

We are authorised channel partner of Adani Solar

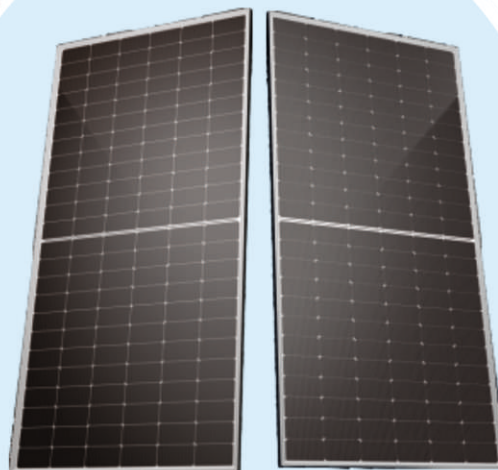
Elan Shine TOPCon Modules

**570+WP Output
22.28% Efficiency**

Elan SHINE TOPCon
570+ Wp

Elan SHINE
535+ Wp

SHINE Series



**upto 30
years**

Linear warranty assuring
optimal performance

**12
years**

Limited product
warranty

**10
GW**

Fully Integrated and
Comprehensive Solar
Manufacturing Ecosystem

FEATURES:

- G12, M10 Bifacial PERC/TopCon cells
- Half Cut, Multi Bus Bar Technology
- Ga/B doped Wafer Technology
- Module Efficiency upto 23.4%
- Excellent PID Resistance
- Linear Power Degradation as low as 0.40%
- Bifaciality Factor upto 80%
- Upto 30 Years Warranty



(Scan for datasheet)

Grace[®] **Renewable Energy Ltd.**

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World-Class Solar Modules for you

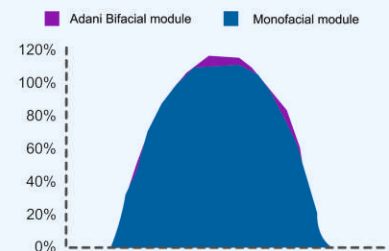
Adani Solar's cutting-edge technology, scale of operations, cost leadership and reliability, sets it apart from all other global competitors and supporting utilities. Adani Solar produces hi-tech solar panel modules using advanced technology and supplies reliable solar modules that are proven to meet the customer's exact requirements



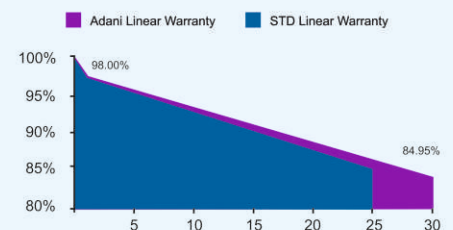
ELAN SHINE Series

Bifacial PV Modules
with Dual Glass,
MBB P-Type PERC Half-cut
(545 Wp) Panel

Higher generation due to Bifacial technology



Warranty based on Power



Highlights



MBB cell technology - excellent anti-microcracking performance with more balanced interior stress: grid pattern current path, lower cost



Longer Product life and performance -0.45% year over year degradation with 30 years warranty on power



