

ARKA SERIES

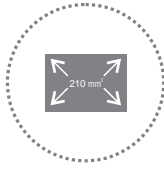
WSMD-645 to WSMD-665

WAAREE®

One with the Sun



Highest reliability & enhanced crack tolerant 12BB module



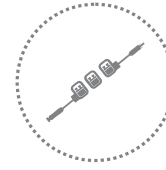
Full square Mono PERC M12 cells



Best in class thermal coefficients



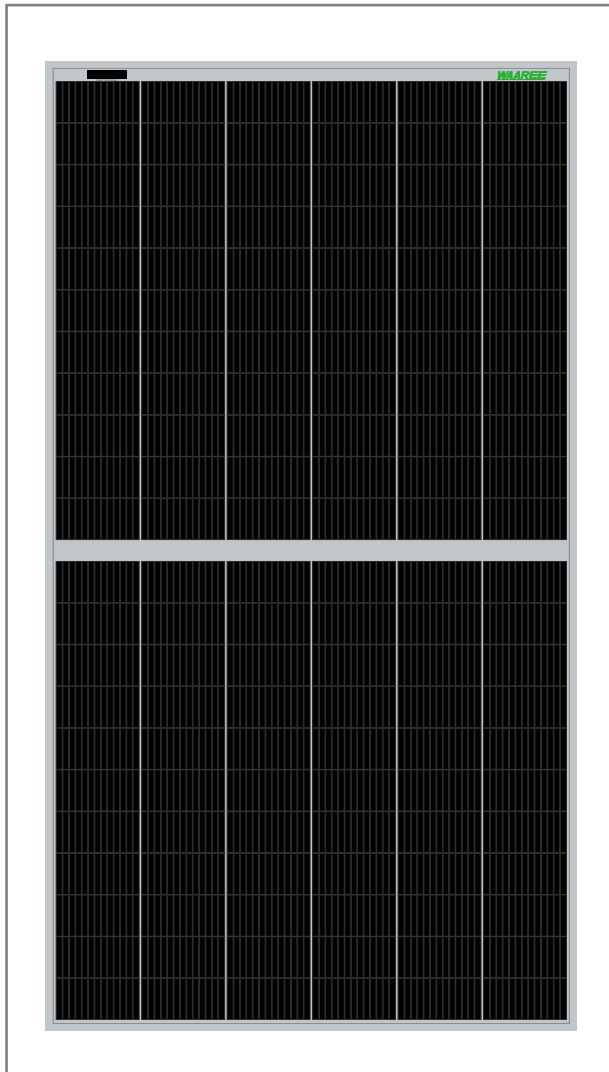
Highest commercial gains, lower LCOE



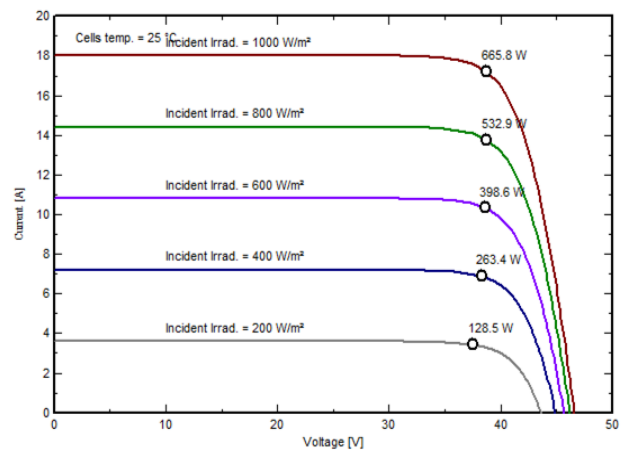
Split junction box improve heat dissipation & lower risk of hotspot



