IMA SOLAR
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ASSOCIATE PARTNER

INDIA'S MOST TRUSTED SOLAR BRAND



INSOLATION ENERGY LTD.



PLATINUM SERIES

High Efficiency N-type TOPCon Glass to Glass Module

DCR | NON DCR MODULE AVAILABLE

580 Wp - 600 Wp

580 Wp | 585 Wp | 590 Wp | 595 Wp | 600 Wp

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

TECHNICAL DATA

*STC: Irradiance 1000 W/m2 module temperature 25°C, Am=1.5 According to EN 60904-3, Tolerance of Rating at STC (Pmpp / Isc / Voc) [%] : 0~3/±5/±5, Electrcal Measurement Uncertainity is within ± 3%
*NOCT: Irradiance 800 W/m2, ambient teperature 20°C, Am=1.5, Wind speed lm/sec. Average power reduction of 4.5% at 200 W/m2

Module Type	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power - Pmax	Wp	580	436	585	440	590	445	595	449	600	453
Maximum voltage (Vmpp)	V	42.94	40.73	43.07	40.86	43.20	40.99	43.31	41.10	43.44	41.23
Maximum current (Impp)	A	13.52	10.70	13.60	10.78	13.67	10.85	13.75	10.93	13.82	10.99
Open circuit voltage (Voc)	V	51.41	48.77	51.57	48.93	51.80	49.16	51.94	49.30	52.12	49.48
Short circuit current (Isc)	A	14.19	11.45	14.24	11.50	14.33	11.56	14.42	11.64	14.50	11.72
Module Efficiency	%	**22.45**		**22.65**		**22.84**		**23.02**		**23.23**	

Operating Temperature range (°C)	-40 to +85°C	Power Tolerance	Positive Power Tolerance
Maximum system voltage	DC1500V (IEC)	Nominal operating cell temperature (NOCT)	42 ± 2 °C
Maximum series fuse rating	30A	Application	Class - A
Temperature coefficients of Isc (α)	0.044%/°C	Safety Class	Class - II
Temperature coefficients of Pmax (γ)	-0.30%/°C	Application Rating	Class - A
Temperature coefficients of Voc (β)	-0.25%/°C		

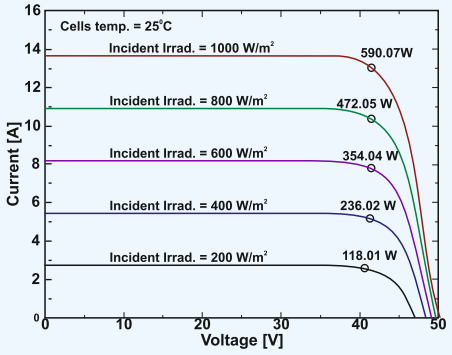
***BIFACIAL OUTPUT – BACKSIDE POWER GAIN @STC* [Bifaciality Factor: 80% ± 10%]**
[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]
**Power gain from rear side depends upon the ground reflectance (Albedo) 8 Bifaciality factor.

Bifacial Gain	Measurement	Unit	580	585	590	595	600
5%	Maximum Power (Pmax)	Wp	609	614.25	619.5	624.75	630
	Module Efficiency	%	23.58	23.79	23.98	24.17	24.36
10%	Maximum Power (Pmax)	WP	638	644	649	654	659
	Module Efficiency	%	24.7	24.95	25.13	25.31	25.49
25%	Maximum Power (Pmax)	WP	725	731	737.5	744	750.5
	Module Efficiency	%	28.07	28.32	28.55	28.78	29.01

