

Elan Shine 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 $70 \pm 5\%$ bifaciality Factor



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



Least Degradation for LID, LeTID



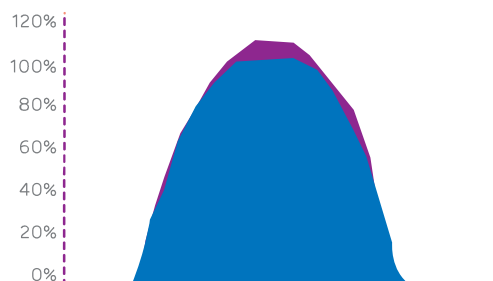
Modules Made with Ga doped wafer, Smart Soldering, 10BB



Excellent PID Resistance

Higher generation due to bifacial technology

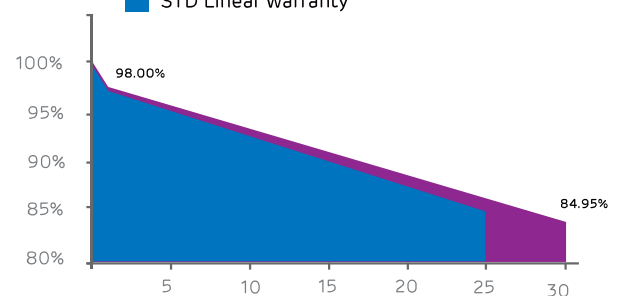
Adani bifacial module Monofacial module



Warranty based on power

ADANI Linear warranty

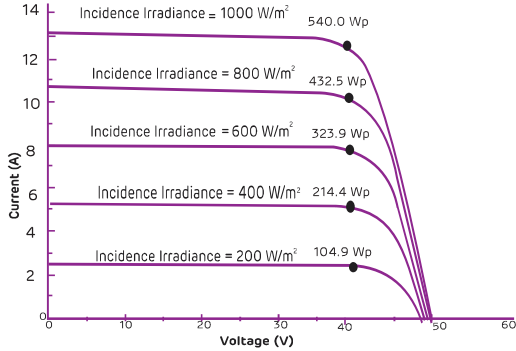
STD Linear warranty



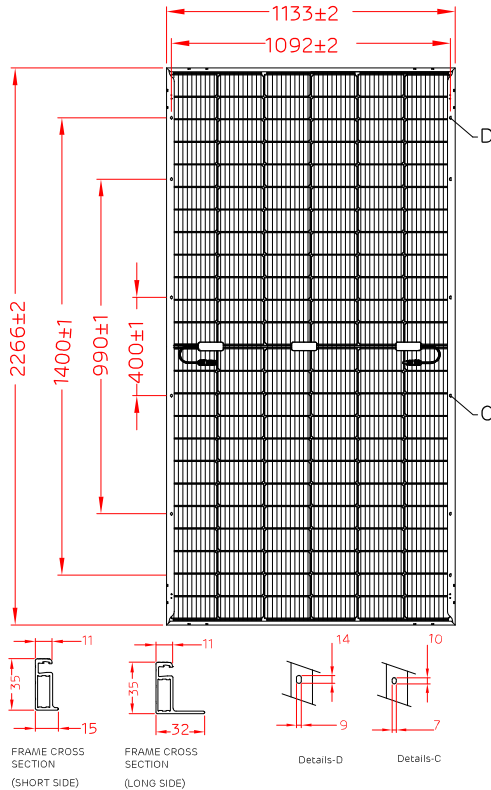
Technical Data

Multi irradiance curve Bifacial M10-144 HC cell Module

Cell temp: 25°C



Dimensions in mm



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, UL 61730, BIS, IEC 61853-1, IEC 62782,

CEC, IEC 60068-2-68, IEC 61701, IEC 62716, IEC 61853-2



Certifications are under process

MSEL/MDL/PDM/Rev04

Specifications included in this datasheet are subject to change without notice.

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)	41.18	41.34	41.49	41.64	41.80	41.94
Maximum current, Impp (A)	12.65	12.72	12.79	12.86	12.93	13.01
Open circuit voltage, Voc (V)	48.60	48.78	48.95	49.12	49.32	49.48
Short circuit current, Isc (A)	13.41	13.48	13.55	13.63	13.71	13.79
Module efficiency (%)	20.25	20.44	20.64	20.83	21.03	21.22

*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, 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 (%)	22.39	23.37	24.54	25.32

*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)	-0.30 %/°C
T _c of short circuit current (α)	0.050 %/°C
T _c of power (γ)	-0.38 %/°C
Maximum system voltage	1500 VDC (IEC & UL)
NOCT	45°C ± 2°C
Temperature range	-40°C to + 85°C

Mechanical data

Length	2266 mm
Width	1133 mm
Height	35 mm
Weight	33.5 kg
Junction box	IP68; Junction box
Cable and connectors	300 mm length cable, MC4 compatible connectors
Application class	Class A (Safety class II)
Superstrate	2.0 mm High Transmission ARC, Heat Strengthened Glass
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
Designed Mechanical Load	3600 Pa-downward; 1600 Pa-upward
Safety factor for Mechanical load	1.5
Maximum series fuse rating	30 A

Packaging Configuration

Container	40'HC	
Pallets / Container	20	Pieces / Container 620

Note:

- The specifications included in this datasheet are subjected 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.