



BROCHURE

Solar Energy |

www.rayonsolar.co.in

Rayon
SOLAR



About us

Rayon Solar is on a mission to revolutionize the renewable energy sector by harnessing the power of the sun to create a sustainable future. Established in [year], we have rapidly emerged as a leading innovator in solar energy solutions, driven by our commitment to environmental stewardship and technological excellence.





Why Choose Us

■ Best energy solution

The best energy solution depends on several factors, including your specific needs, location, budget, and environmental considerations.

■ 24/7 Technical Support

At Sustainable Energy Services, we understand the importance of reliable and uninterrupted access to technical support when it comes to sustainable energy systems.



Temperature Coefficient

0.27% / °C

Voltage

0.05% / °C

Current

0.35% / °C

Power

Technical Specifications

Power (Pm) in Watts (nominal)	550 (0±2%)
Open Circuit Voltage (Voc) in Volts	50.2
Short Circuit Current (Isc) in Amps	13.72
Voltage at Maximum Power (Vmp) in Volts	41.91
Current at Maximum Power (Imp) in Amps	3.13
Maximum System Voltage	1500V
Solar Cells per Module (Units)	144
Length x Width x Thickness (L x W x T) mm	2278X1134X35
Weight – Kg	29
Area – Sq. M	2.58
Module EFF - %	21.3
Series Fuse Rating	25 A

Construction Features

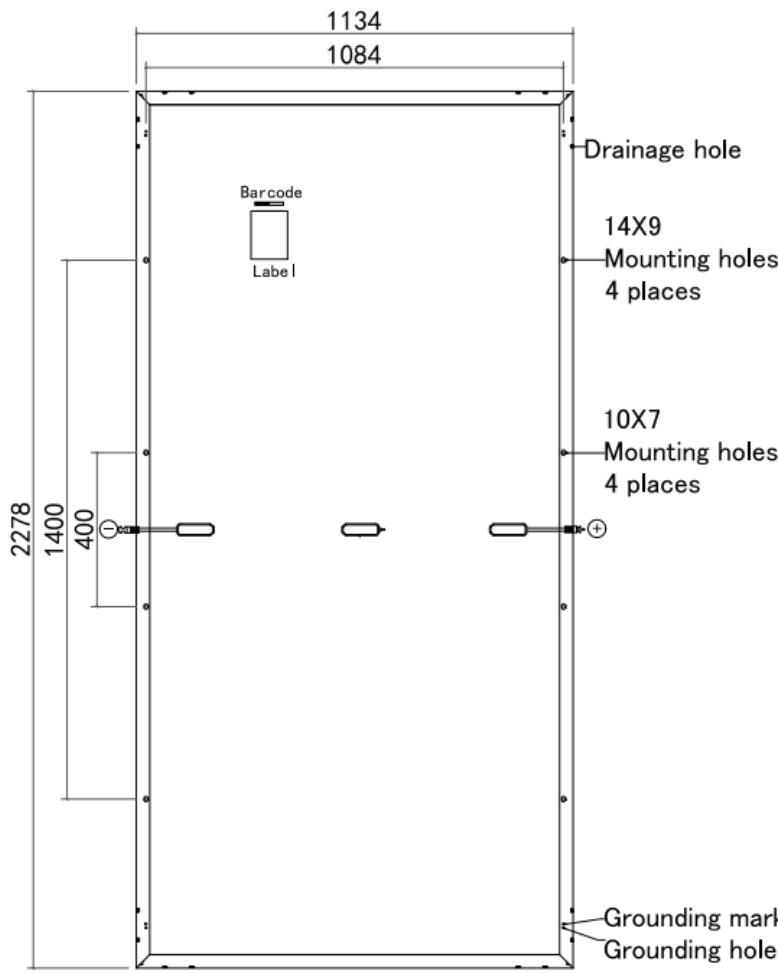
Type of cell :	MONO PERC,182 X 91mm 144 12x6/12x6
Glass :	3.2mmTempered & Low Iron (ARC)
Encapsulate:	PID Free & UV Resistant
Frame :	Anodized Aluminum Alloy
Junction Box	IP68 Weather proof MC4 Connector
Cable/connector	IP68 Rated 0.4M / MC4 compatible

*All electrical parameters specified at STC: 25°C cell temperature; 1000W/M² irradiance; AM 1.5