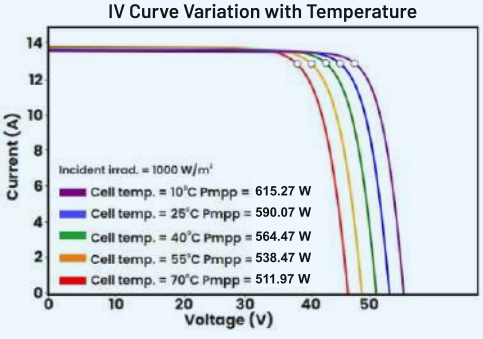
MECHANICAL SPECIFICATIONS

Cell Type	N-Type TOPCon Solar Cell
Dimensions	2278X1134X30mm (LxWxH) ± 1.5 mm
Weight (Kg)	28.00 Kg ± 0.5 Kg
Front Cover	3.2 mm High Transmission, Low iron, Tempered Glass, AR coated
Encapsulate	PID resistant and UV resistant polymeric film
Back sheet	Composite Film White / Transparent Back sheet
Junction Box	IP68 Split type Junction box with individual bypass diodes
Cable	300mmx2nos 4mm² 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	37 Pieces/Pallet

I-V Characteristics at Different Irridance
Model No. : INA-144THC-GGF-590



IV Curve Variation with Temperature



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

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

MECHANICAL DRAWING

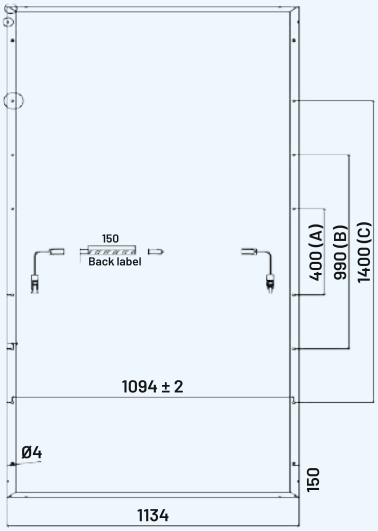
PLATINUM SERIES

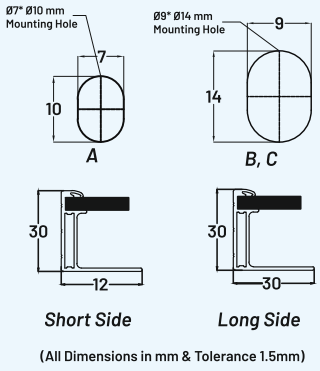


Front View



Rear View

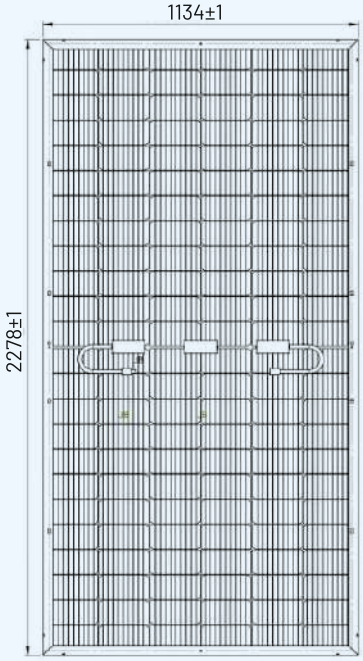




(All Dimensions in mm & Tolerance 1.5mm)

KEY FEATURES

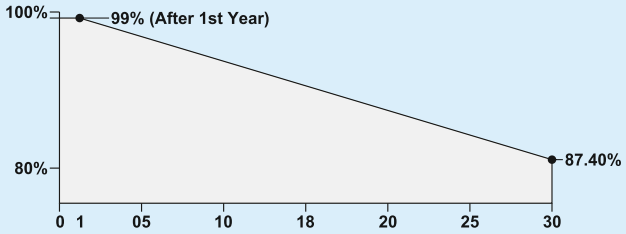
1. LCOE is reduced with lower BOS costs, improving the product's value proposition and ensuring a competitive ROI.
2. Two peak performance periods for the optimal utilization of bifacial generation.
3. Hassle-free installation with the ability to be mounted vertically in the East-West direction, offering 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.