Modules made with Ga doped wafer with Smart soldering



Across 50+ countries



Up to 70 ± 5 % Bifaciality Factor



Least degradation for LID & LeTID



Excellent PID resistance



worth USD 200 bn

INVEST IN TOP
PERFORMANCE

590 – 620 W_p

High Efficiency

22.95%

G12 R - 132

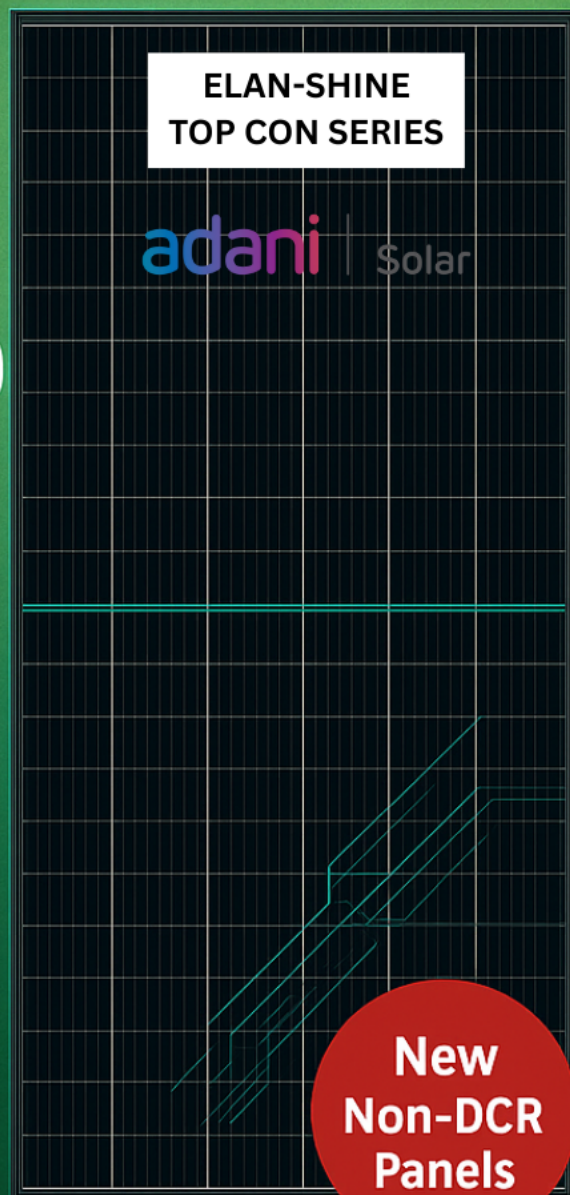
Half-Cell Module



Bifaciality +80 %



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Stock Available

ELAN SHINE TOPCON Series

N-type
Bifacial Transparent Backsheet Modules

ASB-M10-144-AAA (AAA=550-580) 144 Cells
| 550-580 Wp | Gen-II

580+ Wp

Maximum Power
Output

22.47%

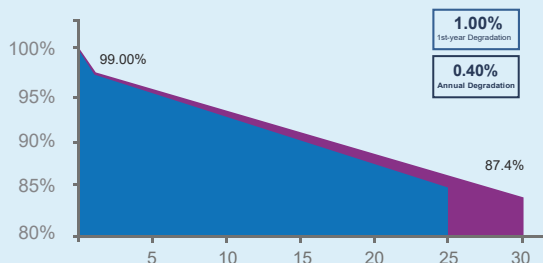
Maximum Efficiency

0~+5W

Power Tolerance

Linear Performance Warranty

Adani Linear Warranty STD Linear Warranty



Highlights



Up to 30% Additional Power Gain when compared with conventional P-type module



No LID Loss - Higher power generation



Better Output In Low Irradiance-
Higher power output even under low-light environments like on cloudy or foggy days



Better Temperature Coefficient-
Higher power generation under higher ambient temperature conditions

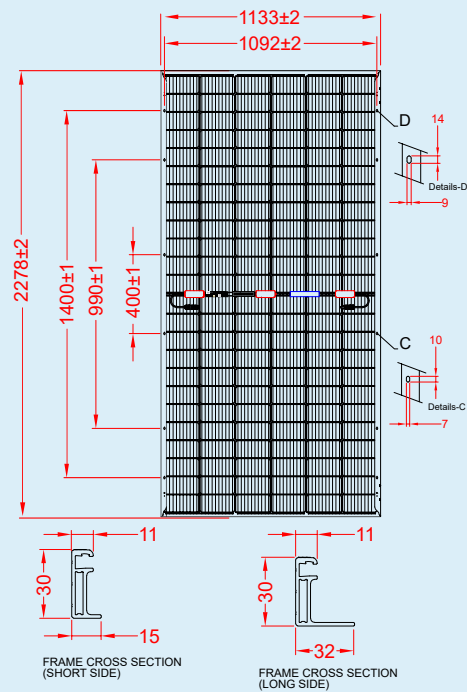


Bifaciality Factor $80 \pm 5 \%$

Delivers Reliable Performance Over Time

- Full-automatic facility and industry-leading technology
- Best-in-class durability and reliability

