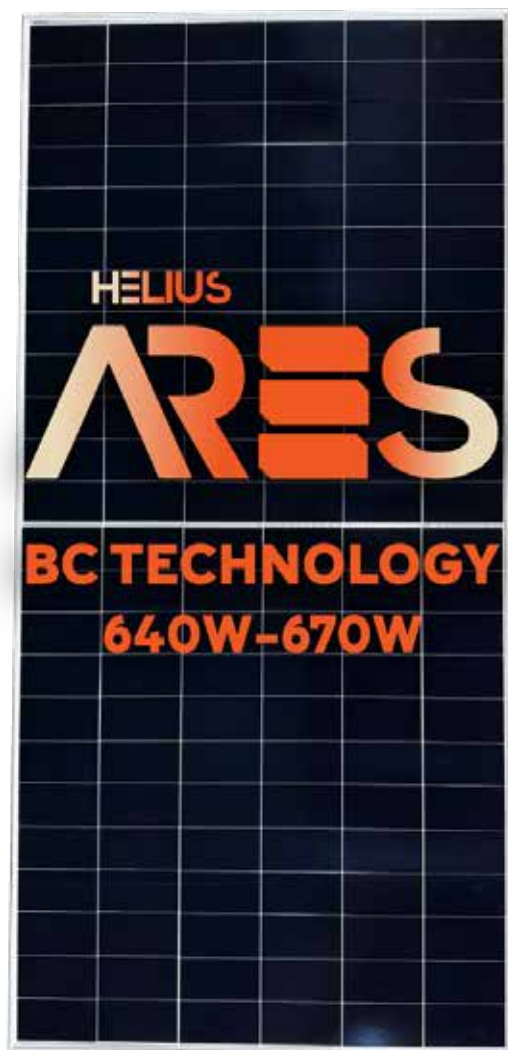




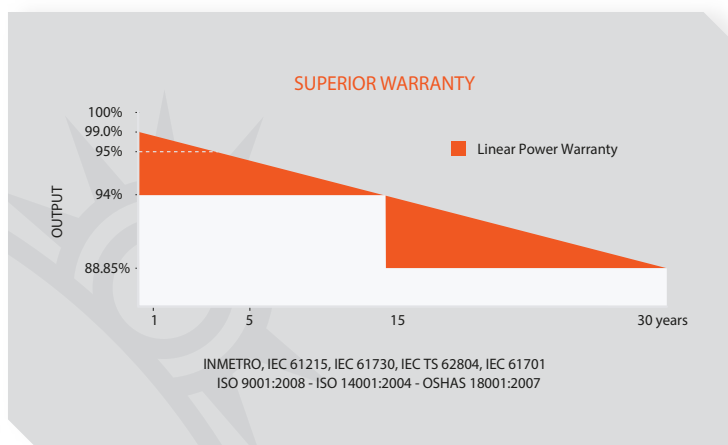
## HMF144B12R

640W - 670W

Monofacial

30-year linear power output warranty

15-years product warranty



### SUPERIOR QUALITY

With BACK CONTACT technology and half cell design, Helius Sunlink PV panels reduce conversion of cell by busbars and improve current collection ability on cloudy days.



### HIGH EFFICIENCY AND POWER DENSITY

High conversion efficiency and up to 670 W.  
More gain power per square meter.



### PERFORMANCE WARRANTY

With up to 30 years of solar generation, Helius Sunlink PV warranty can guarantee the longevity of your project.



### FIRE-PROOF PERFORMANCE

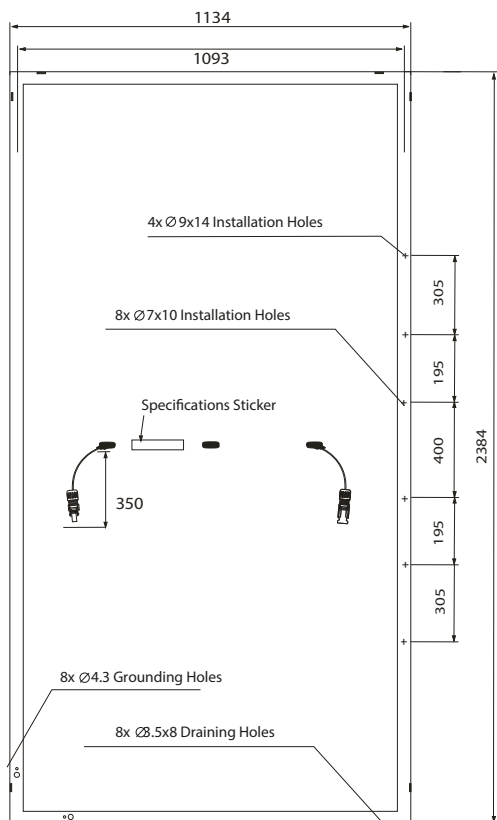
Modules are approved and tested under IEC 61730 and Class C Fire Test.



