

ELAN SHINE TOPCON Series

N-type Dual Glass Modules

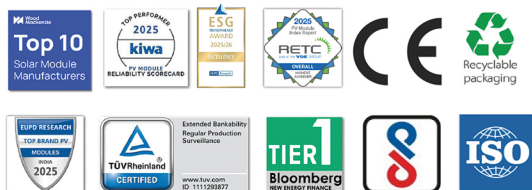
AB-G12R-132-XXX (XXX=605-640)
132 Cells | 605-640Wp






Maximum Power Output
640+ Wp

Maximum Efficiency
23.71%

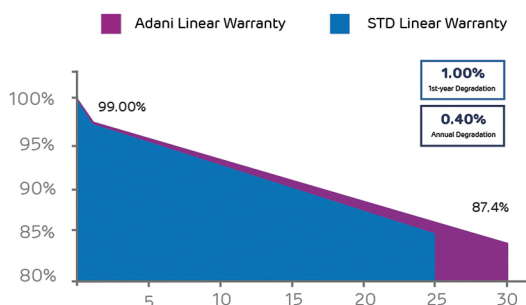
Power Tolerance
0~+5W

Highlights



-  **Up to 30% Additional Power Gain** when compared with conventional P-type module
-  **Excellent anti-LID, anti-LeTid & anti-PID Performance**- Higher power generation
-  **Better Output In Low Irradiance**- Higher power output even under low-light environments like on cloudy or foggy days
-  **Lower Temperature Coefficient**- More energy yield even under hot climatic conditions
-  **Bifaciality Factor 80 ± 5 %**

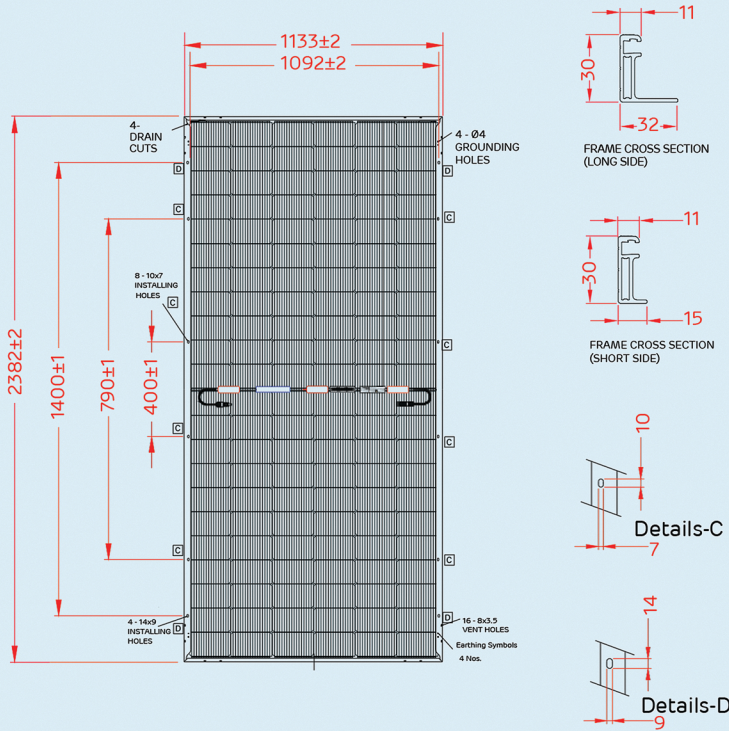
Linear Performance Warranty



Delivers Reliable Performance Over Time

- Full-automatic facility and industry-leading technology
- Best-in-class durability and reliability
- One of the largest fully integrated & comprehensive Solar PV ecosystem facility at single location.

