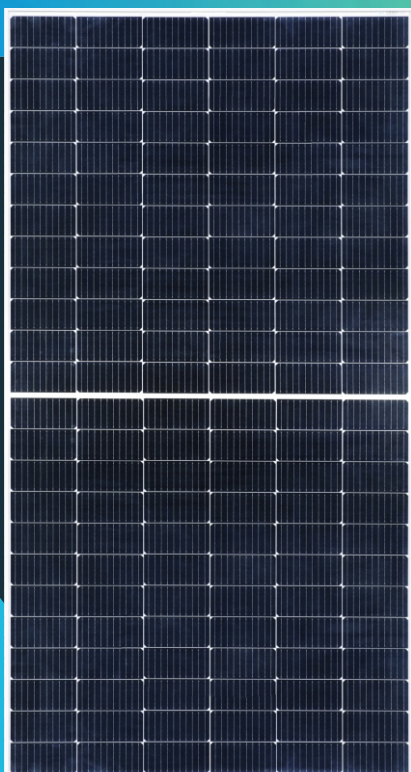




PLATINUM SERIES

High Efficiency N-type TOPCon M10R
Glass to Glass Module

550 - 580 Wp

550 Wp | 560 Wp | 570 Wp | 580 Wp

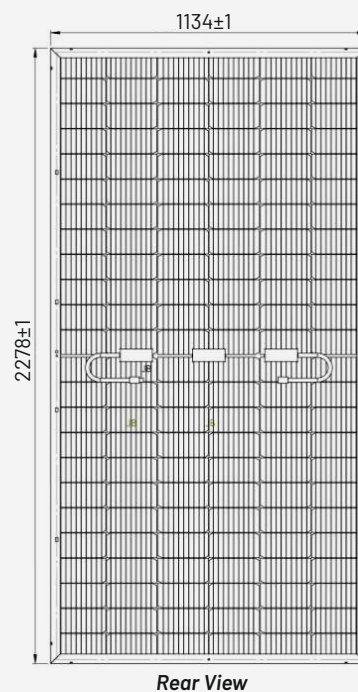
INA-144THC-GGF-XXX (XXX = 550-580 Wp)



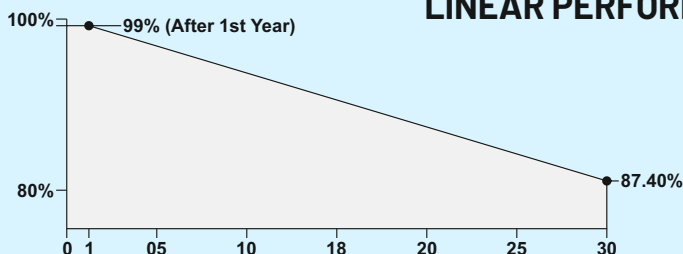
APPLICATION : RESIDENTIAL | COMMERCIAL | INDUSTRIAL | SOLAR PARK

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.



LINEAR PERFORMANCE WARRANTY



12-Year Product Warranty on Materials and Workmanship*



30-Year Warranty for Linear Performance*

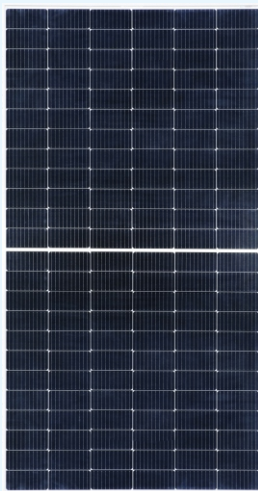
CERTIFICATIONS & STANDARDS:

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

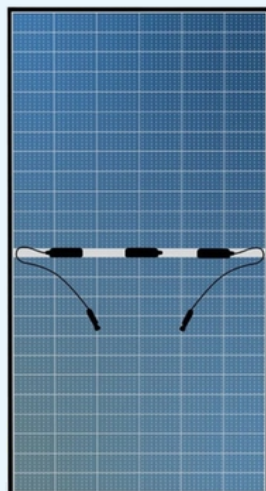
IS 14286: 2010/IEC 61215: 2005
IS/IEC 61730 (PART 1): 2004
IS/IEC 61730 (PART 2): 2004



