

ELITE R SERIES

N-TYPE

BiN-34-545 to BiN-34-575

Framed Dual Glass Bifacial module

WAAREE[®]

One with the Sun



Highest reliability & enhanced crack tolerance MBB module



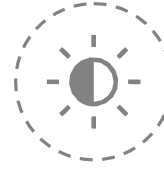
Sustain heavy snow & wind loads (5400 Pa & 2400 Pa)



Best in class thermal coefficients



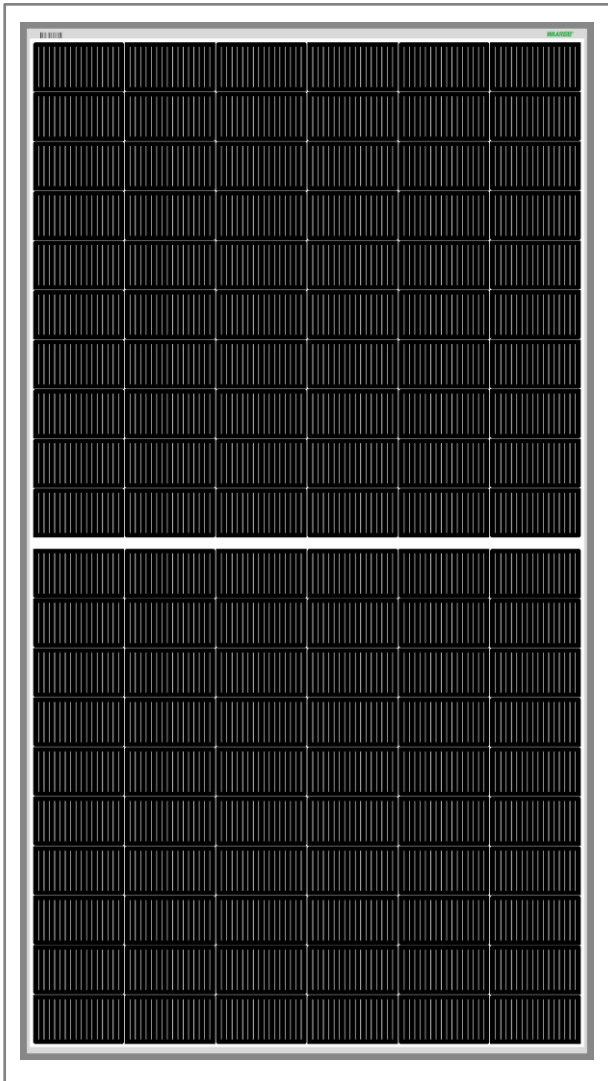
Highest commercial gains, lower LCOE



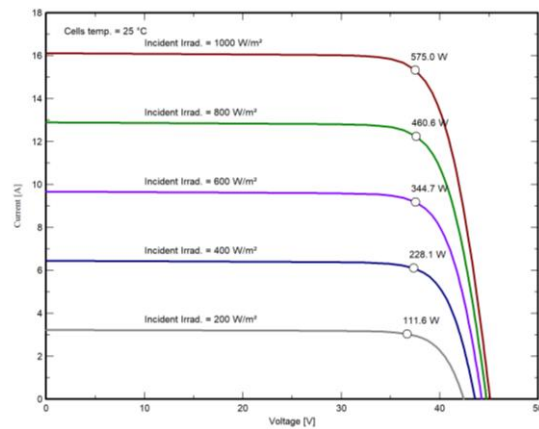
Better weak light performance



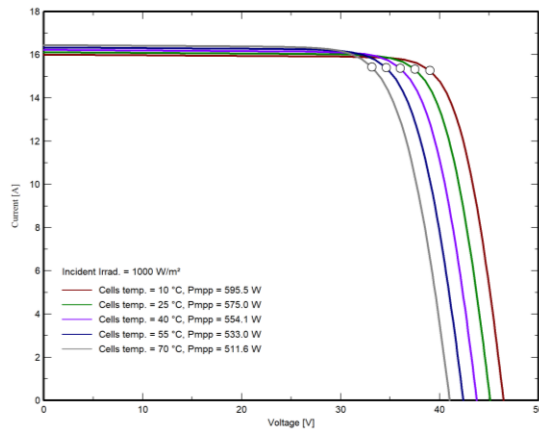
Excellent PID resistance



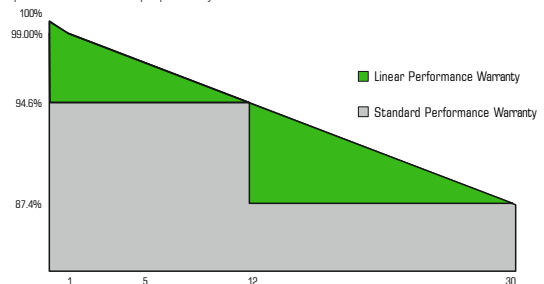
I-V VARIATION WITH IRRADIANCE



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

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Models	Pmax (W)		Vmp (V)		Imp (A)		Isc (A)		Voc (V)		Module Eff. (%)
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
BiN-34-545	545	411	36.85	34.35	14.80	11.93	15.81	12.74	43.91	41.72	22.13
BiN-34-550	550	415	37.06	34.55	14.85	11.97	15.86	12.78	44.11	41.91	22.33
BiN-34-555	555	419	37.27	34.74	14.90	12.01	15.91	12.82	44.31	42.10	22.53
BiN-34-560	560	423	37.48	34.94	14.95	12.05	15.96	12.86	44.51	42.29	22.74
BiN-34-565	565	427	37.69	35.14	15.00	12.09	16.01	12.90	44.71	42.48	22.94
BiN-34-570	570	430	37.90	35.33	15.05	12.13	16.06	12.94	44.91	42.67	23.14
BiN-34-575	575	434	38.11	35.53	15.10	12.17	16.11	12.98	45.11	42.86	23.35

*Standard Test Conditions (STC) - 1000 W/m² irradiance, Air Mass 1.5 and 25°C cell temperature. Nominal Operating Cell Temperature (NOCT) - 800 W/m² irradiance, Air Mass 1.5, Ambient temperature 20°C and Wind speed 1 m/s. Average power reduction of 4.5% at 200 W/m² as per IEC 60904-1. Measuring Uncertainty ± 3%.

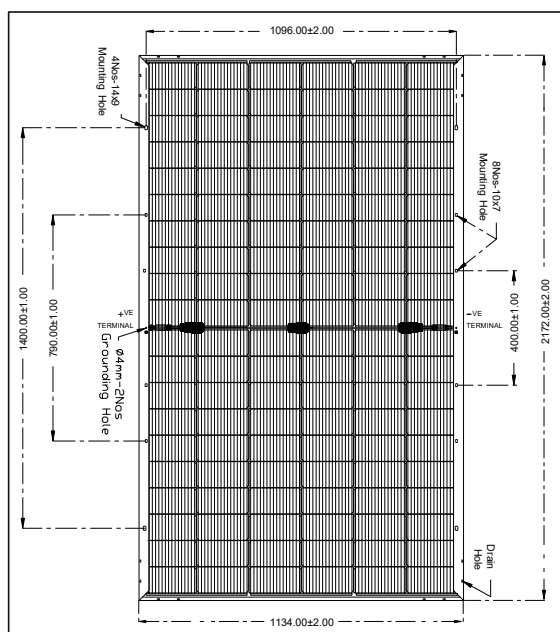
System Voltage	1500 V	Series Fuse Rating	30 A
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BI-FACIAL OUTPUT - BACKSIDE POWER GAIN*

		BiN-34-545	BiN-34-550	BiN-34-555	BiN-34-560	BiN-34-565	BiN-34-570	BiN-34-575
10%	Power Output (W)	600	605	611	616	622	627	633
