

# G12R 132 Half Cut Cell

N-Type TOPCon Bifacial

**650 Wp**

Maximum Power Output

**24.06%**

Maximum Module Efficiency

**0~+5<sup>W</sup>**

Power Output Guarantee

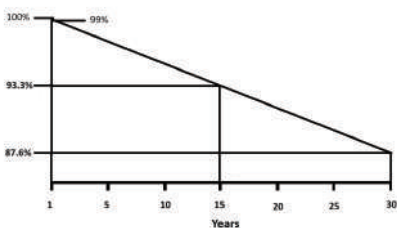
## PRODUCT CERTIFICATES

IS 14286 | IEC 61215 |  
IEC 61730-1/2 | IEC 62804 | IEC 61701 |  
IEC 62716 | IEC 61853  
IEC 60068-2-68

## ISO CERTIFICATES

- ISO 9001:2015 - Quality Management System
- ISO 14001:2015 - International Standard for Environmental Management System
- ISO 45001:2018 - International Standard for Occupational Health and Safety

### Linear Degradation & Performance Chart



The graphs are for reference purposes only.  
Please consult the Ganesh Green Bharat Limited technical team for further clarification.  
\*Third Party Insurance by  
NSE SME Listed (Stock Code : GGBL)



**12 YEARS** Product warranty on materials and workmanship

**30 YEARS** Industry leading with 87.6% performance output warranty\*

**<1 %**

First Year Degradation

**LID**

Negligible LID

**LeTID**

Anti-LeTID

**PID**

High PID Resistance

## PRODUCT KEY FEATURES

- Higher Efficiency with bifacial gain
- Positive Power Output
- Low LCOE & BOS
- Withstand heavy wind & snow loads
- Superior low-light performance
- Better temperature Coefficient for high-heat conditions
- Low annual linear degradation
- Tier-1 brand Solar Cells
- POE & EPE encapsulation for extended module life
- 6005-T6 alloy aluminium frame materials for robust mechanical stability
- Fully automated manufacturing facilities
- Sustain Dynamic & Static load
- Better Performance at Low Irradiance

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### ELECTRICAL PARAMETERS (STC)

MODEL	SG132G12R-650	SG132G12R-645	SG132G12R-640	SG132G12R-635	SG132G12R-630	SG132G12R-625	SG132G12R-620
Voc(V) Tolerance ± 5%	50.08	49.9	49.77	49.62	49.49	49.34	49.22
Isc(A) Tolerance ± 5%	16.3	16.25	16.22	16.17	16.11	16.05	15.98
Vmax (V) Tolerance ± 5%	41.57	41.41	41.31	41.18	41.05	40.95	40.82
Imax(A) Tolerance ± 5%	15.64	15.58	15.5	15.42	15.35	15.27	15.19
Pmax(Wp) Tolerance 0 to +3%	650	645	640	635	630	625	620
EFF(%) Positive Tolerance	24.06	23.88	23.69	23.51	23.32	23.14	22.95

\*STC: Irradiance 1000W/m<sup>2</sup>, Temperature 25°C, Spectrum at AM 1.5

### ELECTRICAL PARAMETERS (NMOT/NOCT)

MODEL	SG132G12R-650	SG132G12R-645	SG132G12R-640	SG132G12R-635	SG132G12R-630	SG132G12R-625	SG132G12R-620
Voc(V)	47.6	47.41	47.28	47.08	46.96	46.84	46.68
Isc (A)	13.25	13.21	13.15	13.1	13.05	12.98	12.93
Vmax (V)	39.16	39.01	38.92	38.8	38.7	38.58	38.49
Imax(A)	12.62	12.57	12.49	12.43	12.38	12.32	12.24
Pmax(Wp)	494	490	486	482	479	475	471
EFF(%)	22.85	22.68	22.5	22.32	22.15	21.98	21.79

\*NMOT/NOCT : Irradiance 800 W/m<sup>2</sup>, Ambient Temperature at NMOT/NOCT, Spectrum at AM 1.5

### POWER GAIN

	MODEL	SG132G12R-650	SG132G12R-645	SG132G12R-640	SG132G12R-635	SG132G12R-630	SG132G12R-625	SG132G12R-620
5%	PowerOutput(Wp)	683	677	672	667	662	656	651
	Module eff. (%)	25.27%	25.07%	24.88%	24.68%	24.49%	24.29%	24.10%
10%	PowerOutput(Wp)	715	710	704	699	693	688	682
	Module eff. (%)	26.47%	26.27%	26.06%	25.86%	25.66%	25.45%	25.25%
15%	PowerOutput(Wp)	748	742	736	730	725	719	713
	Module eff. (%)	27.67%	27.46%	27.25%	27.03%	26.82%	26.61%	26.40%
20%	PowerOutput(Wp)	780	774	768	762	756	750	744
	Module eff. (%)	28.88%	28.65%	28.43%	28.21%	27.99%	27.77%	27.54%
25%	PowerOutput(Wp)	813	806	800	794	788	781	775
	Module eff. (%)	30.08%	29.85%	29.62%	29.39%	29.15%	28.92%	28.69%

