP   | 655   | 665   | 675   |
|               | Module Efficiency    | %    | 25.35 | 25.74 | 26.13 |

\*STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C, Am=1.5;

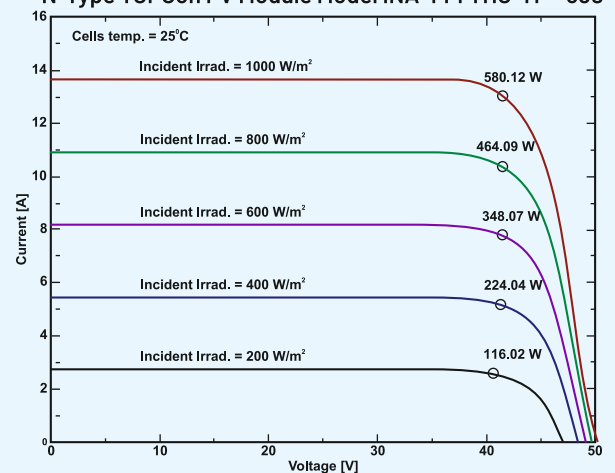
\*NOCT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20°C, Am=1.5, Wind speed 1m/sec. Average power reduction of 4.5% at 200 W/m<sup>2</sup> as per IEC 60904-1. Measuring Uncertainty +/- 3%

\*\*Power gain from rear side depends upon the ground reflectance (Albedo) & Bifaciality factor.

## MODULE MECHANICAL DATA

| SPECIFICATION        | DATA                                                          |
|----------------------|---------------------------------------------------------------|
| Cell Type            | N-Type TOPCon Solar Cell                                      |
| Dimensions           | 2278X1134X35mm (LxWxH) ± 1.5 mm                               |
| Weight               | 28.00 kgs ± 0.5 kg                                            |
| Front Cover          | 3.2 mm High Transmission, Low iron, Tempered Glass, AR coated |
| Back sheet           | Composite Film White / Transparent Back sheet                 |
| J-Box                | IP68 Split type Junction box with individual bypass diodes    |
| Cable                | 300mmx2nos 4mm <sup>2</sup> solar cable                       |
| Connectors           | MC4 Compatible Connector IEC/UL Certified                     |
| Frame Material       | Silver Anodized Aluminium frame with twin wall profile        |
| Mechanical Load Test | 5400 Pa (Snow load), 2400 Pa (Wind load)                      |
| Hail resistance      | Max. diameter of 25 mm with velocity 23 m/s                   |
| Standard Packaging   | 31 Pieces/Pallet                                              |

## I-V CHARACTERISTICS AT DIFFERENT IRRIDANCE



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

**Note:** • The specifications 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.

**\*\* Warranty:** Please read INA solar warranty documents thoroughly.

# INSOLATION ENERGY LTD.

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