Dimensions in mm

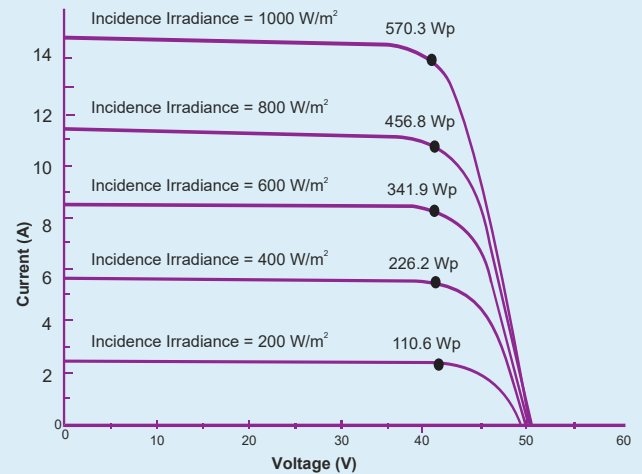


Technical Data

Multi Irradiance Curve

Bifacial M10-144 HC Cell Module

Cell temp: 25°C



Electrical data - All data measured to STC*

Electrical Specification	Only front (STC)						
Peak power, Pmax(Wp)	550	555	560	565	570	575	580
Maximum voltage, Vmpp (V)	43.35	43.52	43.69	43.86	44.03	44.20	44.40
Maximum current, Imp (A)	12.69	12.75	12.82	12.88	12.95	13.01	13.08
Open circuit voltage, Voc (V)	51.00	51.20	51.40	51.60	51.80	52.00	52.20
Short circuit current, Isc (A)	13.36	13.43	13.49	13.56	13.63	13.70	13.76
Module efficiency (%)	21.31	21.50	21.70	21.89	22.08	22.28	22.47

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

Electrical Characteristics with different rear side power gain (Reference 560 Wp Front)

Electrical Specification	Pmax gain from rear side ^λ				
Bifaciality Gain	10%	15%	20%	25%	30%
Peak power, (0 ~+ 4.99 Wp) Pmax(Wp)	616	644	672	700	728
Maximum voltage, Vmpp (V)	44.43	44.53	44.64	44.74	44.84
Maximum current, Imp (A)	13.87	14.47	15.07	15.67	16.27
Open circuit voltage, Voc (V)	51.70	51.81	51.91	52.00	52.11
Short circuit current, Isc (A)	14.83	15.50	16.18	16.86	17.53
Module efficiency (%)	23.8	24.9	26.0	27.1	28.20

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

Packaging Configuration

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

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.

Temperature co-efficients (Tc) and permissible operating conditions

T _c of open circuit voltage (β)	-0.26% /°C
T _c of short circuit current (α)	0.046% /°C
T _c of power (γ)	-0.31% /°C
Maximum system voltage	1500 VDC (IEC & UL)
NOCT	45°C ± 2°C
Temperature range	-40°C to + 85°C

Mechanical data

Length	2278 mm
Width	1133 mm
Height	30 mm
Weight	28 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 3.2 mm
Cells	N-type Bifacial 144 Half-cut cell
Encapsulation	High volume resistivity and low MVTR
Substrate	Transparent / Patterned Backsheet
Frame	Anodized Frame
Design Mechanical load	3600 Pa-downward; 1600 Pa-Upward
Safety Factor for Mechanical load	1.5
Maximum series fuse rating	30 A

#Warranty:

Please read Adani solar warranty documents thoroughly.

