

# ELITE SERIES

## N-TYPE

WSMT-615 to WSMT-645

Framed Glass White Backsheet Monofacial module

**WAAREE**<sup>®</sup>

One with the Sun



Highest reliability & enhanced crack tolerance MBB module



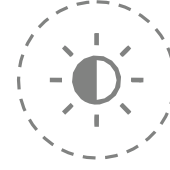
Sustain heavy snow & wind loads (5400 Pa & 2400 Pa)



Best in class thermal coefficients



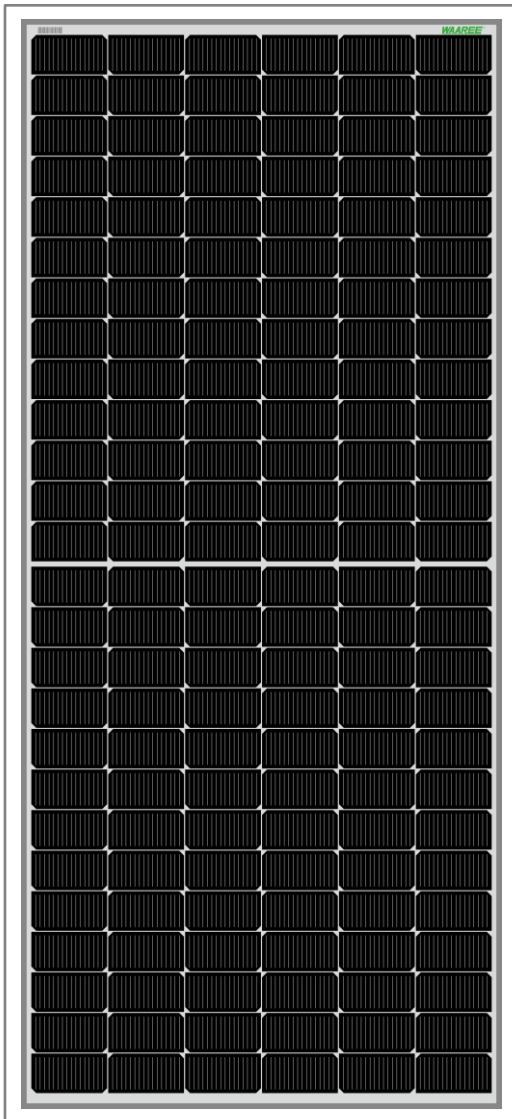
Highest commercial gains, lower LCOE



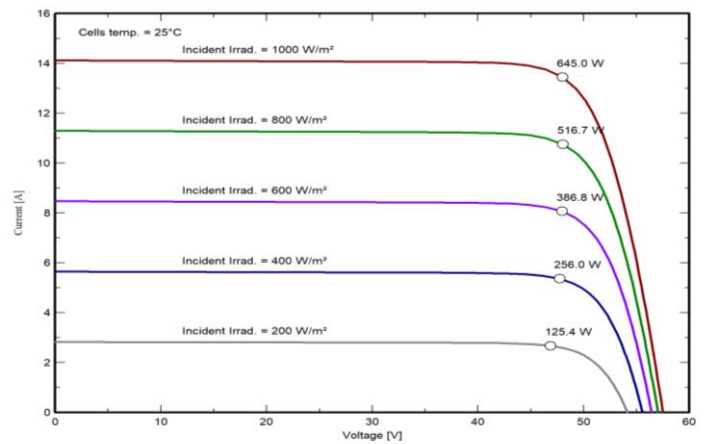
Better weak light performance



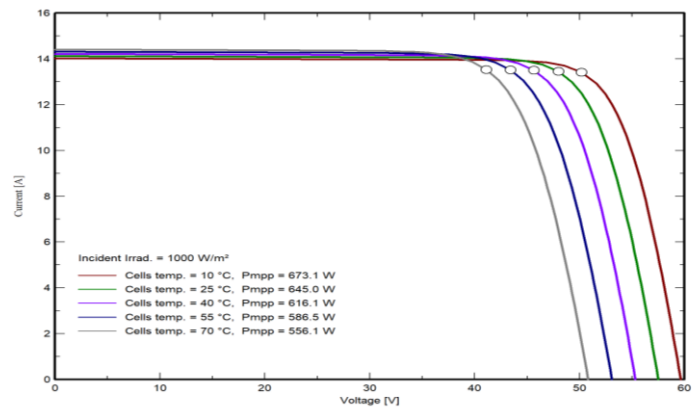
Excellent PID resistance



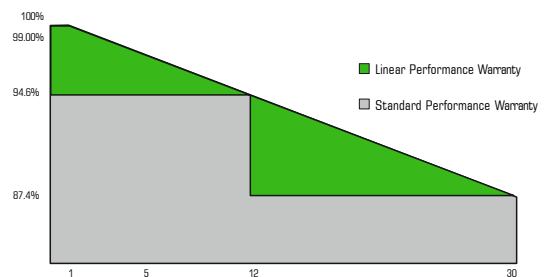
### I-V VARIATION WITH IRRADIANCE



### I-V VARIATION WITH TEMPERATURE



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



IEC 61215, IEC 61730  
UL 61730-1, UL 61730-2

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  |                 |
| WSMT-615 | 615      | 464.30 | 47.27   | 44.06 | 13.01   | 10.51 | 13.78   | 11.12 | 56.55   | 53.72 | 22.00           |
| WSMT-620 | 620      | 468.10 | 47.44   | 44.21 | 13.07   | 10.56 | 13.83   | 11.16 | 56.71   | 53.87 | 22.18           |
| WSMT-625 | 625      | 471.90 | 47.60   | 44.36 | 13.13   | 10.61 | 13.88   | 11.20 | 56.88   | 54.04 | 22.36           |
| WSMT-630 | 630      | 475.70 | 47.73   | 44.48 | 13.20   | 10.67 | 13.94   | 11.25 | 57.02   | 54.17 | 22.54           |
| WSMT-635 | 635      | 479.40 | 47.89   | 44.63 | 13.26   | 10.71 | 13.99   | 11.29 | 57.18   | 54.32 | 22.72           |
| WSMT-640 | 640      | 483.20 | 48.01   | 44.75 | 13.33   | 10.77 | 14.05   | 11.34 | 57.33   | 54.46 | 22.90           |