Rear View

TOPCon

LINEAR PERFORMANCE WARRANTY



12-Year Product Warranty on Materials and Workmanship*

30-Year Warranty for Linear Performance*

CERTIFICATIONS & STANDARDS:

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

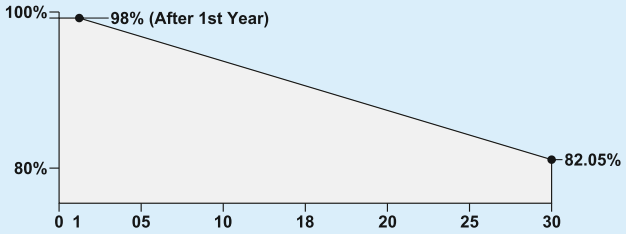
IS 14286 (Part 1/Sec 1) : 2023/ IEC 61215-1-1: 2021
IS/IEC 61730-1: 2023
IS/IEC 61730-2: 2023

www.bis.gov.in

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.

Mono PERC

LINEAR PERFORMANCE WARRANTY



12-Year Product Warranty on Materials and Workmanship*

30-Year Warranty for Linear Performance*

CERTIFICATIONS & STANDARDS:

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

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

www.bis.gov.in

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 0.55 %/year from year 2 to year 30. Please read Insolation Energy Ltd. warranty documents thoroughly.



PLATINUM SERIES

High Efficiency N-type TOPCon Bi-facial G12R Glass to Glass Module

APPROVED ALMM | BIS | IEC APPROVED

615 Wp - 635 Wp

615 Wp | 620 Wp | 625 Wp | 630 Wp | 635 Wp

INA132T210RGGFXXX (XXX = 615-635 Wp)

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

TECHNICAL DATA

*STC: Irradiance 1000 W/m2 module temperature 25°C, Am=1.5 According to EN 60904-3, Tolerance of Rating at STC (Pmpp / Isc / Voc) [%] : 0~3/±5/±5, Electrcal Measurement Uncertainity is within ± 3%
*NOCT: Irradiance 800 W/m2, ambient teperature 20°C, Am=1.5, Wind speed lm/sec. Average power reduction of 4.5% at 200 W/m2

Module Type	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power - Pmax	Wp	615	463.46	620	467.23	625	471.00	630	474.77	635	478.54
Maximum voltage (Vmpp)	V	40.60	38.57	40.74	38.70	40.88	38.84	41.02	38.97	41.16	39.10
Maximum current (Impp)	A	15.15	12.02	15.22	12.07	15.29	12.13	15.36	12.18	15.43	12.24
Open circuit voltage (Voc)	V	48.88	46.44	49.08	46.63	49.28	46.82	49.48	47.01	49.68	47.20
Short circuit current (Isc)	A	16.02	12.93	16.08	12.97	16.14	13.02	16.17	13.05	16.21	13.08
Module Efficiency	%	**22.77**		**22.95**		**23.14**		**23.32**		**23.51**	

Operating Temperature range (°C)	-40 to +85°C	Power Tolerance	0 ~ + 3 %
Maximum system voltage	DC1500V (IEC)	Nominal operating cell temperature (NOCT)	42 ± 2 °C
Maximum series fuse rating	30A	Application	Class - A
Temperature coefficients of Isc (α)	0.043%/°C	Safety Class	Class - II
Temperature coefficients of Pmax (γ)	-0.29%/°C	Application Rating	Class - A
Temperature coefficients of Voc (β)	-0.25%/°C		

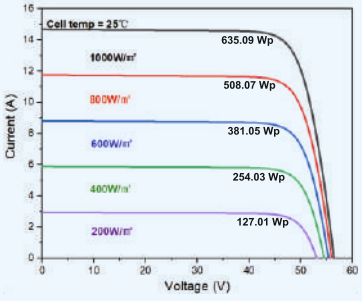
***BIFACIAL OUTPUT – BACKSIDE POWER GAIN @STC* [Bifaciality Factor: 80% ± 10%]**
[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]
****Power gain from rear side depends upon the ground reflectance (Albedo) 8 Bifaciality factor.**