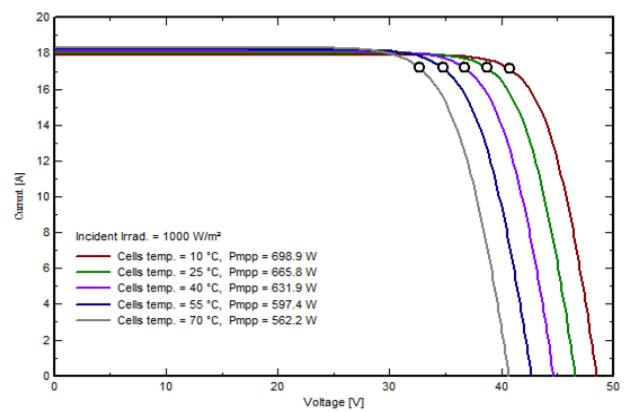
Increase shade tolerance



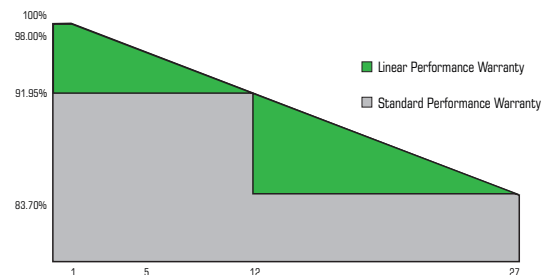
I-V VARIATION WITH IRRADIANCE



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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WSMD-645 to WSMD-665

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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	
WSMD-645	645	485.2	37.87	35.70	17.04	13.58	17.78	14.33	45.94	43.20	20.65
WSMD-650	650	489.5	37.91	35.90	17.16	13.63	17.84	14.37	46.09	43.40	20.82
WSMD-655	655	494.2	37.94	36.10	17.29	13.69	17.90	14.42	46.26	43.50	20.99
WSMD-660	660	497.3	38.06	36.20	17.35	13.75	17.98	14.49	46.40	43.60	21.13
WSMD-665	665	501.7	38.10	36.40	17.46	13.79	18.03	14.53	46.58	43.80	21.29

*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%.

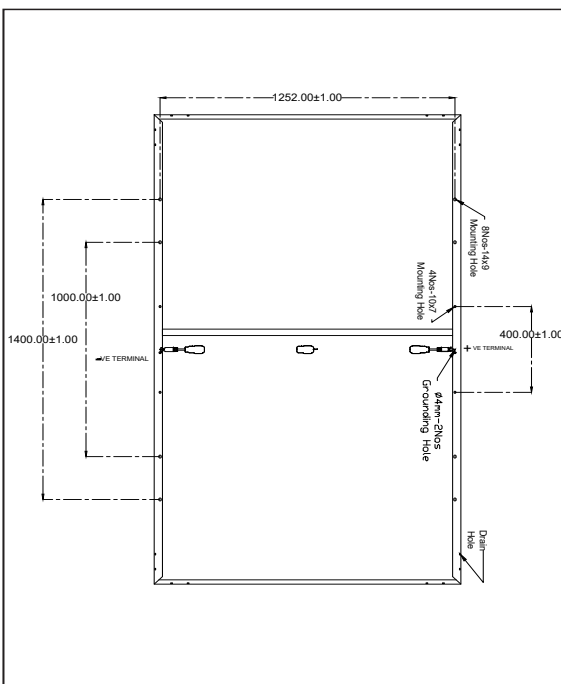
System Voltage	1500 V
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Series Fuse Rating	30 A
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MECHANICAL CHARACTERISTICS

Length x Width x Thickness (L x W x T)	2400 mm (L) x 1302 mm (W) x 35 mm (T)
Weight	34.5 kgs
Solar Cells per Module (Units) / Arrangement	132 cells / (11x6 11x6)
Solar Cell Type & Size	Mono PERC, 105 x 210 mm
Front Glass	3.2 mm Low Iron and Tempered glass with ARC coating
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 ² & 500mm
Frame	Anodized Aluminium Alloy

DESIGN SPECIFICATIONS



12 Years Product Warranty • 27 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.

THERMAL CHARACTERISTICS

Temperature coefficient of Current (Isc), α (%/°C)	0.04
Temperature coefficient of Voltage (Voc), β (%/°C)	-0.25
Temperature coefficient of Power (Pm), γ (%/°C)	-0.34
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 5 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 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.