\*Note : Extra Power Gain from rear side & front side at STC depends on mounting structure (height, tilt angles etc.) and reflectivity of ground. Bi-faciality Factor:80±5%

### DESIGN SPECIFICATION

Cell Type/No of Cell	132 Half Cut, 16BB, N-Type TOPCon Bifacial
Dimension	2382x1134x30 mm
Weight	33.5 Kgs ± 3%
Front Cover	Low Iron, ARC, HS Tempered Glass 2.0 mm
Encapsulation	PID resistant and UV resistant Polymeric Film
Back cover	Low Iron, HS Tempered Glass 2.0mm
Frame	AA15 Anodized aluminum alloy
Diode	03 nos. Bypass Diodes
Junction box	IP68 Split JB
Cable	4 sq. mm, 400 to 1400 mm on request

### MAXIMUM RATING

System Voltage	1500VDC
Fuse Rating	30A
Application Class	A
Safety Class	II
Snow Load	5400 Pa
Wind Load	2400 Pa
Bifaciality Factor	80±5%

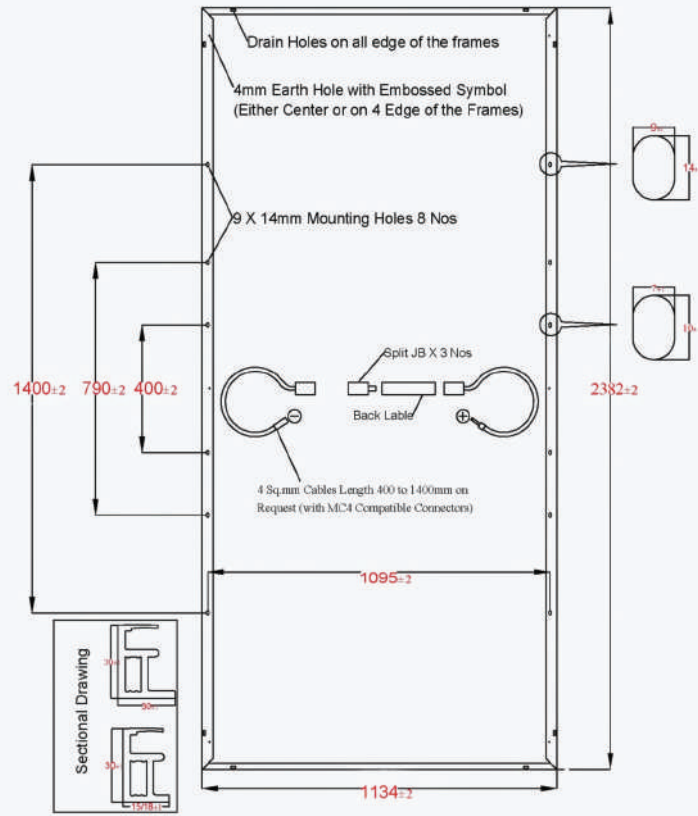
### TEMPERATURE RATING

α(Isc):	+0.05%/°C
β(Voc):	-0.26%/°C
γ(P max):	-0.30%/°C
NOMT/NOCT	45±2°C
Operating Range	-40°C to 85°C
Power Binning	0 to +4.99 W

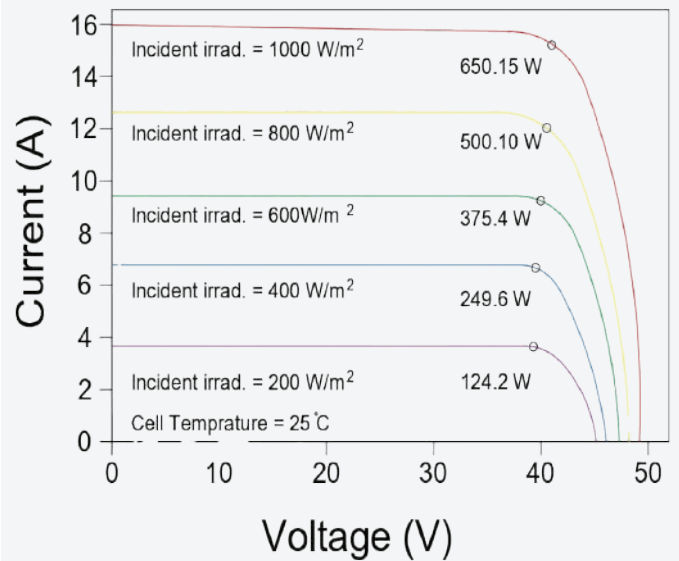
### STACKING STANDARD

STACKING STANDARD	40 FT
No. of Modules per Vehicle	640 Nos.
No. of Pallet per Vehicle	20 Pallets
Module Per Pallet	32 Nos.
Per Pallet Weight	Max. 1150 Kgs.

### Rear / Back View



### IV Curve Variation With Irradiance



### HEAD OFFICE

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### FACTORY

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