### LIGHT AND RELIABLE

Much lighter modules with thicker frames to ensure module resilience. Modules could be applied under ammonia, salt mist, high temperature, high humidity condition.

### TECHNICAL DIMENSIONS (MM)

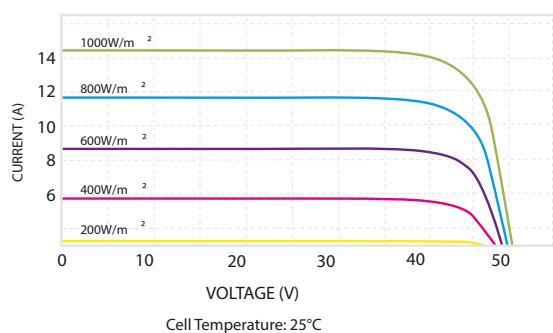


### MECHANICAL CHARACTERISTICS

|               |                                            |
|---------------|--------------------------------------------|
| Dimensions    | 2384 x 1134 x 30mm                         |
| Solar Cells   | 144 N-type Back Contact Cells              |
| Weight        | 27.1 kg                                    |
| Frame         | Anodized Aluminium Alloy                   |
| Frontal Glass | 3.2mm High Transmission, Low Iron Tempered |
| J-Box         | IP68 / 3 bypass diodes                     |
| Cables        | 4mm / Length 350mm or Customized           |

### TEMPERATURE CHARACTERISTICS

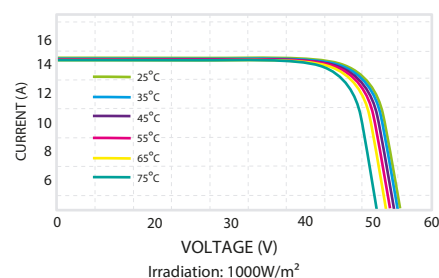
|                                   |               |
|-----------------------------------|---------------|
| Temperature Coefficient $I_{sc}$  | 0.05% / °C    |
| Temperature Coefficient $V_{oc}$  | -0.22% / °C   |
| Temperature Coefficient $P_{max}$ | -0.26% / °C   |
| Operational Temperature           | -40°C ~ +85°C |



### ELECTRICAL CHARACTERISTICS

| HMF144BT12R                        | 640HL   | 645HL | 650HL | 655HL | 660HL | 665HL | 670HL |
|------------------------------------|---------|-------|-------|-------|-------|-------|-------|
| Maximum Power $P_{Max}$ (W)        | 640     | 645   | 650   | 655   | 660   | 665   | 670   |
| Maximum Power Voltage $V_{mp}$ (V) | 44.90   | 45.00 | 45.10 | 45.20 | 45.30 | 45.40 | 45.50 |
| Maximum Power Current $I_{mp}$ (A) | 14.26   | 14.34 | 14.42 | 14.50 | 14.57 | 14.65 | 14.73 |
| Open Circuit Voltage $V_{oc}$ (V)  | 54.20   | 54.30 | 54.40 | 54.50 | 54.60 | 54.70 | 54.80 |
| Short Circuit Current $I_{sc}$ (A) | 15.00   | 15.06 | 15.12 | 15.18 | 15.24 | 15.30 | 15.36 |
| Module Efficiency                  | 23.7%   | 23.9% | 24.1% | 24.2% | 24.4% | 24.6% | 24.8% |
| Maximum System Voltage             | 1500VCC |       |       |       |       |       |       |
| Maximum Series Fuse                | 25A     |       |       |       |       |       |       |

Test Conditions: 1000W/m<sup>2</sup>, 25°C, AM = 1.5



### PACKAGING CONFIGURATION

|                              |                      |
|------------------------------|----------------------|
| Modules per Container 40HQ   | 720 pcs              |
| Pallets per Container 40HQ   | 20                   |
| Modules per Pallet           | 36                   |
| Pallet Dimensions            | 2405 X 1260 X 1120mm |
| Gross Weight per Pallet (kg) | 987                  |

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MAY 2026

