

AMARON®

LASTS LONG, REALLY LONG.



POWERING UP YOUR LIFE, EVERY DAY.

SOLAR PV MODULES

MONO PERC BIFACIAL 545 & 550 Wp

DCR & Non-DCR available



PRODUCT
WARRANTY



WARRANTY FOR
LINEAR PERFORMANCE

IS 14286: 2010 / IEC 61215:
2015, IS / IEC 61730 (PART1):
2004 & IS / IEC 61730 (PART2)



R-91019895
www.bis.gov.in



HI-POT TESTED
FOR SUPERIOR
ELECTRICAL SAFETY



IP68 RATED –
BUILT TO WITHSTAND
DUST & WATER



POSITIVE POWER
TOLERANCE FOR ASSURED
PERFORMANCE



ENHANCED SOLAR
PERFORMANCE WITH
AR COATED GLASS

AMARON®

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SOLAR PV MODULE SPECIFICATION (MONO PERC- BIFACIAL)

ELECTRICAL PARAMETERS

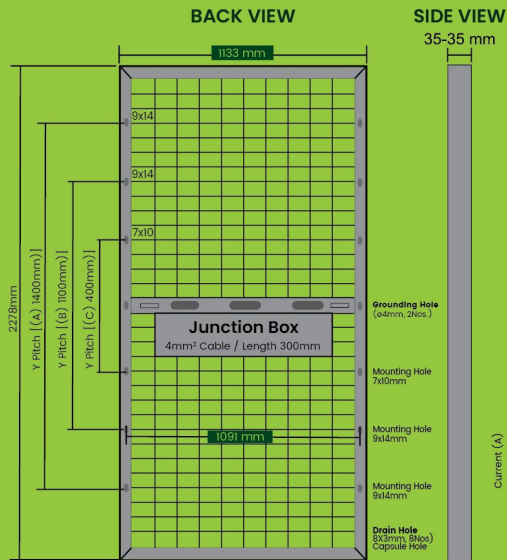
Performance Under STC (Standard Temperature Condition)

No.	Item	Description @STC*	
1.	Peak power Pmax (Wp)	545 Wp	550 Wp
2.	Power Tolerance	0 to +4.99 W	0 to +4.99W
3.	Maximum Voltage (Vmp)	42.01 V	42.14 V
4.	Open circuit Voltage (Voc)	49.91 V	50.06 V
5.	Maximum Current (Imp)	12.98 A	13.07 A
6.	Short Circuit Current (Isc)	13.59 A	13.65 A
7.	Module Efficiency	>21%	>21%
8.	Fill Factor	80.39 %	80.54 %
9.	Maximum System Voltage	1500 VDC	1500 VDC

*Note: STC- Irradiance 1000 W/m², Cell Temperature 25°C & AM = 1.56

MECHANICAL PARAMETERS

No.	Item	Description
1.	Length x Width x Height	2278mm x 1133mm x 35mm
2.	Weight	Min. 28 kgs Approximately
3.	Cell technology	Mono Crystalline or Mono Perc Half Cut
4.	Front Cover	ARC 3.2mm ARC Glass in Transparent Back sheet / 2mm Glass to Glass
5.	Rear Cover	2.0mm Semi Tempered Glass
6.	Cell Encapsulate	Ethylene Vinly Acetate (EVA) Sheet - PID resistant and UV resistant
7.	Junction box	Split Junction Box (3 nos. with individual Bypass Diode) - Weatherproof (IP68)
8.	Frame Material	Silver Anodized Aluminium Alloy
9.	Bypass Diode	40 A, 45 V, 200 °C max. junction temperature
10.	Cable	4 sq. mm, 300/400 mm length (1200 mm available on request)
11.	Connectors	MC4 compatible (MC4 original available on request)
12.	Application Class Rating	Class A
13.	Safety Class Rating	Class II
14.	Mechanical Load Test	5400 Pa-Front; 2400 Pa-Back (as per IEC & UL)



BIFACIAL OUTPUT – BACKSIDE POWER GAIN

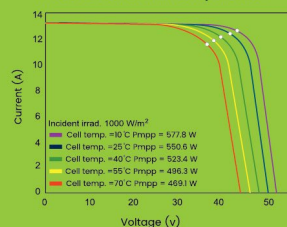
@STC [Bifaciality Factor: 75%± 10%]

Note: Bifacial gain depends on the power plant design & conditions.

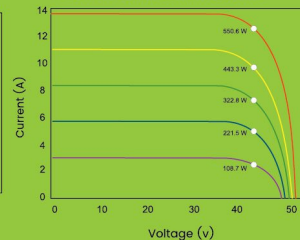
Electrical rating components should be selected on the actual bifacial gain at the site. Module currents indicated below.

		627W	632W
15%	Nominal Maximum Power (Pmax)	627W	632W
	Module Short-Circuit Current / Efficiency	24.35%	24.56%
20%	Nominal Maximum Power (Pmax)	654W	660W
	Module Short-Circuit Current / Efficiency	25.41%	25.63%
25%	Nominal Maximum Power (Pmax)	681W	686W
	Module Short-Circuit Current / Efficiency	26.46%	26.70%

IV Curve Varies with Temperature



IV Curve Varies with Irradiance



IV Curves for Front-Side illumination of 550 Wp Panel

MAXIMUM OPERATING CONDITIONS

Operating Temperature :	-40°C to +85°C
Maximum System Voltage :	1500V
Maximum Series Fuse Rating :	25A

TEMPERATURE COEFFICIENT

Current α (Isc) :	-0.0286%/°C
Voltage β (Voc) :	-0.2488%/°C
Power γ (Pmax) :	-0.3290%/°C

Note: Power measurement uncertainty: <±3%

PERFORMANCE UNDER NOCT (NOCT irradiances of 800 W/m², ambient temperature of 20°C, Wind speed 1m/s, Average NOCT = 45.25 °C)

Solar Module	545Wp	550Wp
Maximum Power (Pmax)	410.4 W	412.2 W
Optimum Operating Voltage (Vmp)	38.7 V	38.94 V
Optimum Operating Current (Imp)	10.59 V	10.62 V
Open Circuit Voltage (Voc)	46.7 V	46.83 V
Short Circuit Current (Isc)	11.22 A	11.15 A

*All dimensions are in mm with +/- 2mm tolerance.

Caution: Please read the safety and installation instructions before using this product.**Warranty:** Linear power warranty for 27 years, with degradation of up to 3% in the first year and 0.7 % per year from year 2 to year 27. Please read the Amara Raja Energy & Mobility warranty documents thoroughly.**Disclaimer:** Specifications included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D activities. Amara Raja Energy & Mobility reserves the right to make any adjustments to the information described here. The data contained in this specification do not represent the performance of an individual module. T&C apply.

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