	Module Efficiency (%)	24.34	24.56	24.79	25.01	25.23	25.46	25.68
15%	Power Output (W)	627	633	638	644	650	656	661
	Module Efficiency (%)	25.45	25.68	25.91	26.15	26.38	26.61	26.85
20%	Power Output (W)	654	660	666	672	678	684	690
	Module Efficiency (%)	26.55	26.80	27.04	27.28	27.53	27.77	28.01
25%	Power Output (W)	681	688	694	700	706	713	719
	Module Efficiency (%)	27.66	27.91	28.17	28.42	28.67	28.93	29.18
30%	Power Output (W)	709	715	722	728	735	741	748
	Module Efficiency (%)	28.77	29.03	29.29	29.56	29.82	30.08	30.35

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

DESIGN SPECIFICATIONS



THERMAL CHARACTERISTICS

Temperature coefficient of Current (Isc), α (%/°C)	0.046
Temperature coefficient of Voltage (Voc), β (%/°C)	-0.26
Temperature coefficient of Power (Pm), γ (%/°C)	-0.30
NOCT (°C)	43 ± 2
Operating temperature range (°C)	-40 to 85
Bifaciality	80 ± 10

MECHANICAL CHARACTERISTICS

Length x Width x Thickness (L x W x T)	2172 mm (L) x 1134 mm (W) x 35 mm (T)
Weight	31 kgs
Solar Cells per Module (Units) / Arrangement	120 cells / (10x6 10x6)
Solar Cell Type & Size	G12R N-type Bifacial
Front Glass (Material / Thickness)	2 mm Low Iron HTAR semi-tempered glass
Back Glass (Material / Thickness)	2 mm Low Iron Printed semi-tempered glass
Encapsulate	PID Free & UV Resistant
Junction Box (Protection degree / Material)	IP68 / Weatherproof PPO, 3 Diodes
Cable & Connector (Protection degree / Type)	IP68 rated / MC4 compatible
Cable cross - section & Length	4 mm ² & 500mm
Frame	Anodized Aluminium Alloy

Waaree Energies Ltd. is amongst the top Solar Energy Companies and has the country's largest Solar PV Module manufacturing capacity of 12 GW. In addition, it is committed to provide top notch EPC services, project development, rooftop solutions, solar water pumps and also in an Independent Power Producer. Waaree has its presence in over 350+ 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.

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