

# AHNAY SERIES

Bi-13-380 to Bi-13-400  
Dual Glass Bifacial module

**WAAREE**<sup>®</sup>

One with the Sun



Better performance under all climatic conditions



Enhanced power output due to revolutionary design



Split junction box



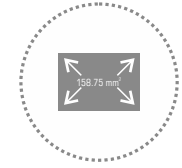
Reduced power losses up to 1/4 times



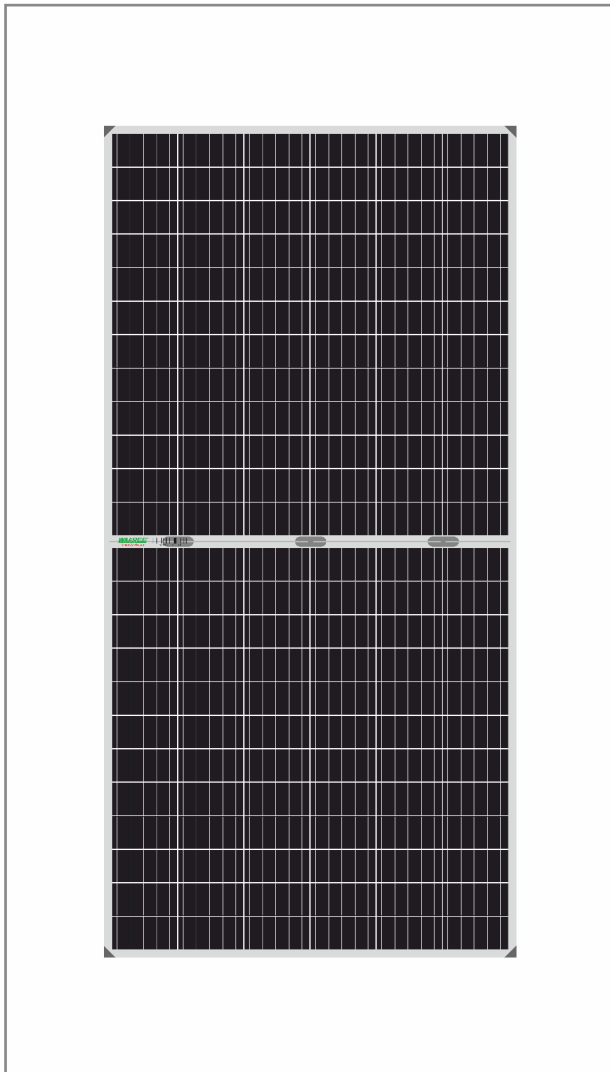
PID resistant with long term reliability



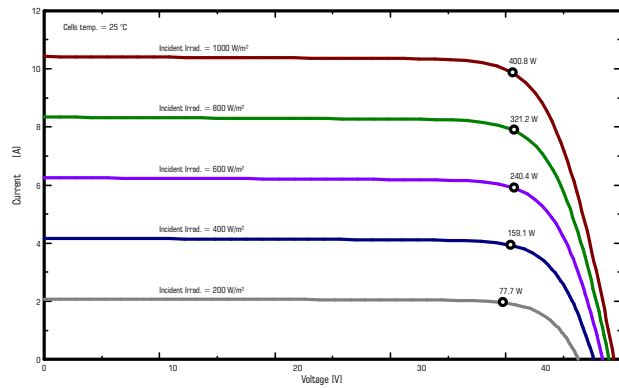
Sustain heavy wind & snow loads (2400 pa & 5400 pa)



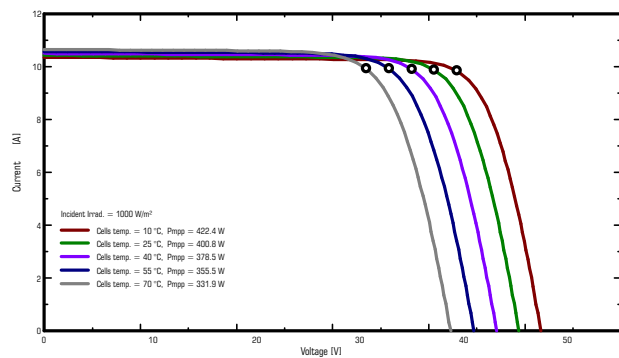
Full square Mono PERC cells



## I-V VARIATION WITH IRRADIANCE



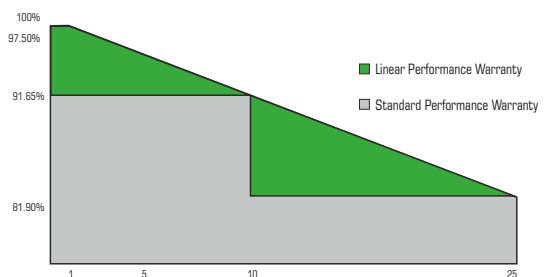
## I-V VARIATION WITH TEMPERATURE



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

## INTERNATIONAL & NATIONAL CERTIFICATIONS ^

IEC 61215 | IEC 61730 | UL61730



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-13-380	380	282.7	39.07	36.58	9.75	7.73	10.16	8.21	48.14	44.73	18.70
Bi-13-385	385	286.7	39.32	36.84	9.82	7.78	10.22	8.25	48.45	45.00	18.95
Bi-13-390	390	290.2	39.56	37.06	9.88	7.83	10.29	8.31	48.76	45.29	19.19
Bi-13-395	395	294.1	39.81	37.32	9.95	7.88	10.35	8.36	49.07	45.58	19.44
Bi-13-400	400	297.8	40.07	37.55	10.02	7.93	10.42	8.42	49.39	45.88	19.68

\*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-13-380	Bi-13-385	Bi-13-390	Bi-13-395	Bi-13-400
15%	Power Output (W)	437	443	449	454	460
	Module Efficiency (%)	21.50%	21.79%	22.07%	22.35%	22.64%
20%	Power Output (W)	456	462	468	474	480
	Module Efficiency (%)	22.44%	22.74%	23.03%	23.33%	23.62%
25%	Power Output (W)	475	481	488	494	500
	Module Efficiency (%)	23.37%	23.68%	24.00%	24.30%	24.61%
30%	Power Output (W)	494	501	507	514	520
	Module Efficiency (%)	24.31%	24.63%	24.95%	25.27%	25.59%

## MECHANICAL CHARACTERISTICS

Length x Width x Thickness (L x W x T)	2024 mm (L) x 1004 mm (W) x 6.5 mm (T)
Weight	29 kgs
Solar Cells per Module (Units) / Arrangement	144 cells / (12x6    12x6)
Solar Cell	Mono PERC Bifacial
Front / Back Glass (Material / Thickness)	2.5mm Low Iron and Tempered 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

## THERMAL CHARACTERISTICS

Temperature coefficient of Current (Isc), α (%/°C)	0.05
Temperature coefficient of Voltage (Voc), β (%/°C)	-0.27
Temperature coefficient of Power (Pm), γ (%/°C)	-0.37
NOCT (°C)	43 ± 2
Operating temperature range (°C)	-40 to 85

Waaree Energies Ltd. is amongst the top Solar Energy Companies and has the country's largest Solar PV Module manufacturing capacity of 2 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.

\*If you need specific product certificates, and if module installations are to deviate from our guidance specified in our installation manual, please contact your local Waaree sales and technical representatives.

10 Years Product Warranty • 25 Years Power Output Warranty

( ^ ) FEW MODELS MAY BE UNDER CERTIFICATION

- 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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