Bifacial Gain	Measurement	Unit	615	620	625	630	635
5%	Maximum Power (Pmax)	Wp	646	651	656	662	667
	Module Efficiency	%	23.84	24.03	24.22	24.42	24.61
10%	Maximum Power (Pmax)	WP	677	682	688	693	699
	Module Efficiency	%	24.97	25.18	25.38	25.58	25.78
15%	Maximum Power (Pmax)	WP	707	713	719	725	730
	Module Efficiency	%	26.11	26.32	26.53	26.74	26.96

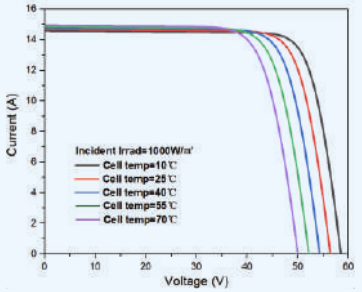
MECHANICAL SPECIFICATIONS

Cell type / No Of Cell	132 Half-cut N-type TOPCon Bifacial G12R Solar cells
Dimensions	2382×1134×30mm (LxWxH)
Weight (Kg)	32.5±0.5 Kg
Front Glass	2.0mm AR-coated heat-strengthened glass
Encapsulate	PID resistant and UV resistant polymeric film (EPE/EPE)
Rear Glass	2.0mm heat-strengthened glass
Junction Box	30A Split Junction Box (3 nos. with individual Bypass Diode) – Weatherproof (IP68)
Solar Cable	4 sqmm, 300 mm length x 2 Nos. (Can be customize as per customer requirement)
Connectors	MC4 Compatible Connector IEC/UL Certified
Frame Material	Anodized silver aluminum frame
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Hail Test	Max. diameter of 25 mm with velocity 23 m/s
Standard Packaging	37 in 1 Pallet, (20 pallets in 40Ft vehicle) Total Qty: 740 Nos

I-V Characteristics at Different Irridance
INA132T210RGGF635



I-V Characteristics at Different Temperatures
INA132T210RGGF635



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



DIAMOND SERIES

High Efficiency Mono PERC Bi-facial 144 Half Cut Cell Module

DCR | NON DCR MODULE AVAILABLE

550 Wp - 560 Wp
MONOFACIAL / BI-FACIAL

550 Wp | 555 Wp | 560 Wp

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

TECHNICAL DATA

*STC: Irradiance 1000 W/m2 module temperature 25°C, Am=1.5 According to EN 60904-3, Tolerance of Rating at STC (Pmpp / Isc / Voc) [%] : 0~3/±5/±5, Electrcal Measurement Uncertainity is within ± 3%
*NOCT: Irradiance 800 W/m2, ambient teperature 20°C, Am=1.5, Wind speed lm/sec. Average power reduction of 4.5% at 200 W/m2

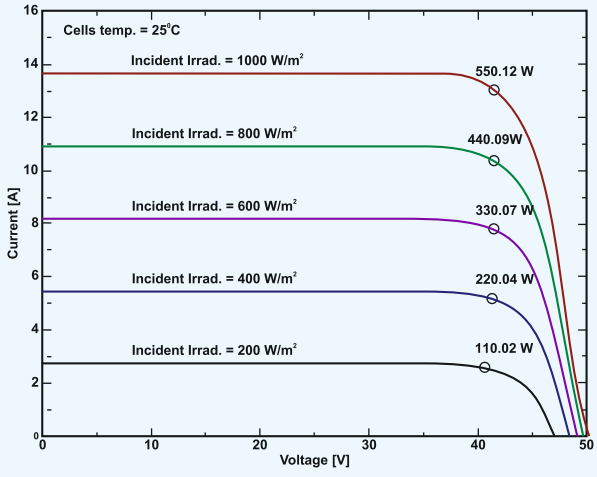
Module Type	Unit	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power - Pmax	Wp	550	410.96	555	413.81	560	416.67
Maximum voltage (Vmpp)	V	41.93	38.92	42.05	39.04	41.77	38.80
Maximum current (Impp)	A	13.12	10.56	13.20	10.59	13.41	10.62
Open circuit voltage (Voc)	V	49.90	46.95	50.01	46.56	50.45	46.56
Short circuit current (Isc)	A	13.98	11.09	14.05	11.16	14.15	11.08
Module Efficiency	%	**21.12**		**21.48**		**21.67**	