Dimensions in mm



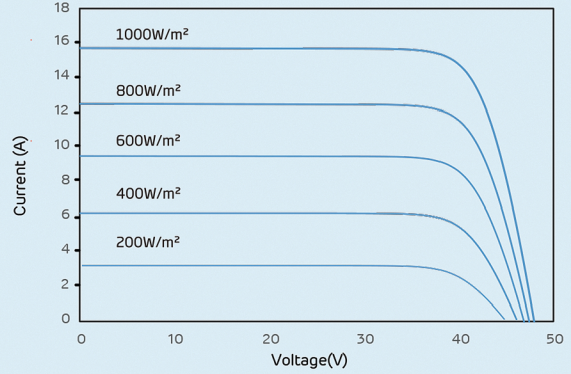
Technical Data

Multi Irradiance Curve

Bifacial G12R-132 HC Cell Module

Cell temp: 25°C

I-V CURVES OF PV MODULE (605 W)



Electrical data - All data measured to STC*

Electrical Specifications	Only Front (STC)							
	605	610	615	620	625	630	635	640
Peak power, Pmax (Wp)	605	610	615	620	625	630	635	640
Maximum voltage, Vmpp (V)	40.72	40.93	41.14	41.30	41.51	41.72	41.88	42.00
Maximum current, Imp (A)	14.86	14.91	14.96	15.02	15.06	15.11	15.18	15.26
Open circuit voltage, Voc (V)	48.14	48.27	48.40	48.53	48.67	48.80	48.93	49.06
Short circuit current, Isc (A)	15.87	15.89	15.90	15.92	15.93	15.94	16.01	16.09
Module efficiency (%)	22.42	22.60	22.79	22.97	23.16	23.34	23.53	23.71

*STC: Irradiance 1000 W/m², cell temperature 25°C, Airmass AM 1.5 according to EN 60904-3. Average efficiency reduction is approx. 3% at 200 W/m² according to EN 60904-1. Except Pmpp, all other parameter have tolerance of +/-3%, measurement uncertainty <3%.

Temperature co-efficients (Tc) and permissible operating conditions

Tc of open circuit voltage (β)	-0.23% /°C
Tc of short circuit current (α)	0.061% /°C
Tc of power (γ)	-0.28% /°C
Maximum system voltage	1500 VDC (IEC & UL)
NOCT	45°C ± 2°C
Temperature range	-40°C to + 85°C

Electrical Characteristics with different rear side power gain (Reference 610 Wp Front)

Electrical Specifications	Pmax gain from rear side		
	5%	10%	15%
Bifaciality Gain	5%	10%	15%
Peak power, (0 → 4.99 Wp) Pmax(Wp)	640	671	701
Maximum voltage, Vmpp (V)	40.93	40.93	40.93
Maximum current, Imp (A)	15.66	16.40	17.15
Open circuit voltage, Voc (V)	48.27	48.27	48.27
Short circuit current, Isc (A)	16.68	17.48	18.27
Module efficiency (%)	23.8	24.9	25.9

λ Power gain from rear side depends upon the ground reflectance (Albedo) & Bifaciality factor.

Mechanical data

Length	2382 mm
Width	1133 mm
Height	30 mm
Weight	33.6 kg
Junction Box	IP68
Cable and Connectors	300 mm length cable, MC4 compatible connectors
Application Class	Class A (Safety class II)
Superstrate	High Transmission ARC glass 2.0 mm
Cells	N-type Bifacial 132 Half-cut cell
Encapsulations	High volume resistivity and low MVTR
Substrate	Semi Tempered Glass 2.0 mm
Frame	Anodized Frame
Design Mechanical Load	3600 Pa-downward; 1600 Pa-Upward
Safety Factor for Mechanical Load	1.5
Maximum Series Fuse rating	35 A

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.

Caution:

Please read safety and installation instructions before using the product.

Warranty:

Please read Adani solar warranty documents thoroughly.

INSEL/MSFU/Rec./PMW/GEN-III/Rev.03

Packaging Configuration

Container	40'HC
Pallets / Container	20
Pieces / Container	720

Warranty and certifications

Product warranty# 12 years of product warranty

Performance warranty# Power degradation <1.0% in first year <0.40% / year in 2-30 years

Approvals and certificates+ : IEC 61215, IEC 61730, UL 61730, BIS, IEC 61853-1, IEC 62782, IEC 61853-2, IEC 61701, IEC 60068-2-68, IEC 62716 + - Certifications are under process