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SOLAR BRAND**



**INSOLATION ENERGY LTD.**

# PLATINUM SERIES

High Efficiency N-type TOPCon  
Glass to Glass Module



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/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>. Measuring Uncertainty 0~3%

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) & 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

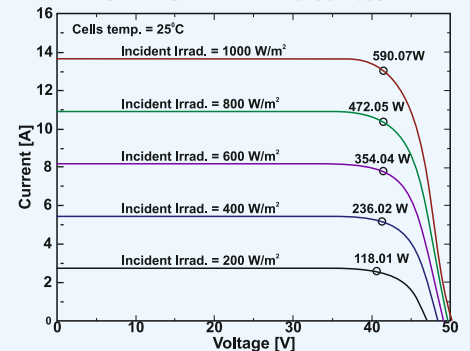
Cell Type	N-Type TOPCon Solar Cell
Dimensions	2278X1134X30mm (LxWxH) ± 1.5 mm
Weight (Kg)	28.00 Kg ± 0.5 Kg
Front Cover	3.2 mm High Transmission, Low iron, Tempered Glass, AR coated
Encapsulate	PID resistant and UV resistant polymeric film
Back sheet	Composite Film White / Transparent Back sheet
Junction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

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

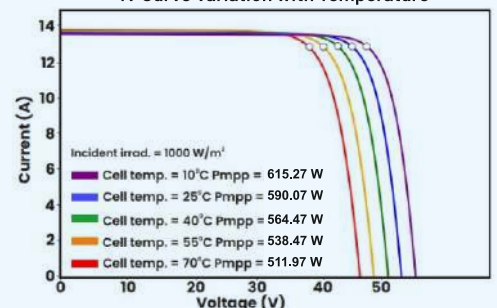
Note: • The specifications included in this datasheet are subject to change without notice.  
• The electrical data given here is for reference purpose only.  
• Please confirm your exact requirements with the sales representative while placing your order. All models sold will be per INA QAP.

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

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



IV Curve Variation with Temperature

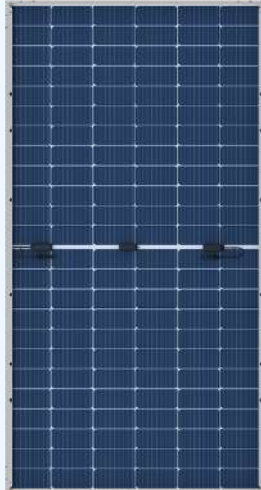


# MECHANICAL DRAWING

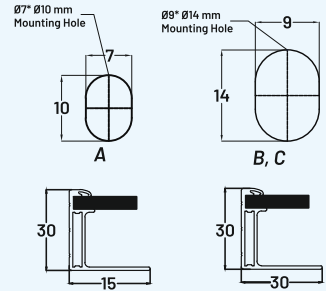
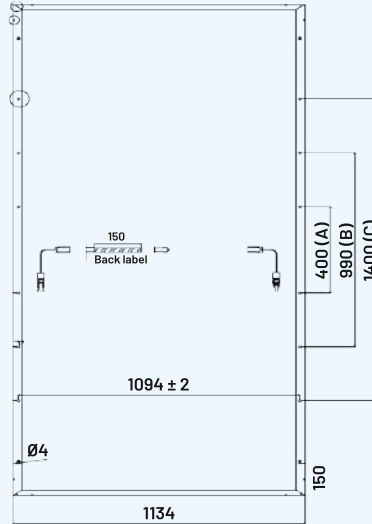
## PLATINUM / DIAMOND SERIES



Front View



Rear View



Short Side

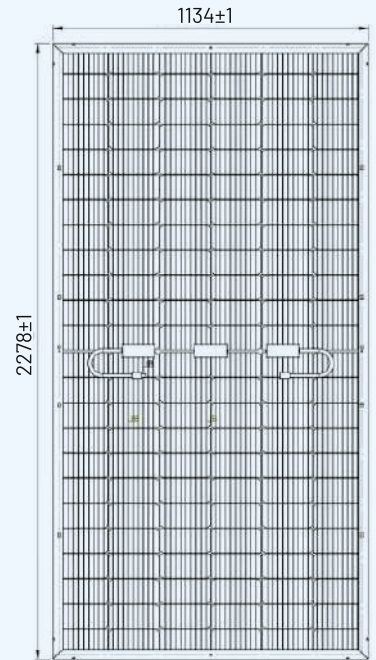
Long Side

(All Dimensions in mm & Tolerance 1.5mm)

## KEY FEATURES

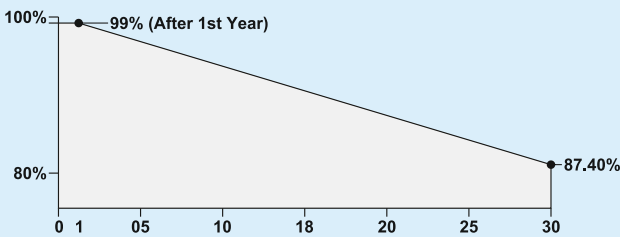
### PLATINUM / DIAMOND SERIES

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\*

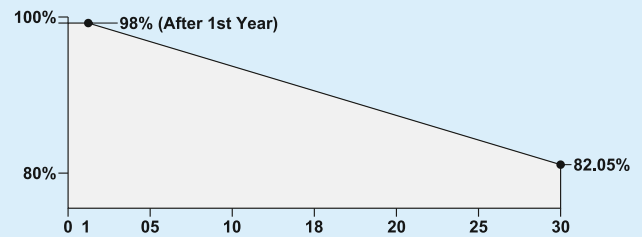
#### CERTIFICATIONS & STANDARDS:

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

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



### 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



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.

