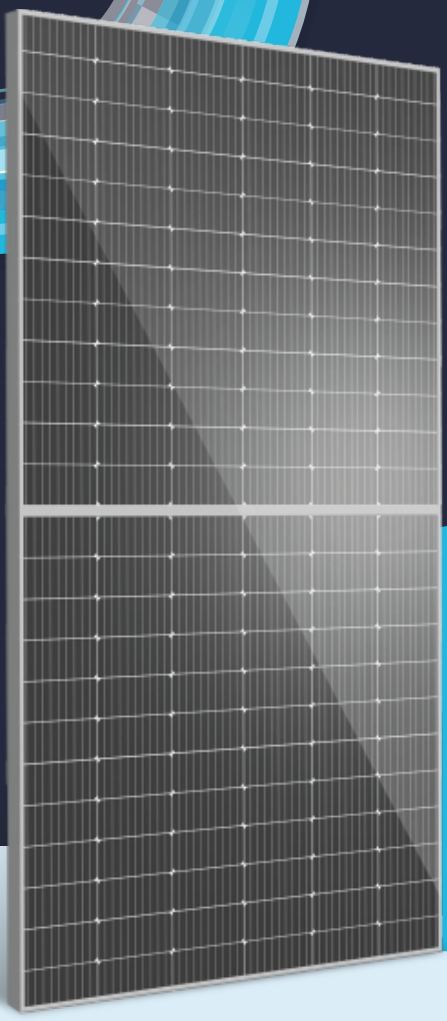
adani Solar

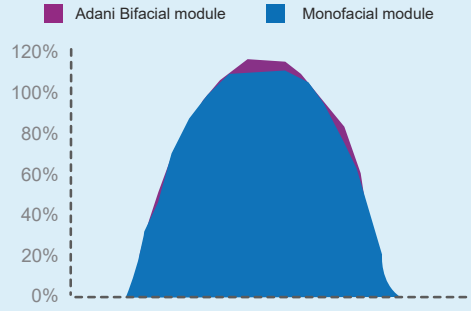
ELAN SHINE Series

Bifacial PV Modules with Dual Glass, MBB P-Type PERC Half-cut

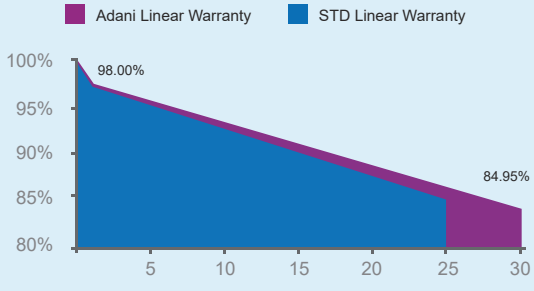
ASB-M10-144-AAA (AAA=520-550)
144 Cells | 520-550 Wp | Gen-II



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
- Up to 70 ± 5 % Bifaciality Factor
- Longer Product life and performance -0.45% year over year degradation with 30 years warranty on power
- HIGH BIFACIALITY FACTOR — Least degradation for LID & LeTID
- Modules made with Ga doped wafer with Smart soldering
- Excellent PID resistance

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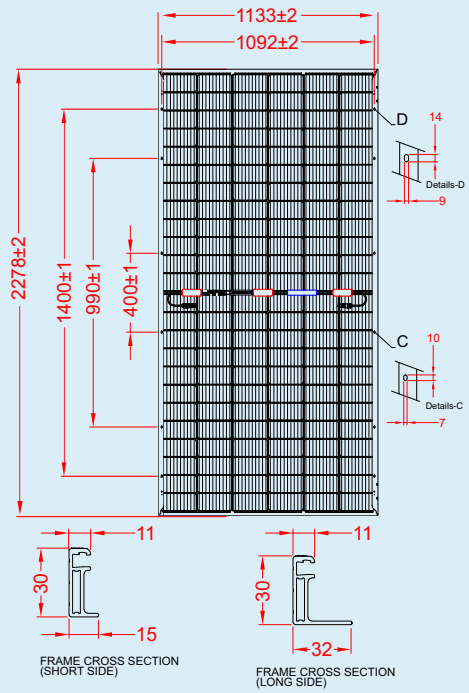
Dimensions in mm

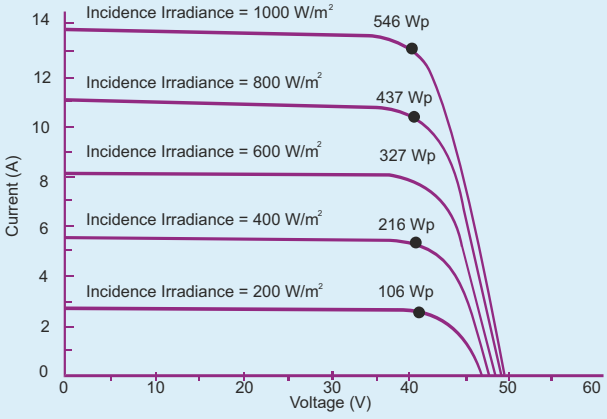


Technical Data

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, (0 ~+ 4.99 Wp) Pmax(Wp)	520	525	530	535	540	545	550
Maximum voltage, Vmpp (V)	41.18	41.34	41.49	41.64	41.80	41.94	42.09
Maximum current, Impp (A)	12.65	12.72	12.79	12.86	12.93	13.01	13.07
Open circuit voltage, Voc (V)	48.60	48.78	48.95	49.12	49.32	49.48	49.67
Short circuit current, Isc (A)	13.41	13.48	13.55	13.63	13.71	13.79	13.85
Module efficiency (%)	20.15	20.34	20.54	20.73	20.92	21.12	21.31

*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 Pmpp, all other parameter have tolerance of +/-3%, measurement uncertainty <3%.

Electrical Characteristics with different rear side power gain (Reference 525 Wp Front)

Electrical Specification	Pmax gain from rear sideλ			
Bifaciality Gain	10%	15%	20%	25%
Peak power, (0 ~+ 4.99 Wp) Pmax(Wp)	575	600	630	650
Maximum voltage, Vmpp (V)	41.35	41.35	41.36	41.36
Maximum current, Impp (A)	13.89	14.50	15.25	15.75
Open circuit voltage, Voc (V)	48.36	48.36	48.36	48.36
Short circuit current, Isc (A)	15.01	15.66	16.47	17.01
Module efficiency (%)	22.28	23.25	24.41	25.19

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 (ß)	-0.24% /°C
T_c of short circuit current (α)	0.037% /°C
T_c of power (Y)	-0.32% /°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	32 kg
Junction box	IP68; Junction box
Cable and connectors	300 mm length cable, MC4 compatible connectors
Application class	Class A (Safety class II)
Superstrate	High Transmission ARC, Heat Strengthened Glass 2.0 mm
Cells	144 Half-cut mono-crystalline P-type PERC bifacial solar cells; Multi bus bar
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	30 A

Warranty:

Please read Adani Solar warranty documents thoroughly.

Warranty and certifications

Product warranty# 12 years of product warranty
Performance warranty# Power degradation <2.0% in first year <0.45% / year in 2-30 years
Approvals and certificates†: IEC 61215, IEC 61730, BIS, UL 61730, IEC 61853,IEC 62716, IEC 60068-2-68, IEC 61701, IEC 62716, IEC 61853-2
† Few certificates under process

EU-28 WEEE COMPLIANT

Recyclable packaging

MSEL/MDL/PM/Gen-II/Rev09