

AHNAY SERIES

Bi-56-425 to Bi-56-455

Framed Dual Glass Bifacial module

WAAREE[®]

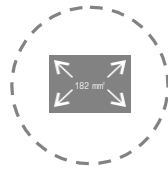
One with the Sun



Highest reliability & enhanced crack tolerant MBB module



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



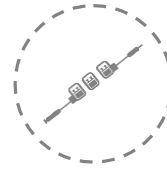
Highly efficient Mono PERC M10 cells



Best in class thermal coefficients



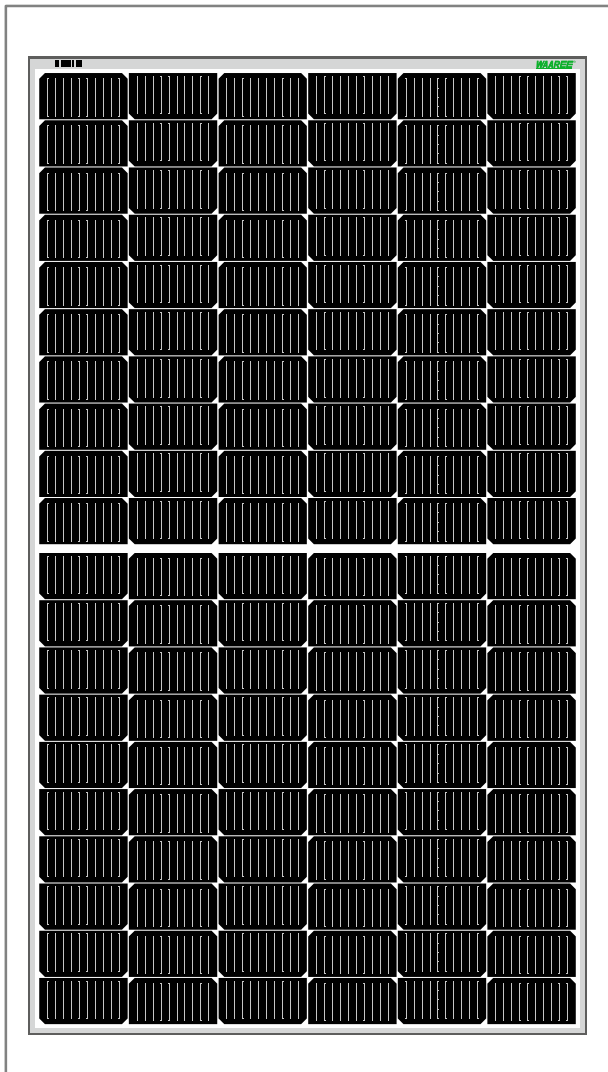
Highest commercial gains, lower LCOE



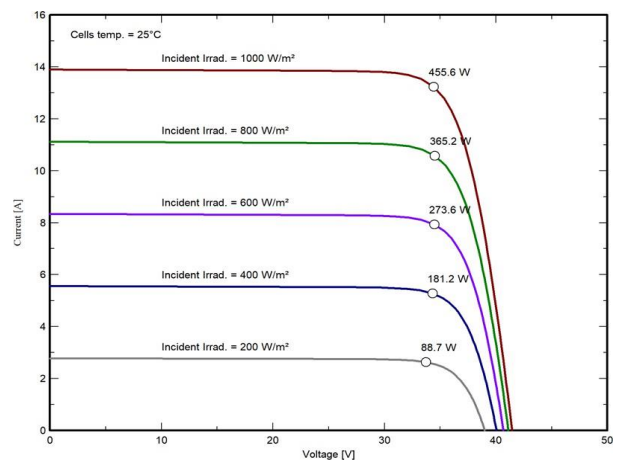
Split junction box improve heat dissipation



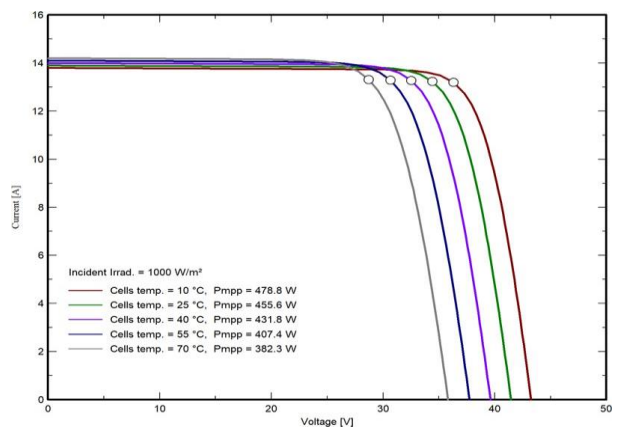
Increase shade tolerance



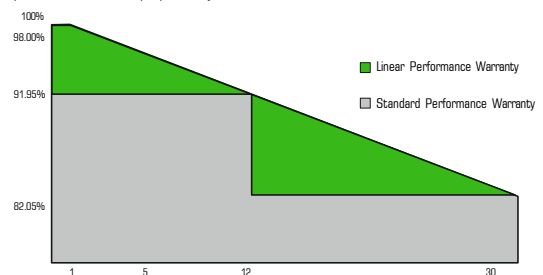
I-V VARIATION WITH IRRADIANCE



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

AHNAY SERIES

Bi-56-425 to Bi-56-455

Framed Dual Glass Bifacial module

WAAREE[®]

