

# AHNAY SERIES

Bi-53-560 to Bi-53-590

Framed dual glass bifacial module

**WAAREE**<sup>®</sup>

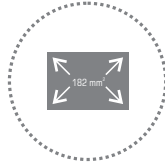
One with the Sun



Highest reliability & enhanced crack tolerant 10BB module



Module utilizing Half cut cell for optimum performance



Highly efficient Mono PERC M10 cells



Best in class thermal coefficients



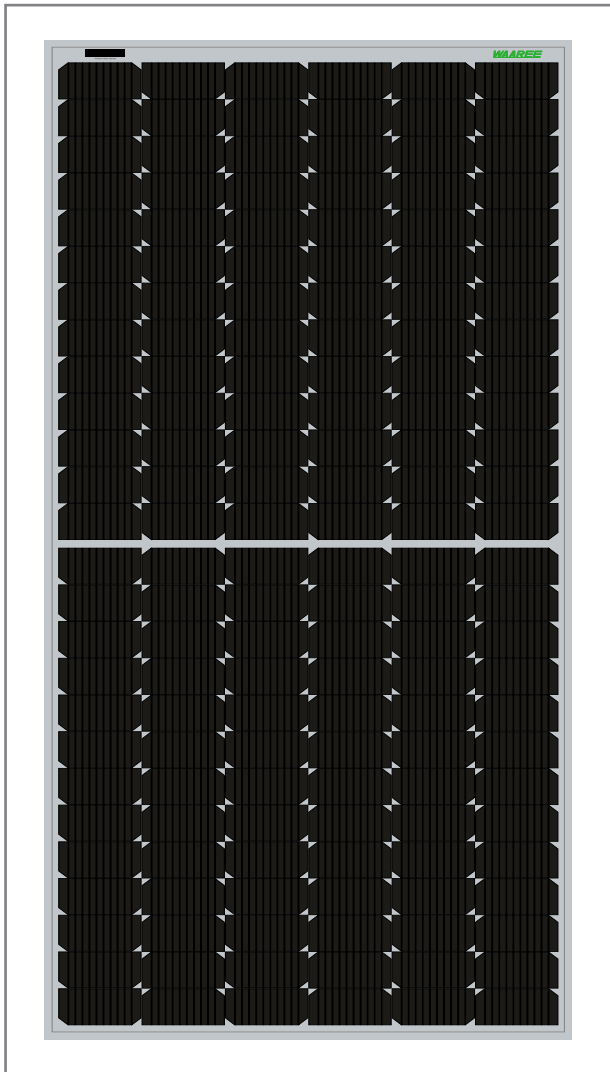
Highest commercial gains, lower LCOE



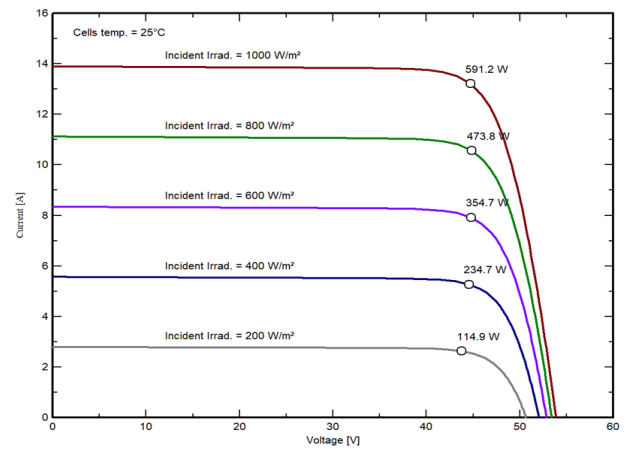
Split junction box improve heat dissipation



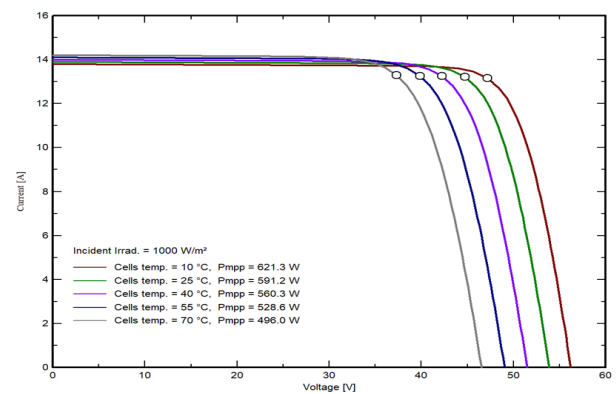
Increase shade tolerance



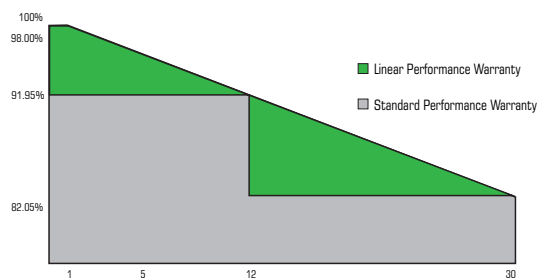
## I-V VARIATION WITH IRRADIANCE



## I-V VARIATION WITH TEMPERATURE



The Graphs are for reference purpose only. Please consult Waaree technical team for further clarifications.



ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018  
Independent assessment of factories by BLACK & VEATCH

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## ELECTRICAL CHARACTERISTICS

Models	Pmax (W)		Vmp (V)		Imp (A)		Isc (A)		Voc (V)		Module Eff. (%)
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
Bi-53-560	560	422.2	44.56	41.00	12.57	10.29	13.49	10.89	53.07	49.80	20.05
Bi-53-565	565	425.9	44.67	41.20	12.65	10.35	13.55	10.94	53.18	49.90	20.23
Bi-53-570	570	429.1	44.79	41.30	12.73	10.40	13.63	11.00	53.29	50.00	20.41
Bi-53-575	575	432.8	44.93	41.40	12.80	10.45	13.69	11.05	53.45	50.10	20.59
Bi-53-580	580	436.4	45.05	41.60	12.88	10.50	13.76	11.11	53.59	50.30	20.77
Bi-53-585	585	440.4	45.21	41.70	12.95	10.56	13.83	11.16	53.73	50.40	20.95
Bi-53-590	590	443.9	45.34	41.80	13.02	10.61	13.90	11.22	53.87	50.50	21.13

\*Standard Test Conditions (STC) - 1000 W/m<sup>2</sup> irradiance, Air Mass 1.5 and 25°C cell temperature. Nominal Operating Cell Temperature (NOCT) - 800 W/m<sup>2</sup> irradiance, Air Mass 1.5, Ambient temperature 20°C and Wind speed 1 m/s. Average power reduction of 4.5% at 200 W/m<sup>2</sup> as per IEC 60904-1. Measuring Uncertainty ± 3%.

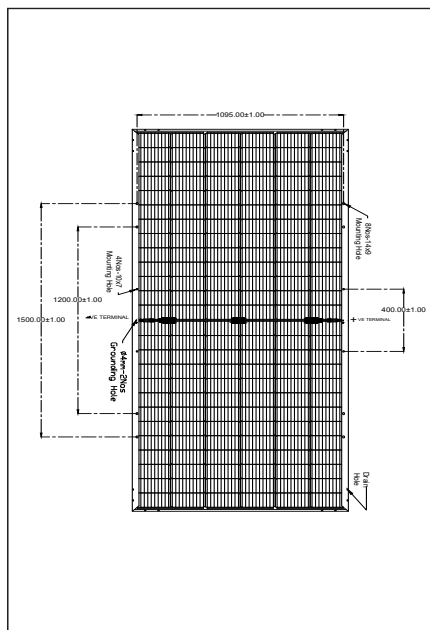
System Voltage	1500 V	Series Fuse Rating	25 A
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## BI-FACIAL OUTPUT - BACKSIDE POWER GAIN\*

		Bi-53-560	Bi-53-565	Bi-53-570	Bi-53-575	Bi-53-580	Bi-53-585	Bi-53-590
15%	Power Output (W)	644	650	656	661	667	673	679
	Module Efficiency (%)	23.06%	23.26%	23.47%	23.68%	23.88%	24.09%	24.29%
20%	Power Output (W)	672	678	684	690	696	702	708
	Module Efficiency (%)	24.06%	24.28%	24.49%	24.71%	24.92%	25.14%	25.35%
25%	Power Output (W)	700	706	713	719	725	731	738
	Module Efficiency (%)	25.06%	25.29%	25.51%	25.74%	25.96%	26.18%	26.41%
30%	Power Output (W)	728	735	741	748	754	761	767
	Module Efficiency (%)	26.07%	26.30%	26.53%	26.76%	27.00%	27.23%	27.46%

\*The bifacial gains are dependant on the power plant design and location

## DESIGN SPECIFICATIONS



## THERMAL CHARACTERISTICS

Temperature coefficient of Current (Isc), $\alpha$ (%/°C)	0.05
Temperature coefficient of Voltage (Voc), $\beta$ (%/°C)	-0.27
Temperature coefficient of Power (Pm), $\gamma$ (%/°C)	-0.35
NOCT (°C)	43 ± 2
Operating temperature range (°C)	-40 to 85

## MECHANICAL CHARACTERISTICS

Length x Width x Thickness (L x W x T)	2465 mm (L) x 1133 mm (W) x 35 mm (T)
Weight	35 kgs
Solar Cells per Module (Units) / Arrangement	156 cells / (13x6    13x6)
Solar Cell Type & Size	Mono PERC Bifacial, 91 x 182 mm
Front / Back Glass (Material / Thickness)	2.0 mm Low Iron glass
Encapsulate	PID Free & UV Resistant
Junction Box (Protection degree / Material)	IP68 / Weatherproof PPO
Cable & Connector (Protection degree / Type)	IP68 rated / MC4 compatible
Cable cross - section & Length	4 mm <sup>2</sup> & 500mm

Waaree Energies Ltd. is amongst the top Solar Energy Companies and has the country's largest Solar PV Module manufacturing capacity of 5 GW. In addition, it is committed to provide top notch EPC services, project development, rooftop solutions, solar water pumps and also an Independent Power Producer. Waaree has its presence in over 325+ locations nationally and 68 countries globally.

12 Years Product Warranty • 30 Years Power Output Warranty

- The electrical data given here is for reference purpose only.
- Please confirm your exact requirements with the sales representative while placing your order.
- Refer installation Manual instructions & Waaree warranty statement for terms & conditions.
- Waaree Reserves the right to change the specifications without prior notice.z

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