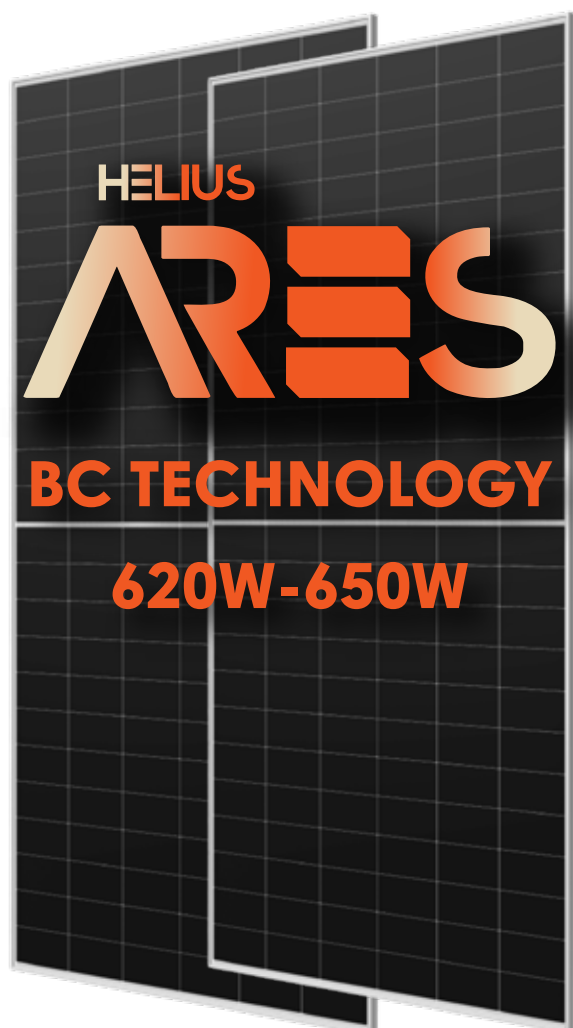




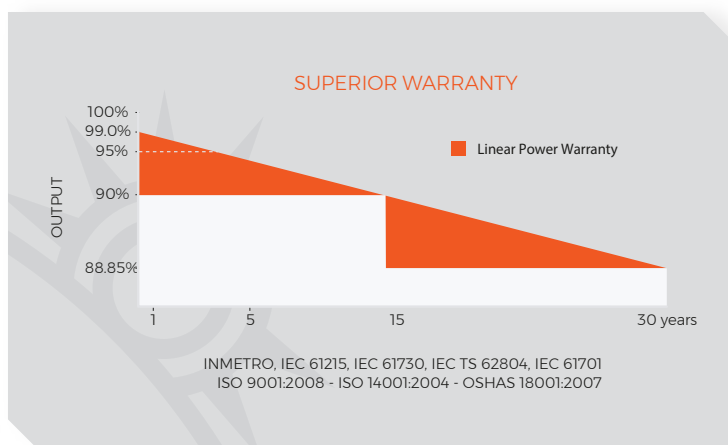
HMB144B12R

620W - 650W

Bifacial

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 650 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

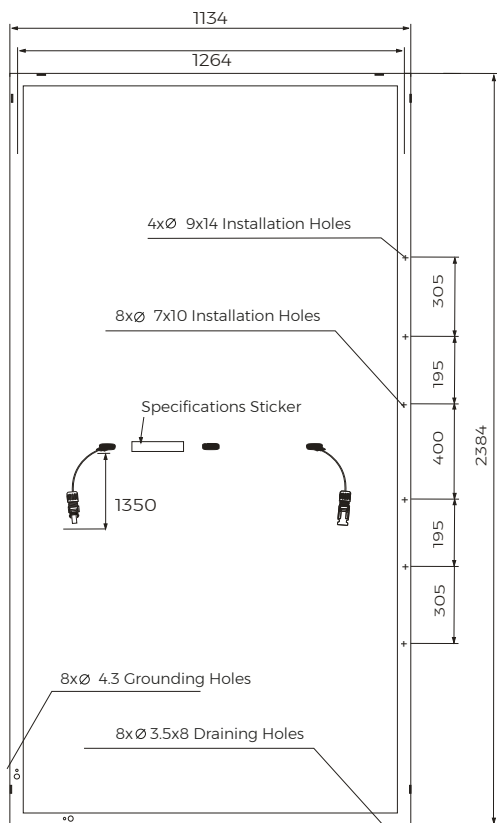
Modules are approved and tested under IEC 61730 and Class C Fire Test.



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)

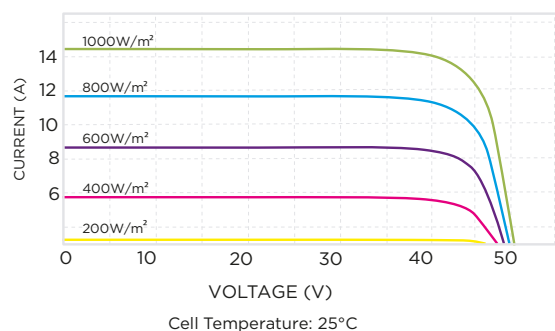


MECHANICAL CHARACTERISTICS

Dimensions	2384 x 1134 x 30mm
Solar Cells	144 N-type Back Contact Cells
Weight	33,5 kg
Frame	Anodized Aluminium Alloy
Frontal Glass	2mm High Transmission, Low Iron Tempered
Back Glass	2mm High Transmission, Low Iron Tempered
J-Box	IP68 / 3 bypass diodes
Cables	4mm / Length 1350mm or Customized

TEMPERATURE CHARACTERISTICS

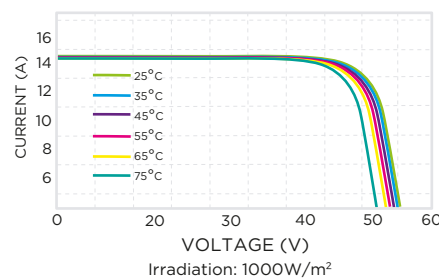
Temperature Coefficient I_{sc}	0.05% / °C
Temperature Coefficient V_{oc}	-0.22% / °C
Temperature Coefficient P_{max}	-0.26% / °C
Operational Temperature	-40°C - +85°C



ELECTRICAL CHARACTERISTICS

HMB144BT12R	620HL	625HL	630HL	635HL	640HL	645HL	650HL
Maximum Power P_{Max} (W)	620	625	630	635	640	645	650
Maximum Power Voltage V_{mp} (V)	44.70	44.80	44.90	44.90	45.00	45.10	45.20
Maximum Power Current I_{mp} (A)	13.88	13.96	14.04	14.12	14.20	14.27	14.35
Open Circuit Voltage V_{oc} (V)	53.40	53.50	53.60	53.70	53.80	53.90	54.00
Short Circuit Current I_{sc} (A)	14.70	14.76	14.82	14.88	14.94	15	15.06
Module Efficiency	23%	23.1%	23.3%	23.5%	23.7%	23.9%	24.1%
Maximum System Voltage	1500VCC						
Maximum Series Fuse	30A						

Test Conditions: 1000W/m², 25°C, AM =1.5



ELECTRICAL CHARACTERISTICS WITH REAR POWER GAIN (650W)

P_{max} Gain (%)	10%	20%
Maximum Power P_{Max} (W)	715	780
Maximum Power Voltage V_{mp} (V)	45.20	45.20
Maximum Power Current I_{mp} (A)	15.78	17.22

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)	1177

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SEPTEMBER 2025