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



**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/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>. Measuring Uncertainty 0~3%

Module Type	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT		
Peak Power - Pmax	Wp	615	464	620	468	625	472	630	471	635	475		
Maximum voltage (Vmpp)	V	40.60	38.10	40.74	38.25	40.88	38.44	41.02	38.48	41.16	38.61		
Maximum current (Impp)	A	15.15	12.19	15.22	12.24	15.29	12.28	15.36	12.26	15.43	12.31		
Open circuit voltage (Voc)	V	48.88	46.43	49.08	46.62	49.28	46.81	49.48	46.69	49.68	46.88		
Short circuit current (Isc)	A	16.02	12.93	16.08	12.98	16.14	13.03	16.20	12.99	16.26	13.04		
<b>Module Efficiency</b>	<b>%</b>	<b>22.77</b>		<b>22.95</b>		<b>23.14</b>		<b>23.32</b>		<b>23.51</b>			
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) & 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

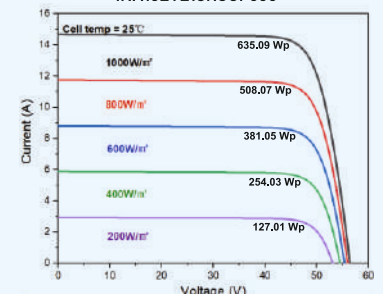
Cell type / No Of Cell	132 Half-cut N-type TOPCon Bifacial G12R Solar cells
Dimensions	2382×1134×30mm (LxWxH)
Weight (Kg)	32.5±0.5 Kg
Front Glass	2.0mm AR-coated heat-strengthened glass
Encapsulate	PID resistant and UV resistant polymeric film (EPE/EPE)
Rear Glass	2.0mm heat-strengthened glass
Junction 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

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

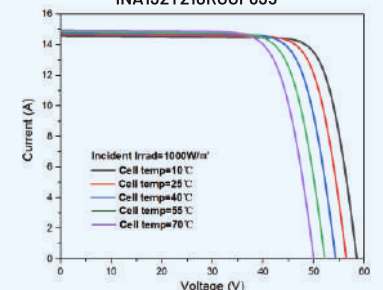
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I-V CHARACTERISTICS AT DIFFERENT IRRIDANCE  
INA132T210RGGF635



I-V CHARACTERISTICS AT DIFFERENT TEMPERATURES  
INA132T210RGGF635



# DIAMOND SERIES

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



**540 Wp - 560 Wp**  
MONOFACIAL / BI-FACIAL

540 Wp | 545 Wp | 550 Wp | 555 Wp | 560 Wp

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

## TECHNICAL DATA

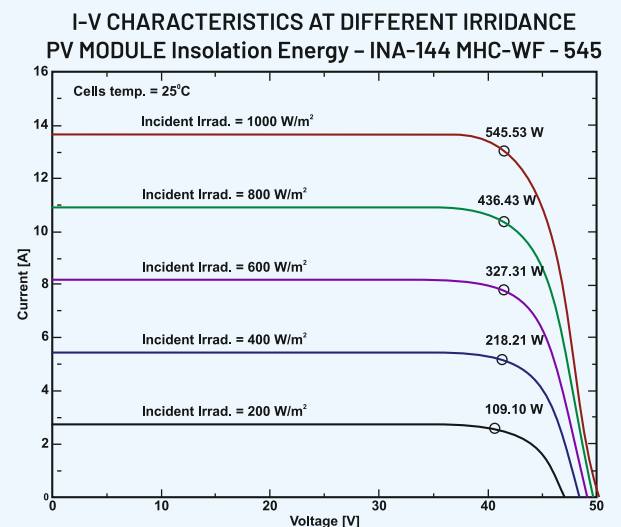
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\*NOCT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20°C, Am=1.5, Wind speed 1m/sec. Average power reduction of 4.5% at 200 W/m<sup>2</sup> as per IEC 60904-1. Measuring Uncertainty +/- 3%

Module Type	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power - Pmax	Wp	540	405.0	545	408.8	550	410.96	555	413.81	560	416.67
Maximum voltage (Vmpp)	V	41.81	38.79	41.90	38.80	41.93	38.92	42.05	39.04	41.77	38.80
Maximum current (Impp)	A	12.92	10.46	13.02	10.46	13.12	10.56	13.20	10.59	13.41	10.62
Open circuit voltage (Voc)	V	49.81	46.54	49.76	46.56	49.90	46.95	50.01	46.56	50.45	46.56
Short circuit current (Isc)	A	13.51	10.98	13.90	11.08	13.98	11.09	14.05	11.16	14.15	11.08
<b>Module Efficiency</b>	<b>%</b>	<b>20.92</b>		<b>21.12</b>		<b>21.29</b>		<b>21.48</b>		<b>21.98</b>	
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	2278X1134X30mm (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, 4mm <sup>2</sup>
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



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

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INA 3 - Factory, Sawarda, Ajmer Expressway, Jaipur, Rajasthan - 303348

INA 4 & 5 - Factory, Mohasa-Babai, Narmadapuram, Bhopal, Madhya Pradesh - 411661

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+91-141-2996001, 2996002

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