

ETERNAL SHINE Series
Monofacial PV Modules
MBB P-Type PERC Half-cut

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

Highlights



MBB cell technology with 10BB, Smart Soldering



High module conversion efficiency upto 21.22%



Excellent low light performance



Least Degradation for LID & LeTID with Ga Doped wafer technology

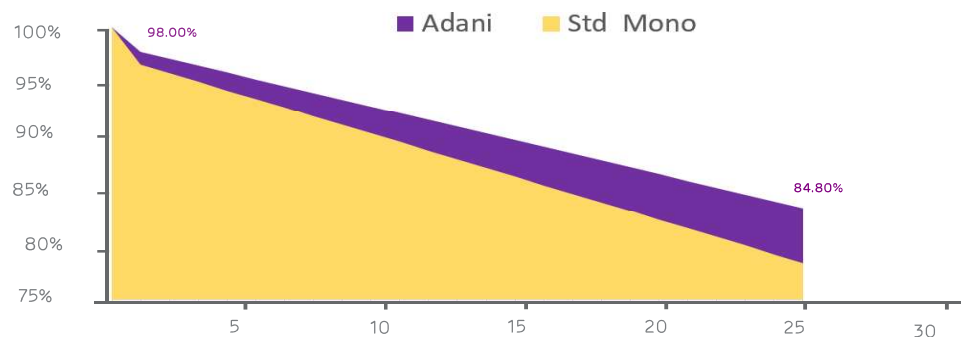


Excellent anti-micro cracking performance with more balanced interior stress:grid pattern current path, lower cost



Excellent PID Resistance

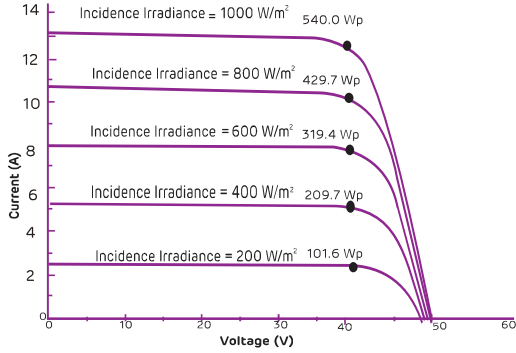
Warranty based on power



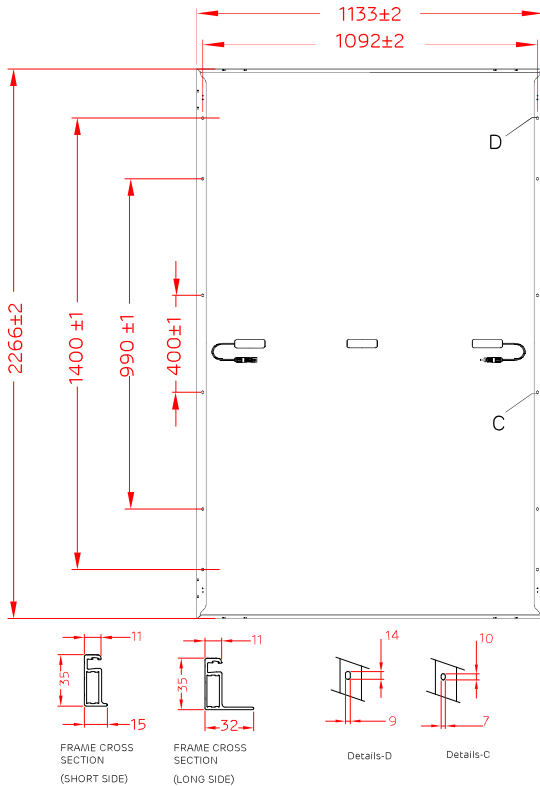
Technical Data

Multi irradiance curve Monofacial 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
< 0.55 % / year in 2-25 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)	41.18	41.34	41.49	41.64	41.80	41.94
Maximum current, Imp (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 Pmpp, all other parameters have a tolerance of +/-3 %, measurement uncertainty < 3 %

Electrical Characteristics at NOCT**

Pmax(Wp)	390	393	397	401	404	408
Maximum voltage, Vmpp (V)	38.39	38.54	38.68	38.82	38.98	39.10
Maximum current, Imp (A)	10.16	10.22	10.27	10.33	10.38	10.46
Open circuit voltage, Voc (V)	45.43	45.76	45.92	46.09	46.28	46.42
Short circuit current, Isc (A)	10.90	10.96	11.02	11.08	11.13	11.22

**NOCT irradiance 800 W/m², ambient temperature 20°C, Air Mass AM 1.5, Wind speed 1 m/sec

Temperature co-efficients (Tc) and permissible operating conditions

Tc of open circuit voltage (β)	-0.28 % /°C
Tc of short circuit current (α)	0.048 % /°C
Tc of power (γ)	-0.37% /°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	28.0 kg
Junction box	IP68; Junction box, MC4 compatible
Cable and connectors	300 / 1500 mm length cable, MC4 & Amphenol compatible connectors
Application class	Class A (Safety class II)
Superstrate	High transmittance ARC glass-3.2mm
Cells	144 Half-cut mono-crystalline P-type PERC bifacial solar cells; Multi bus bar
Encapsulation	High volume resistivity and low MVTR
Substrate	White Backsheet
Frame	Anodized Frame
Design Mechanical Load	3600 Pa-downward; 1600 Pa-upward
Safety factor for Mechanical load	1.5
Maximum series fuse rating	25 A

Packaging Configuration

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

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.