

# 5BB Mono-crystalline PERC Half-cut Silicon Solar PV Modules-1500V Series

ASM-14-PERC-AAA (AAA=355-380 | 144 Cells | 355-380 Wp)

## Highlights



10% higher power output compared to industry average poly-crystalline module



Higher performance at longer wavelengths of light (1100-1200 nm)



Superior temperature co-efficient and performance at NOCT, PTC ratings



Improved performance in shaded conditions



LIR treated cells with least LID effect



5 Busbar cells offering better reliability against microcracks



Triple EL checking to ensure defect free modules



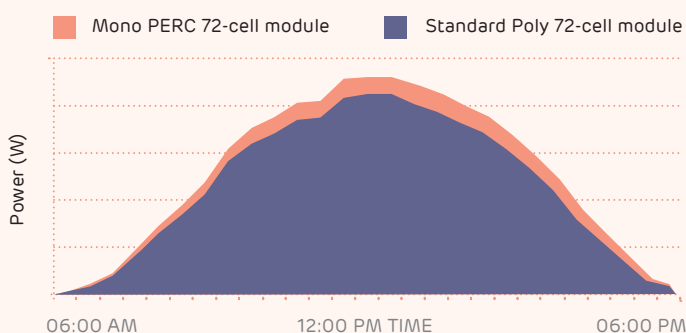
Reduces installation costs by 4%

Reduces transport costs by 3%

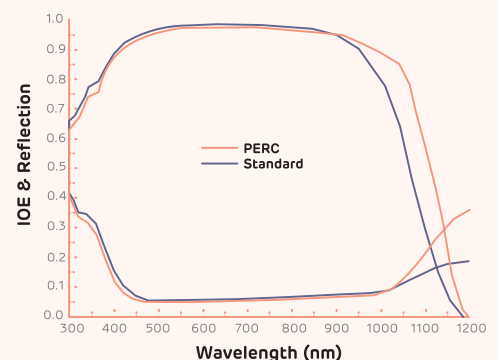
Reduces land costs by 3%

Reduces BOS costs by 3%

## Higher generation due to Mono PERC Half-cut technology



## Significant benefit of PERC technology



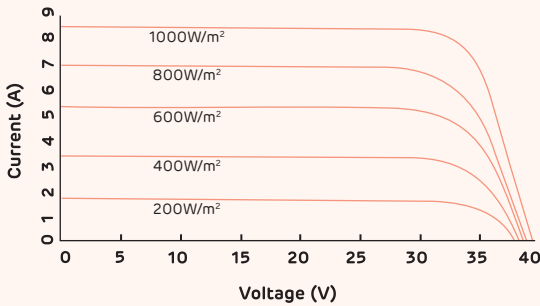
PERC technology enables better light capturing abilities at longer wavelength, weak and diffused light and in cloudy conditions.

**Note:** Data is based on the comparison of the Adani-144 cells mono-crystalline (355 Wp) with industry's 325 Wp poly-crystalline module for a scale of 1 MW installation and will vary from site to site.

# Technical Data

Solar

## Current-Voltage Curve

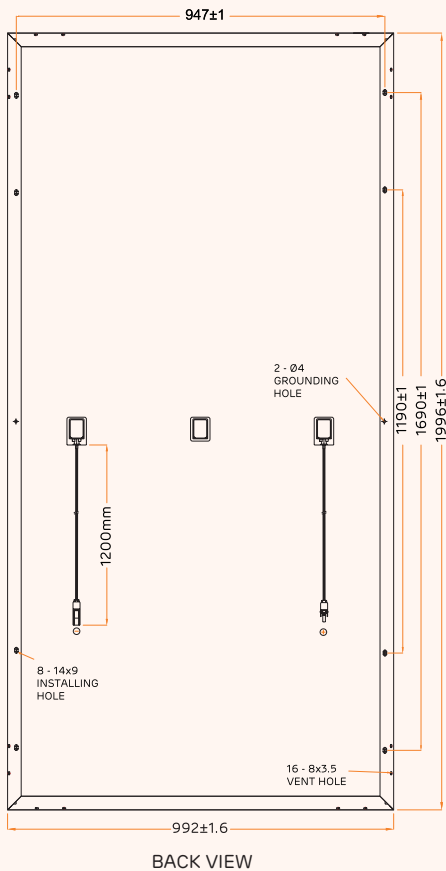


## Electrical data-All data measured to STC\*

Peak power, (0 ~+ 4.99 Wp) Pmax (Wp)	355	360	365	370	375	380
Maximum voltage, Vmpp (V)	39.41	39.61	39.76	39.96	40.15	40.33
Maximum current, Impp (A)	9.01	9.09	9.19	9.27	9.36	9.44
Open circuit voltage, Voc (V)	47.8	47.9	48.1	48.3	48.49	48.68
Short circuit current, Isc (A)	9.4	9.46	9.51	9.54	9.58	9.62
Module efficiency (%)	17.93	18.18	18.43	18.68	18.93	19.18

\*STC: Irradiance 1000 W/m², cell temperature 25°C, air mass AM1.5 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 %

## Dimensions in mm



## Electrical parameters at NOCT

Power (Wp) at NOCT	266	271	275	279.2	283.4	287.6
V@Pmax (V) at NOCT	37.62	37.92	38.13	38.28	38.47	38.67
I@Pmax (A) at NOCT	7.07	7.14	7.2	7.28	7.36	7.43
Voc (V) at NOCT	46.3	46.6	46.87	46.94	47.09	47.24
Isc (A) at NOCT	7.48	7.56	7.61	7.70	7.77	7.85

\*NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

## Temperature co-efficients (TC) and permissible operating conditions

TC of open circuit voltage ( $\beta$ )	-0.29% /°C
TC of short circuit current ( $\alpha$ )	0.048 % /°C
TC of power ( $\gamma$ )	-0.39 % /°C
Maximum system voltage	1500 V (IEC & UL)
NOCT	45°C ± 2°C
Temperature range	-40°C to + 85°C

## Mechanical data

Length	1996 mm
Width	992 mm
Height	35 mm / 40 mm
Weight	23 Kg (35 mm) / 28 Kg (40 mm)
Junction box	IP68
Cable and connectors	1200 mm length cable, MC4 & Amphenol compatible connectors
Application class	Class A (Safety class II)
Superstrate	High transmittance arc glass
Cells	144 mono-crystalline PERC solar cells ; 5 bus bars, 156.75 mm x 78.375 mm
Encapsulation	Low shrinkage PID resistant EVA
Substrate	Tri layer Back sheet
Frame	Anodised aluminium frame with twin wall profile
Mechanical load test as per IEC & UL	5400 Pa-front; 2400 Pa-back
Maximum series fuse rating	15 A

## Warranty and certifications

**Product warranty\*\***  
12 years of product warranty

**Performance guarantee\*\***  
Power degradation <-3 % in first year <-0.68 % / year in 2-25 years

**Approvals and certificates:** IEC 61215-2016, IEC 61730-2016, IEC 61701, UL 1703, MCS, JET, CEC, CEC-Aus, IEC 62716, IEC 62759, IEC 62804, IEC 62782, IEC 60068-2-68, IEC 61853, IS 14286, IS 61730

\*All certifications are under progress



**\*Caution:**  
Please read safety and installation instructions before using the product.

**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. All models sold will be as per MSPVL QAP.

**\*\* Warranty:**  
Please read Adani Solar warranty documents thoroughly.



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