

HELOC<sup>®</sup> PLUS

GS12R-T132-GF  
(600 Wp - 620 Wp)



**High Saving**  
Lower LCOE, reduced BOS cost, shorter payback time



**High Efficiency**  
Excellent module conversion efficiency of up to 22.95%



**Better Weak Illumination Response**  
Higher power output even under low-light environments like on cloudy or foggy days



**LOW LID (Light Induced Degradation)**  
N-Type Solar cell Technology offers Lower Le-TID & LID



**PID Resistance**  
Excellent Anti-PID Performance guarantee limited power degradation for mass production



**10-30% Additional Power Generation**  
More than 10-30% additional power gain comparing with the regular modules.



**Wider Applicability**  
More application scenes like BIPV, vertical installation, snowfield, high-humid, windy and dusty area



## INDUSTRY LEADING PROTECTION



**12 Years Warranty For Materials And Processing**



**30 Years Warranty For Linear Power Output**

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 certified facility

## TECHNICAL DATA

Electrical Parameter at STC	Bifacial Monocrystalline Module				
Module Type	GS12R-T132-GF				
Capacity rating - Pmax(Wp)	600	605	610	615	620
Power Tolerance (%)	0-2				
Module efficiency (%)	22.21	22.39	22.58	22.76	22.95
Rated voltage - Vmp(V)	40.30	40.50	40.70	40.90	41.10
Rated current - Imp(A)	14.89	14.94	14.99	15.04	15.09
Open circuit voltage - Voc(V)	48.40	48.70	49.00	49.30	49.60
Short circuit current - Isc(A)	15.80	15.83	15.86	15.89	15.92

Under Standard Test Conditions (STC) of irradiance 1000 W/m<sup>2</sup>, spectrum AM 1.5 and Module temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±5%. Measuring Uncertainty ±3%

## Electrical Characteristics with 10% rear side power gain#

Capacity rating - Pmax(Wp)	660	665	671	676	682
Rated voltage - Vmp(V)	40.30	40.50	40.70	40.90	41.10
Rated current - Imp(A)	16.37	16.43	16.48	16.54	16.60
Open circuit voltage - Voc(V)	48.40	48.70	49.00	49.30	49.60
Short circuit current - Isc(A)	17.38	17.41	17.45	17.47	17.51

# Additional power gain from rear side compared to power of front side at STC depends on mounting structure (height, tilt angle etc.) and reflectivity of ground.  
**Bi-Faciality Factor: 80 ± 5 %**

## PERMISSIBLE OPERATING CONDITIONS

Temperature range	-40°C to +85°C
Maximum system voltage	1500 VDC
NMOT	45 ± 2°C
Hail resistance	Max. diameter of 25 mm with velocity 23 m/s

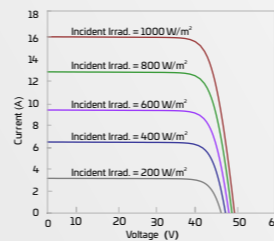
## TEMPERATURE COEFFICIENTS (TC)

Temperature Coefficient (Voc)	-0.25% /°C
Temperature Coefficient (Isc)	0.045% /°C
Temperature Coefficient (Pmax)	-0.30% /°C

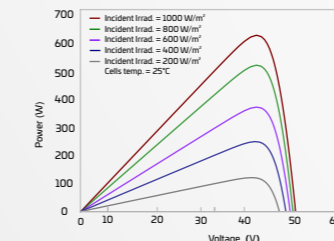
## PACKAGING CONFIGURATION<sup>###</sup>

Number of Modules per Pallet	36
No of pallet	20
No of module, 40ft HC container	720

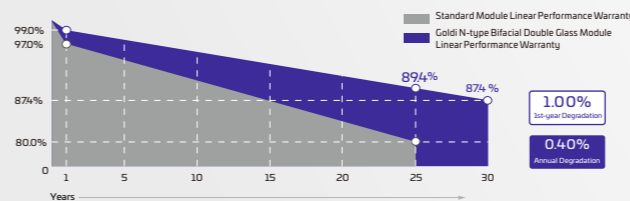
## IV CURVE



## PV CURVE



## LINEAR GRAPH



12 Years Product Material & Workmanship | 30 Years Linear Performance Warranty

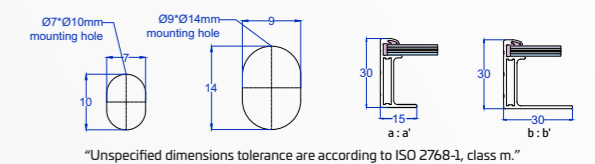
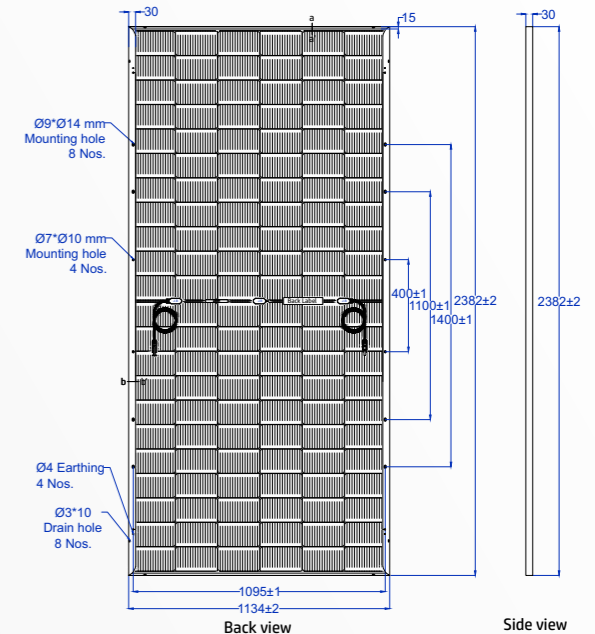
UTILITY | INDUSTRIAL | AGRICULTURE | RESIDENTIAL | INSTITUTIONAL

- Quantity of modules/container may get changed without prior notice.
- For handling & installation instructions, refer to Goldi's installation manual available on the company website
- Before placing an order, confirm your requirements with our sales representative
- The electrical data provided is for reference purposes only
- PV modules needs to be disposed as per government regulations, after it's life cycle
- Refer to Goldi's warranty document for terms and conditions
- Due to constant product modifications, Goldi reserves the right to amend the above specifications without prior notice
- Images in the datasheet are for representation purpose only

## MECHANICAL SPECIFICATION

Solar cells	132 pcs TOPCon cell technology, Multi BB(210mmx182.2mm)
Encapsulation	PID & UV resistance
Frame	Silver Anodized Aluminium Alloy
Front Glass	2.0 mm, High Transmission, AR Coated Semi Tempered Glass
Back Glass	2.0 mm, Heat Strengthened Glass
Dimensions	(L) 2382 mm x (W) 1134 mm x (H) 30 mm"
Weight	~33.7 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series Fuse Rating	30 A
Cable	4 mm <sup>2</sup> , Solar cable 400mm/1400mm length or Customized length
Connectors	MC4 Type
Application Class	Class A
Electrical Safety	Class II
Fire Safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

## DRAWING (MEASUREMENTS ARE IN MM)



## PRODUCT CERTIFICATIONS

IEC 61215: 2021, IEC 61730: 2023, IS 14286:2010/IEC 61215:2005, IS/IEC 61730-1 & 2: 2004, IEC 61701, IEC 62716, IEC 60068-2-62, IEC CD 61215-2:2018, UL 61730-1 & 2, IEC 62804, CEC

## MANAGEMENT SYSTEM CERTIFICATIONS



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