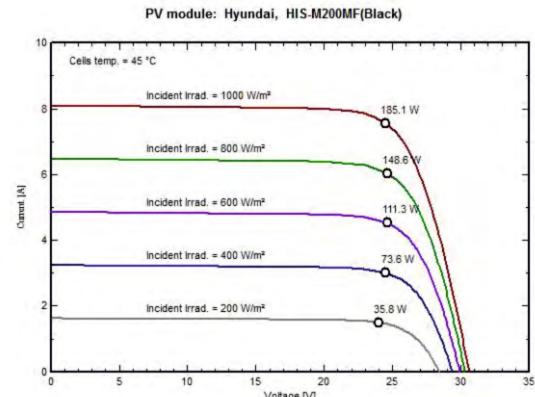
Warranty

12 years Product Warranty

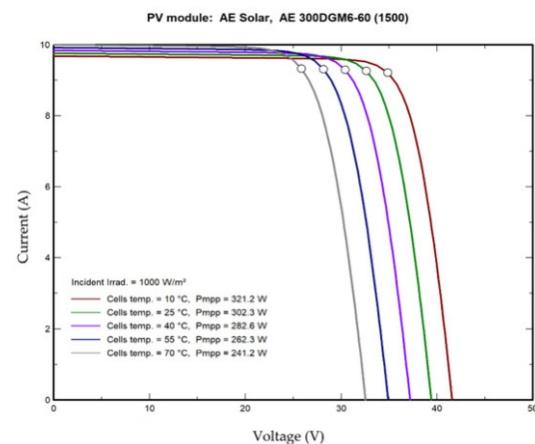
27 Years – power output warranty



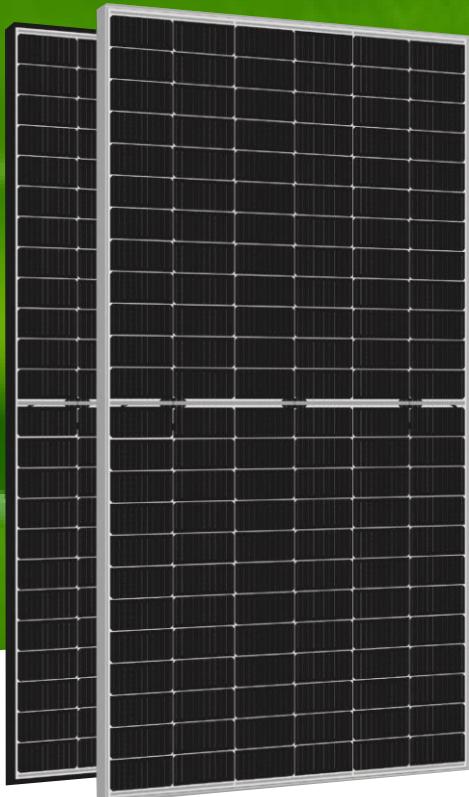
I-V Curve With IRRADIANCE



I-V Curve with Temperature



MODEL	RS144MB 500	RS144MB 535	RS144MB 540	RS144MB 545	RS144MB 550	RS144TP 580	RS144TP 585	RS144TP 590
Power (Pm) in Watts (nominal)	500 ($\pm 2\%$)	535 ($\pm 2\%$)	540 ($\pm 2\%$)	545 ($\pm 2\%$)	550 ($\pm 2\%$)	580 ($\pm 2\%$)	585 ($\pm 2\%$)	590 ($\pm 2\%$)
Open Circuit Voltage (Voc) in Volts	45.8	49.8	49.9	50	50.2	51.57	51.72	51.87
Short Circuit Current (Isc) in Amps	13.99	13.48	13.58	13.64	13.72	14.18	14.24	14.3
Voltage at Maximum Power (Vmp) in Volts	38.2	41.5	41.6	41.7	41.9	42.49	42.64	42.79
Current at Maximum Power (Imp) in Amps	13.1	12.9	13	13.07	13.13	13.65	13.72	13.79
Maximum System Voltage	1500V							
Solar Cells per Module (Units)	144	144	144	144	144	144	144	144
MODULE EFF %	21.1	20.7	20.9	21.1	21.3	22.4	22.6	22.8
Mounting Holes Pitch (Y1) – mm	1400	1400	1400	1400	1400	1400	1400	1400
MODULE LENGTH	2278	2278	2278	2278	2278	2278	2278	2278
MODULE WIDTH	1134	1134	1134	1134	1134	1134	1134	1134
Mounting Holes Pitch (Y2) – mm	1000	1000	1000	1000	1000	1000	1000	1000
Mounting Holes Pitch (X) – mm	1091	1091	1091	1091	1091	1091	1091	1091
Area – Sq. M	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58
Fuse Rating (A)	25	25	25	25	25	25	25	25
Application Class Rating	Class A							
Cell Size	HALF CUTT CELL							