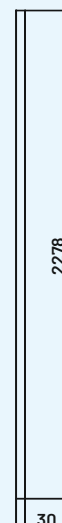
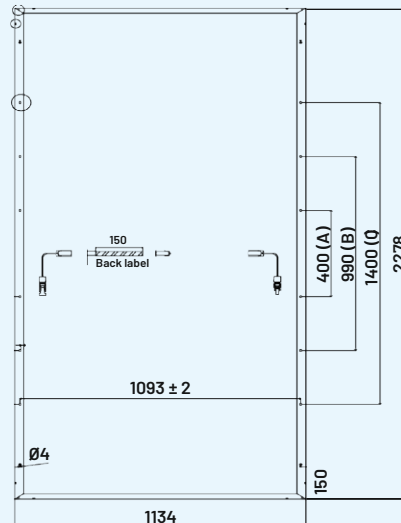
Caution: Please read safety and installation instructions before using the product. *Warranty: Linear performance warranty for 30 years, with degradation up to 1% in 1st year and 0.4 %/year from year 2 to year 30. Please read Insolation Energy Ltd. warranty documents thoroughly.



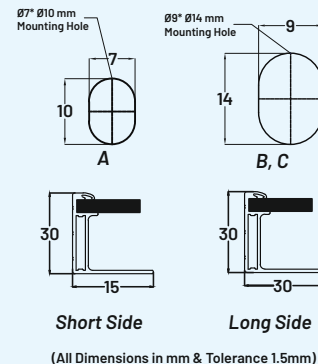
Front View



Rear View



Side View



Short Side

Long Side

(All Dimensions in mm & Tolerance 1.5mm)

TECHNICAL DATA

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

*NOCT: Irradiance 800 W/m², ambient temperature 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)	A	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)	A	13.29	10.76	13.43	10.81	13.57	10.91	13.71	11.01
Module Efficiency	%	21.31		21.74		22.06		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 Isc (α)		0.0465%/°C		Safety Class		Class - II			
Temperature coefficients of Pmax (γ)		-0.3023%/°C		Application Rating		Class - A			
Temperature coefficients of Voc (β)		-0.2114%/°C							

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.

Bifacial Gain	Measurement	Unit	550	560	570	580
5%	Maximum Power (Pmax)	Wp	577.5	588.00	598.50	609.00
	Module Efficiency	%	22.36	22.76	23.17	23.58
10%	Maximum Power (Pmax)	WP	605	616.00	627.00	638.00
	Module Efficiency	%	23.42	23.85	24.27	24.70
25%	Maximum Power (Pmax)	WP	687.5	700.00	712.50	725.00
	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) x 30(H)
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	4sqmm, 300 mm length x 2 Nos.
Connectors	MC4 Compatible Connector IEC/UL Crtified
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 specifications included in this datasheet are subject to change without notice.

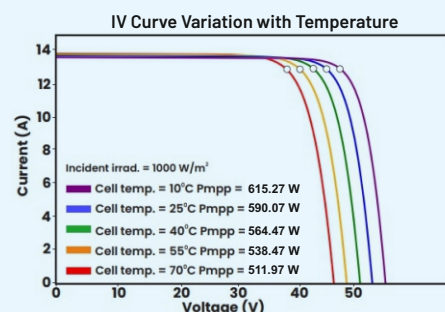
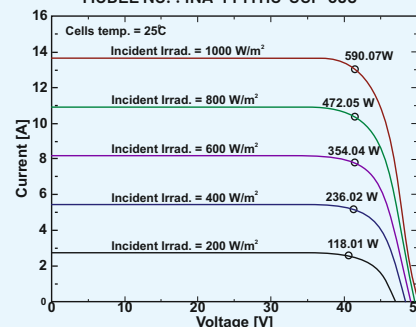
• The electrical data given here is for reference purpose only.

• 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.

I-V CHARACTERISTICS AT DIFFERENT IRRADIANCE

MODEL NO. : INA-144THC-GGF-590



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For Sales Enquiries Call: +91 7240 444 666

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