www.hanusolar.com

HANU SOLAR

HANU Zorex G12R

HS10-T132-GF

600 Wp - 630 Wp

High Saving
Reduced LCOE, lower BOS expenses, and faster payback.

PID Resistance
Strong anti-PID reliability with minimal power loss in production.

High Efficiency
Superior conversion efficiency reaching up to 23.03%.

10-30% Additional Power Generation
Delivers 10% to 30% more energy output than standard modules.

Better Weak Illumination Response
Strong anti-PID reliability with minimal power loss in production.

Wider Applicability
Suitable for diverse environments such as BIPV, vertical setups, snowfields, and dusty or humid regions.

LOW LID (Light Induced Degradation)
Utilizes N-Type solar cell technology to reduce LeTID and LID effects.



INDUSTRY LEADING PROTECTION

12 YEARS — **12 Years** Warranty For Materials And Processing

30 YEARS — **30 Years** Warranty For Linear Power Output

MADE IN INDIA

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, IEC 62759, CEC | ISO 9001:2015 14001:2015 45001:2018 | CE

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

BEST IN Grade Quality Class Results

TECHNICAL DATA

Electrical Parameter at STC	Bifacial Monocrystalline Module						
Module Type	G12R						
Capacity rating – Pmax(Wp)	600	605	610	615	620	625	630
Power Tolerance (%)	0-2						
Module e fficiency (%)	22.21	22.39	22.58	22.76	22.95	23.13	23.31
Rated voltage - Vmp(V)	40.30	40.50	40.70	40.90	41.10	41.30	41.50
Rated current - Imp(A)	14.89	14.94	14.99	15.04	15.09	15.14	15.19
Open circuit voltage - Voc(V)	48.40	48.70	49.00	49.30	49.60	49.90	50.20
Short circuit current - Isc(A)	15.80	15.83	15.86	15.89	15.92	15.95	15.98

Under Standard Test Conditions (STC) of irradiance 1000 W/m^2, spectrum AM 1.5 and Module temper ature of 25°C. Except Pmax, all other parameters ha ve a toler ance of ±5%. Measuring Uncertainity ±3%

Electrical Characteristics with 10% rear side power gain#

Capacity rating – Pmax(Wp)	660	665	671	676	682	688	693
Rated voltage - Vmp(V)	40.30	40.50	40.70	40.90	41.10	41.30	41.50
Rated current - Imp(A)	16.37	16.43	16.48	16.54	16.60	16.66	16.71
Open circuit voltage - Voc(V)	48.40	48.70	49.00	49.30	49.60	49.90	50.20
Short circuit current - Isc(A)	17.38	17.41	17.45	17.47	17.51	17.54	17.58

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

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-bo x	IP 68 certified, 3 diodes, Split junction box
Series Fuse Rating	30 A
Cable	4 mm^2, 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)
Maximum Surface load	Snow load 5400 Pa, Wind load 2400 Pa

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

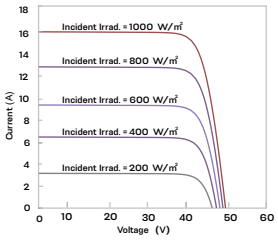
TEMPERATURE COEFFICIENTS (TC)

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

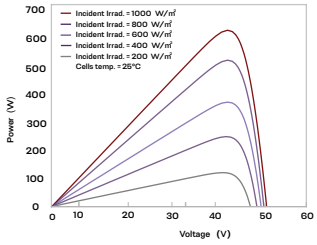
PACKAGING CONFIGURATION##

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

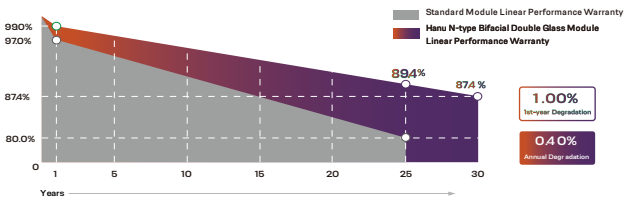
IV CURVE



PV CURVE

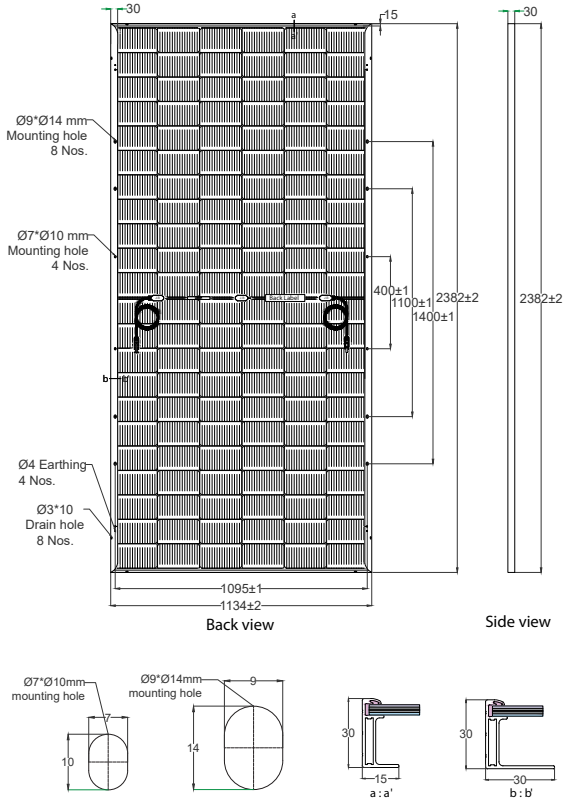


LINEAR GRAPH



12 Years Product Material & Workmanship 30 Years Linear Performance Warranty

DRAWING (MEASUREMENTS ARE IN MM)



"Unspecified dimensions toler ance are according to ISO 27 68-1, class m."

PRODUCT CERTIFICATIONS

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

MANAGEMENT SYSTEM CERTIFICATIONS

ISO 9001,
ISO 14001,
ISO 45001

UTILITY | INDUSTRIAL | AGRICULTURE | RESIDENTIAL | INSTITUTIONAL

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

+91 98765 43210
info@hanusolar.com
www.hanusolar.com