N-TYPE TECHNOLOGY TOPCON Series

N-type
Bifacial Transparent Back sheet Modules

RS-M16-144-AAA (AAA = 590)
144 Cells 590 Wp | Gen-II

590+ Wp

Maximum Power Output

22.83%

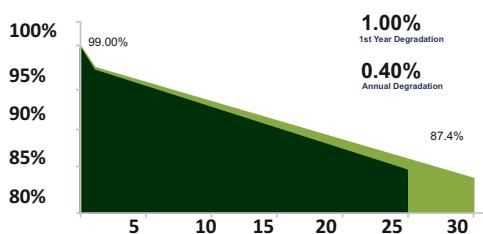
Maximum Efficiency

0~+5W

Power Tolerance

Linear Performance Warranty

Rayon Linear Warranty STD Linear Warranty



Highlights

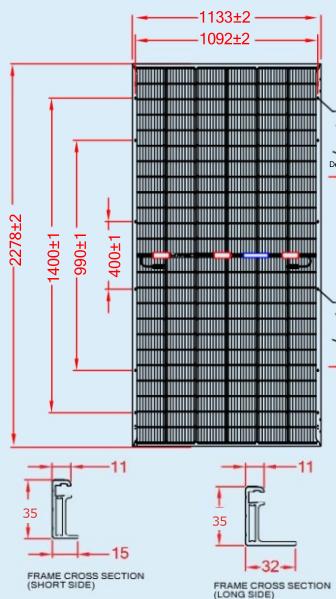
- **Up to 30% Additional Power Gain** when compared with conventional P-type module
- **No LID Loss** - Higher power generation
- **Better Output In Low Irradiance**- Higher power output even under low-light environments like on cloudy or foggy days
- **Better Temperature Coefficient**- Higher power generation under higher ambient temperature conditions
- **Bifaciality Factor $80 \pm 5\%$**

Delivers Reliable Performance Over Time

- Full-automatic facility and industry-leading technology
- Best-in-class durability and reliability

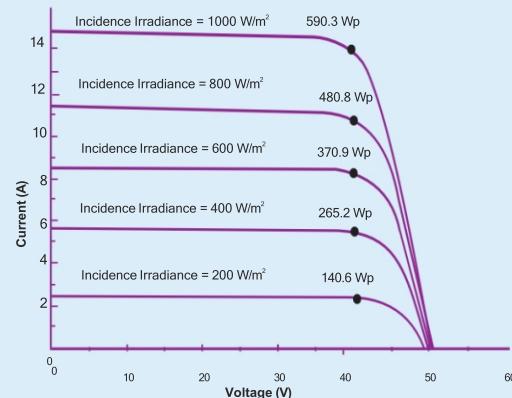
N-TYPE TECHNOLOGY TOPCON Series

Dimensions in mm



Technical Data

Multi Irradiance Curve
Bifacial M16-144 HC Cell Module
Cell temp: 25°C



MODEL	RS144MB 500	RS144MB 535	RS144MB 540	RS144MB 545	RS144MB 550	RS144TP 580	RS144TP 585	RS144TP 590
Power (Pm) in Watts (nominal)	500 (±2%)	535 (±2%)	540 (±2%)	545 (±2%)	550 (±2%)	580 (±2%)	585 (±2%)	590 (±2%)
Open Circuit Voltage (Voc) in Volts	45.8	49.8	49.9	50	50.2	51.57	51.72	51.87
Short Circuit Current (Isc) in Amps	13.99	13.48	13.58	13.64	13.72	14.18	14.24	14.3
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Maximum System Voltage	1500V							
Solar Cells per Module (Units)	144	144	144	144	144	144	144	144
MODULE EFF %	21.1	20.7	20.9	21.1	21.3	22.4	22.6	22.8
Mounting Holes Pitch (Y1) – mm	1400	1400	1400	1400	1400	1400	1400	1400
MODULE LENGTH	2278	2278	2278	2278	2278	2278	2278	2278
MODULE WIDTH	1134	1134	1134	1134	1134	1134	1134	1134
Mounting Holes Pitch (Y2) – mm	1000	1000	1000	1000	1000	1000	1000	1000
Mounting Holes Pitch (X) – mm	1091	1091	1091	1091	1091	1091	1091	1091
Area – Sq. M	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58
Fuse Rating (A)	25	25	25	25	25	25	25	25
Application Class Rating	Class A							
Cell Size	HALF CUTT CELL							

Product warranty** 12 years of product warranty

Performance warranty** Power degradation <1.0% in first year <0.40% / year in 2-30 years

Approvals and certificates*: IEC 61215, IEC 61730, UL 61730, BIS, IEC 61853-1, IEC

62782, IEC 61853-2, IEC 61701, IEC 60068-2-68, IEC 62716

*All certification are under process

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