

Bifacial PV Modules MBB P-Type PERC Half-cut

ASB-M10-144-AAA (AAA=520-545) | 144 Cells | 520-545 Wp

Highlights



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



Up to 600 Wp at 15% bifaciality Gain**



Characterised for 1000 W/m² & 200 W/m² on the front and rear side respectively



Up to 70 ± 5 % bifaciality Factor



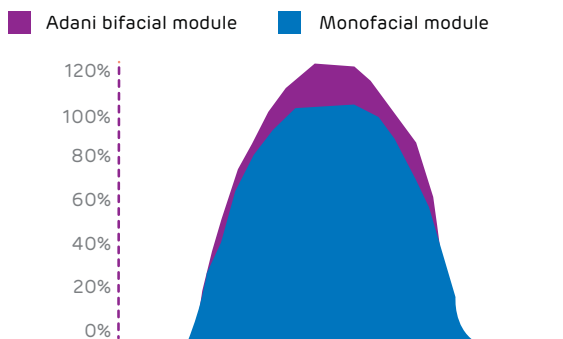
Least Degradation for LID & LeTID with Ga Doped wafer technology



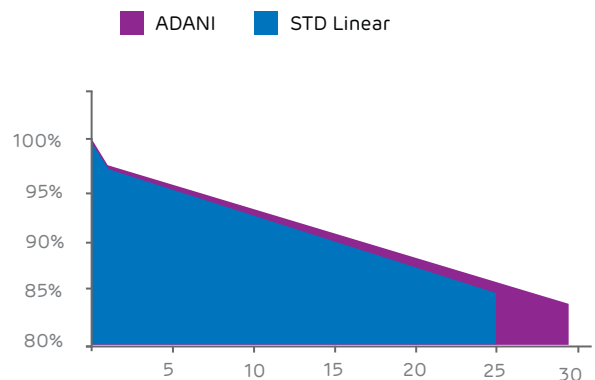
Excellent PID Resistance



Higher generation due to bifacial technology

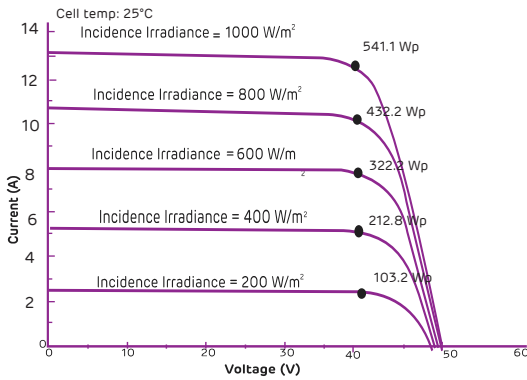


Bifacial technology

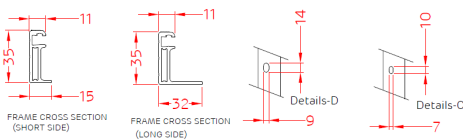
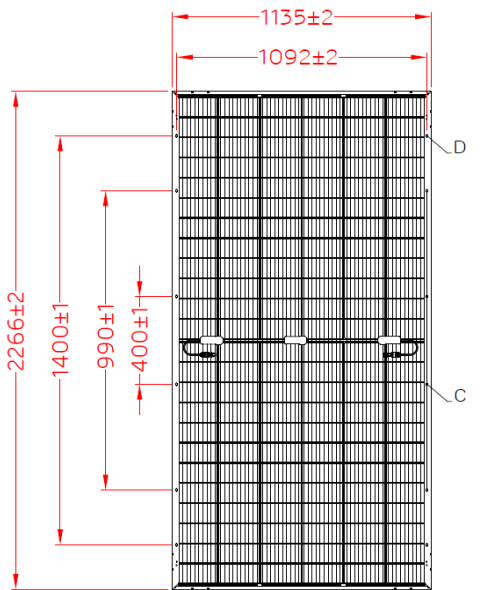


Technical Data

Multi irradiance curve for ASB-M10-144-AAA



Dimensions in mm



Warranty and certifications

Product warranty**
12 years of product warranty

Performance guarantee**
Power degradation < 2.0 % in first year
< 0.55 % / year in 2-30 years

Approvals and certificates* : IEC 61215 Ed2, IEC 61730, IEC 61701, UL 61730, MCS, JET, CEC, CEC-Aus, IEC 62716, IEC 62782, IEC 60068-2-68, IEC 61853, BIS

*All certifications are under process



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
Maximum voltage, Vmpp (V)	41.19	41.34	41.49	41.64	41.80	41.94
Maximum current, Imp (A)	12.65	12.73	12.79	12.86	12.93	13.01
Open circuit voltage, Voc (V)	48.18	48.36	48.57	48.72	48.92	49.07
Short circuit current, Isc (A)	13.54	13.62	13.70	13.74	13.84	13.92
Module efficiency (%)	20.22	20.41	20.60	20.80	21.00	21.20

*STC: Irradiance 1000 W/m², cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3
. Average efficiency reduction of 4.5 % at 200 W/m² according to EN 60904-1. Except Pmp, all other parameters have a tolerance of +/-3 %, measurement uncertainty < 3 %

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

Electrical Specification	Pmax gain from rear side*			
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, Imp (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 (%)	22.36	23.33	24.50	25.27

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

Temperature co-efficients (Tc) and permissible operating conditions

T _c of open circuit voltage (β)	-0.29 % /°C
T _c of short circuit current (α)	0.045 % /°C
T _c of power (γ)	-0.35 % /°C
Maximum system voltage	1500 V (IEC & UL)
NOCT	44°C ± 2°C
Temperature range	-40°C to + 85°C

Mechanical data

Length	2266 mm
Width	1135 mm
Height	35 mm
Weight	28.8 kg
Junction box	IP68; Junction box, MC4 compatible
Cable and connectors	300 mm length cable, MC4 & Amphenol compatible connectors
Application class	Class A (Safety class II)
Superstrate	High transmittance ARC glass-3.2 mm
Cells	144 Half-cut mono-crystalline P-type PERC bifacial solar cells; MBB bus bars
Encapsulation	High volume resistivity and low MVTR
Substrate	Transparent Backsheet
Frame	Anodized Frame
Mechanical load test as per IEC & UL	5400 Pa-front; 2400 Pa-back
Maximum series fuse rating	25 A

Packaging Configuration

Container	40'HC
Pallets / Container	18
Pieces / Container	589

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.

** Warranty:

Please read Adani solar warranty documents thoroughly.

*Caution:

Please read safety and installation instructions before using the product.