

HELOC<sup>®</sup> PRO

GS10-B120-TF  
(435 Wp - 460 Wp)



**High Saving**

Lower LCOE, reduced BOS cost,  
shorter payback time



**PID Resistance**

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



**High Efficiency**

Excellent module conversion  
efficiency of up to 21.26%



**IP68 Junction Box**

High waterproof level



**Low-light Performance**

Advanced glass and cell surface textured design  
ensure excellent performance in low-light environment



**INDUSTRY LEADING PROTECTION**

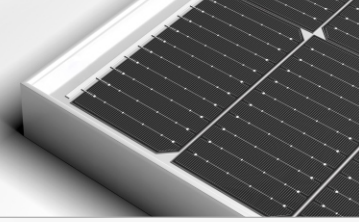


12 Years Warranty For  
Materials And Processing



25 Years Warranty For  
Linear Power Output

# BEST IN Grade Quality Class Results



## TECHNICAL DATA

Electrical Parameter at STC	Bifacial Monocrystalline Module					
Module Type	GS10-B120-GF					
Capacity rating – Pmax(Wp)	435	440	445	450	455	460
Power Tolerance (%)	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2
Module efficiency (%)	20.10	20.33	20.56	20.79	21.03	21.26
Rated voltage - Vmp(V)	36.03	36.26	36.37	36.51	36.65	36.81
Rated current - Imp(A)	12.05	12.14	12.24	12.33	12.42	12.52
Open circuit voltage - Voc(V)	41.02	41.04	41.16	41.22	41.28	41.35
Short circuit current - Isc(A)	13.34	13.36	13.41	13.45	13.55	13.58

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 ±3%.

Electrical Parameter at NMOT						
Capacity rating – Pmax(Wp)	322	326	329	333	337	341
Rated voltage - Vmp(V)	33.60	33.82	36.03	36.03	36.03	36.03
Rated current - Imp(A)	09.56	09.63	09.71	09.78	09.85	09.93
Open circuit voltage - Voc(V)	38.36	38.38	38.49	38.55	38.60	38.67
Short circuit current - Isc(A)	10.74	10.76	10.80	10.83	10.91	10.93

Irradiance 800 W/m<sup>2</sup>, ambient temperature 20°C, wind speed 1 m/sec

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

Capacity rating – Pmax(Wp)	479	484	490	495	501	506
Rated voltage - Vmp(V)	36.03	36.26	36.37	36.51	36.65	36.81
Rated current - Imp(A)	13.25	13.35	13.46	13.56	13.66	13.77
Open circuit voltage - Voc(V)	41.02	41.04	41.16	41.22	41.28	41.35
Short circuit current - Isc(A)	14.67	14.70	14.75	14.80	14.91	14.94

# 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 : 70 ± 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

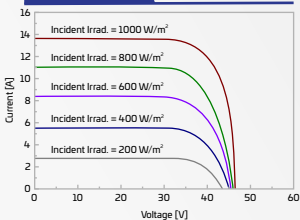
## TEMPERATURE COEFFICIENTS (TC)

Temperature Coefficient (Voc)	-0.25% /°C
Temperature Coefficient (Isc)	0.050% /°C
Temperature Coefficient (Pmax)	-0.32% /°C

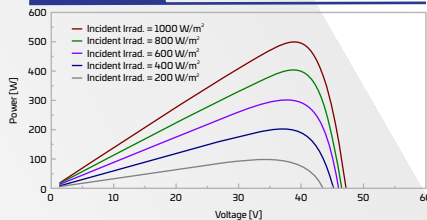
## PACKAGING CONFIGURATION##

Number of Modules per Pallet	31
No of pallet	24
No of module, 40ft HC container	744

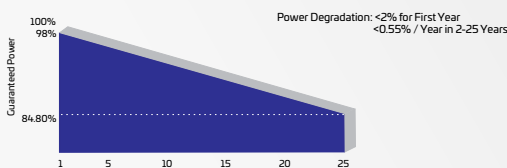
## IV CURVE



## PV CURVE



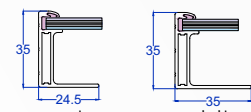
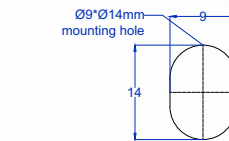
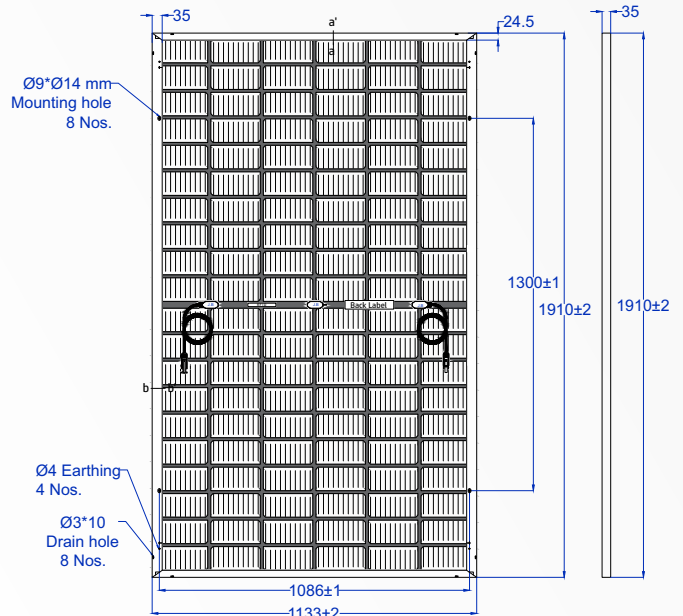
## LINEAR GRAPH



## MECHANICAL SPECIFICATION

Solar cells	120 pcs Bifacial monocrystalline Silicon(PERC), Multi BB
Encapsulation	PID & UV resistance
Frame	Silver Anodized Aluminium Alloy
Solar Glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Dimensions	(L) 1910 mm x (W) 1133 mm x (H) 35 mm"
Weight	~24 Kg
J-box	IP 68 certified, 3 diodes, Split junction box
Series Fuse Rating	25 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)



\*Unspecified dimensions tolerance are according to ISO 2768-1, class m."

## PRODUCT CERTIFICATIONS

IEC 61215: 2016, IEC 61730: 2016, IS 14286:2010/IEC 61215:2005, IS/IEC 61730-1 & 2: 2004, CEC, IEC 61701, IEC 62716, IEC 60068-2-68 UL 61730-1 & 2, IEC 62804, IEC 61853



## MANAGEMENT SYSTEM CERTIFICATIONS



UTILITY | INDUSTRIAL | AGRICULTURE | RESIDENTIAL

- ##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

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