One with the Sun

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-56-425 | 425 | 320.8 | 34.12 | 31.40 | 12.47 | 10.21 | 13.36 | 10.78 | 40.63 | 38.10 | 19.69 |
| Bi-56-430 | 430 | 324.6 | 34.24 | 31.50 | 12.57 | 10.30 | 13.48 | 10.88 | 40.77 | 38.30 | 19.92 |
| Bi-56-435 | 435 | 328.1 | 34.38 | 31.70 | 12.67 | 10.36 | 13.55 | 10.94 | 40.90 | 38.40 | 20.15 |
| Bi-56-440 | 440 | 331.7 | 34.52 | 31.80 | 12.76 | 10.42 | 13.64 | 11.01 | 41.04 | 38.50 | 20.39 |
| Bi-56-445 | 445 | 335.1 | 34.65 | 32.00 | 12.85 | 10.49 | 13.72 | 11.07 | 41.18 | 38.60 | 20.62 |
| Bi-56-450 | 450 | 338.9 | 34.79 | 32.10 | 12.95 | 10.56 | 13.81 | 11.14 | 41.31 | 38.70 | 20.85 |
| Bi-56-455 | 455 | 340.5 | 34.89 | 32.20 | 13.05 | 10.62 | 13.89 | 11.21 | 41.45 | 38.90 | 21.08 |

*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%.

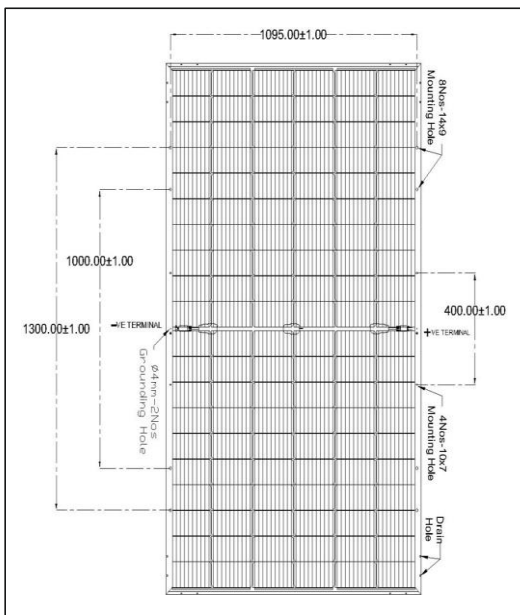
| | | | |
|----------------|--------|--------------------|------|
| System Voltage | 1500 V | Series Fuse Rating | 25 A |
|----------------|--------|--------------------|------|

BI-FACIAL OUTPUT - BACKSIDE POWER GAIN*

| | | Bi-56-425 | Bi-56-430 | Bi-56-435 | Bi-56-440 | Bi-56-445 | Bi-56-450 | Bi-56-455 |
|-----|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 15% | Power Output (W) | 488 | 494 | 500 | 506 | 511 | 517 | 523 |
| | Module Efficiency (%) | 22.64% | 22.90% | 23.17% | 23.44% | 23.71% | 23.97% | 24.24% |
| 20% | Power Output (W) | 510 | 516 | 522 | 528 | 534 | 540 | 546 |
| | Module Efficiency (%) | 23.62% | 23.90% | 24.18% | 24.46% | 24.74% | 25.02% | 25.29% |
| 25% | Power Output (W) | 531 | 537 | 543 | 550 | 556 | 562 | 568 |
| | Module Efficiency (%) | 24.61% | 24.90% | 25.18% | 25.48% | 25.77% | 26.06% | 26.35% |
| 30% | Power Output (W) | 552 | 559 | 565 | 572 | 578 | 585 | 591 |
| | Module Efficiency (%) | 25.59% | 25.89% | 26.19% | 26.50% | 26.80% | 27.10% | 27.40% |

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

DESIGN SPECIFICATIONS



THERMAL CHARACTERISTICS

| | |
|--|-----------|
| Temperature coefficient of Current (Isc), α (%/°C) | 0.05 |
| 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 |

MECHANICAL CHARACTERISTICS

| | |
|--|---|
| Length x Width x Thickness (L x W x T) | 1905 mm (L) x 1133 mm (W) x 35 mm (T) |
| Weight | 27 kgs |
| Solar Cells per Module (Units) / Arrangement | 120 cells / (10x6 10x6) |
| Solar Cell Type & Size | Mono PERC Bifacial, 91 x 182 mm |
| Front Glass (Material / Thickness) | 2 mm Low Iron ARC 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 |
| Cable & Connector (Protection degree / Type) | IP68 rated / MC4 compatible |
| Cable cross - section & Length | 4 mm ² & 500mm |
| Bifaciality Factor (%) | 70 ± 10 |
| 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.

www.waaree.com