Operating Temperature range (°C)	-40°C 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	25A	Fire Safety	Class - C (Type 1)
Temperature coefficients of Isc (α)	0.048%/°C ± 0.01	Application	Class - A
Temperature coefficients of Pmax (γ)	-0.32%/°C ± 0.02	Safety Class	Class - II
Temperature coefficients of Voc (β)	-0.28%/°C ± 0.02		

MECHANICAL SPECIFICATIONS

Cell Type	P Type Mono PERC Bifacial Solar Cell
Dimensions	2296X1134X30mm (LxWxH) ± 2 mm
Weight (Kg)	28.00 Kg ± 0.5 Kg
Front Cover	3.2 mm High Transmission, Low iron, Tempered Glass, AR coated
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)-FC/UFC
Back sheet	Composite Film White Back sheet
J-Box	IP68 Split type Junction box with individual bypass diodes
Cable	300mmx2nos solar cable, 4mm²
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	37 Pieces/Pallet

I-V Characteristics at Different Irridance
PV Module – INA-144 MHC-TF - 550



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INA SOLAR
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ONE OF INDIA'S LEADING SOLAR PANEL MANUFACTURERS

EXPANSION UNDERWAY

4.5 GW	5.5 GW	18,000 MTA
SOLAR CELL	SOLAR PANEL	ALUMINIUM EXTRUSION

INSOLATION ENERGY LTD.

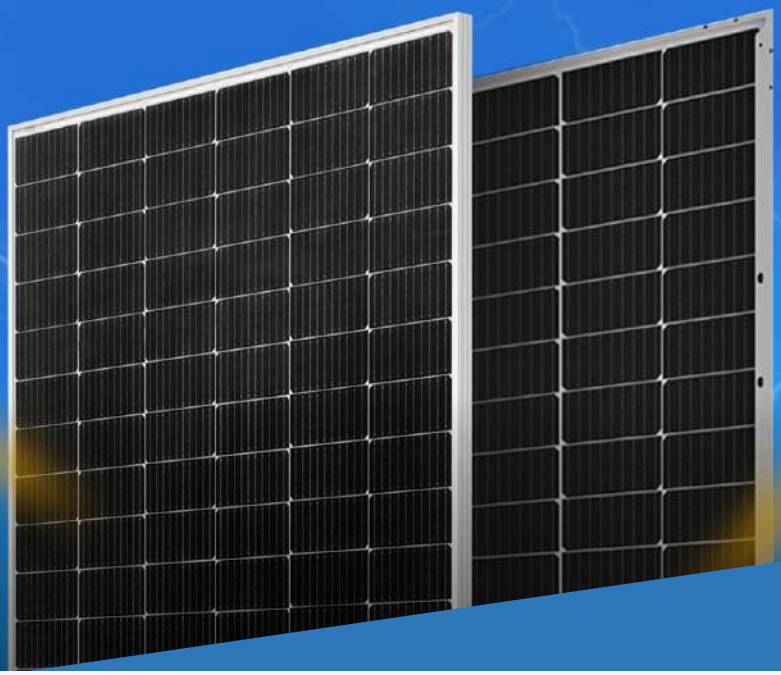
INA 1 - Factory, Near Daulatpura Toll Tax, Jaipur-Delhi Bypass, Jaipur, Rajasthan - 303805

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INA 2 - Factory, Jatawali Industrial Area, Tehsil Chomu, Jaipur, Rajasthan - 303806
INA 3 - Factory, NH -48, Sawarda, Delhi-Ajmer Expressway, Jaipur, Rajasthan – 303348
INA 4 & 5 - Factory, Mohasa-Babai Industrial Area, Narmadapuram, Bhopal, Madhya Pradesh - 461661

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