| WSMT-645 | 645      | 487.00 | 48.17   | 44.89 | 13.39   | 10.82 | 14.11   | 11.39 | 57.49   | 54.61 | 23.07           |

\*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%.

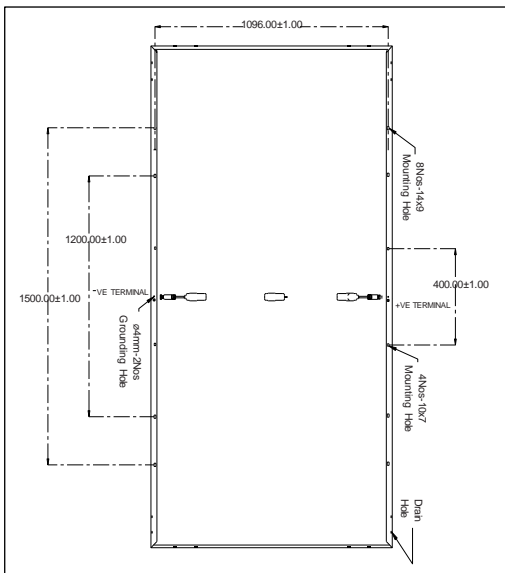
|                |        |
|----------------|--------|
| System Voltage | 1500 V |
|----------------|--------|

|                    |      |
|--------------------|------|
| Series Fuse Rating | 30 A |
|--------------------|------|

## THERMAL CHARACTERISTICS

|   |           |
|---|-----------|
| Temperature coefficient of Current (Isc), $\alpha$ (%/°C) | 0.046     |
| Temperature coefficient of Voltage (Voc), $\beta$ (%/°C)  | -0.26     |
| Temperature coefficient of Power (Pm), $\gamma$ (%/°C)    | -0.30     |
| NOCT (°C)   | 43 ± 2    |
| Operating temperature range (°C)                          | -40 to 85 |

## DESIGN SPECIFICATIONS



## MECHANICAL CHARACTERISTICS

|  |                                       |
|--|---------------------------------------|
| Length x Width x Thickness (L x W x T)       | 2465 mm (L) x 1134 mm (W) x 35 mm (T) |
| Weight                                       | 30 kgs                                |
| Solar Cells per Module (Units) / Arrangement | 156 cells / (13x6   13x6)             |
| Solar Cell Type & Size                       | M10/M10R N-type TOPCon Bifacial       |
| Front Glass (Material / Thickness)           | 3.2 mm Low Iron HTAR Tempered glass   |
| Backsheet                                    | White Backsheet                       |
| 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             |
| 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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