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



ELAN SHINE TOPCON Series

N-type
Dual Glass Modules

AB-G12R-132-XXX (XXX=590-620)
132 Cells | 590-620Wp

620+ Wp

Maximum Power
Output

22.95%

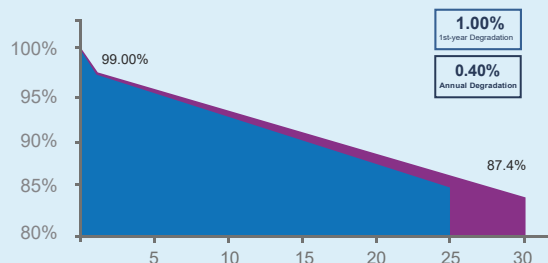
Maximum Efficiency

0~+5W

Power Tolerance

Linear Performance Warranty

Adani Linear Warranty STD Linear Warranty



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

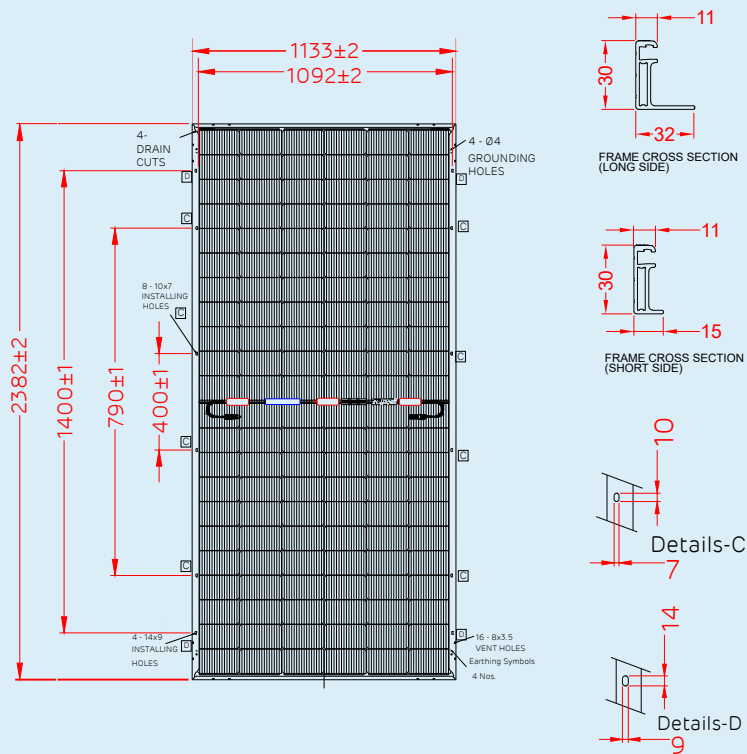


Bifaciality Factor $80 \pm 5 \%$

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



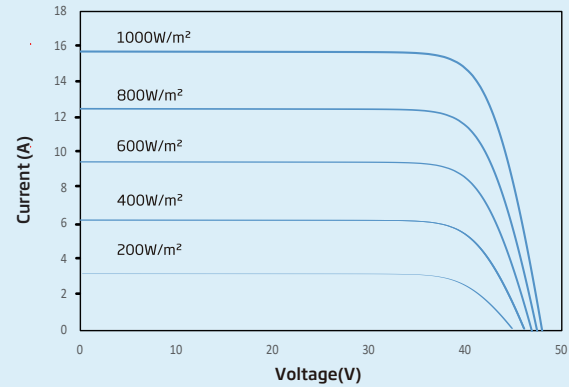
Technical Data

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 Specification	Only front (STC)						
Peak power, Pmax(Wp)	590	595	600	605	610	615	620
Maximum voltage, Vmpp (V)	39.70	40.00	40.30	40.50	40.80	41.10	41.40
Maximum current, Imp (A)	14.87	14.89	14.91	14.94	14.96	14.98	14.99
Open circuit voltage, Voc (V)	47.80	48.10	48.40	48.70	49.00	49.30	49.60
Short circuit current, Isc (A)	15.72	15.76	15.80	15.83	15.86	15.89	15.91
Module efficiency (%)	21.84	22.03	22.21	22.4	22.58	22.77	22.95

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

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

Electrical Specification	Pmax gain from rear side ^A		
Bifaciality Gain	5%	10%	15%
Peak power, (0 ~+ 4.99 Wp) Pmax(Wp)	641	671	701
Maximum voltage, Vmpp (V)	40.8	40.8	40.8
Maximum current, Imp (A)	15.71	16.46	17.2
Open circuit voltage, Voc (V)	49.0	49.0	49.0
Short circuit current, Isc (A)	16.65	17.45	18.24
Module efficiency (%)	23.8	24.9	25.9

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

Packaging Configuration

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

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T _c of open circuit voltage (β)	-0.23% /°C
T _c of short circuit current (α)	0.061% /°C
T _c 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

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
Encapsulation	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

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[†]Certifications are under process.

