



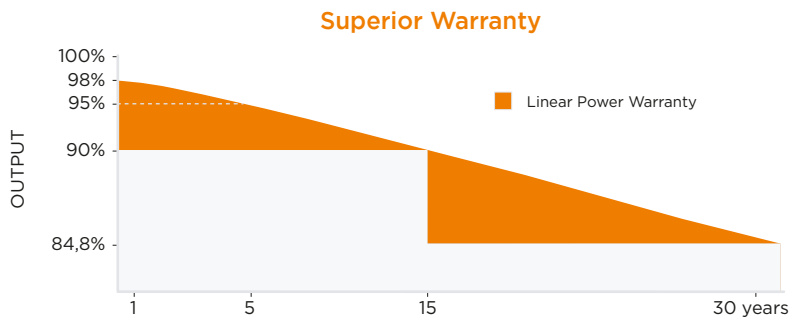
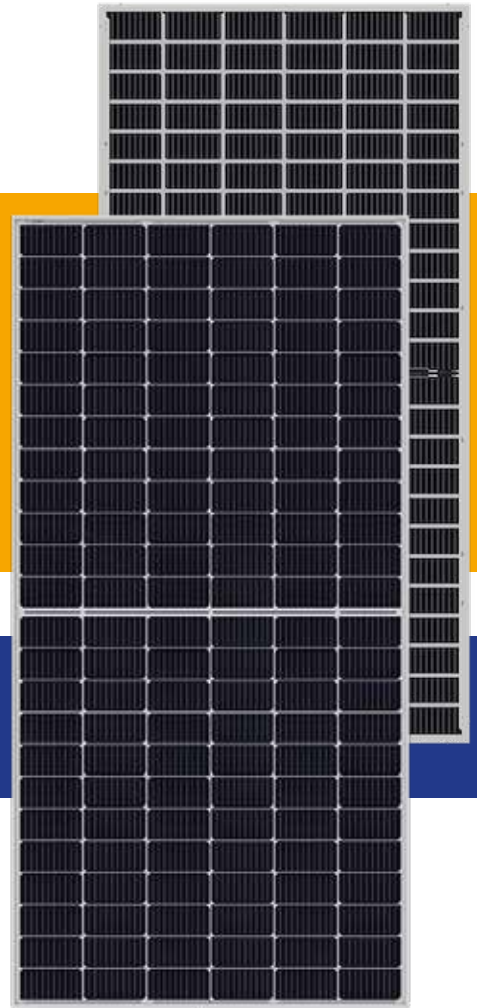
Helius
energy

www.he-solar.com

HELIUS ASTER HMB144M10

30-year linear power output warranty

Premium Monocrystalline Cells
MBB Half Cell Technology



INMETRO, IEC 61215, IEC 61730, IEC TS 62804, IEC 61701
ISO 9001:2008 - ISO 14001:2004 - OSHAS 18001:2007



Superior Quality

With MBB technology and half cell design, Helius Energy panels reduce the conversion of cell by busbars and improve current collection ability on cloudy days.



High Efficiency and Power Density

High conversion efficiency and up to 580W on 2.58m² (22,5%).
More gain power per square meter.



Performance Warranty

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



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.



Fire-Proof Performance

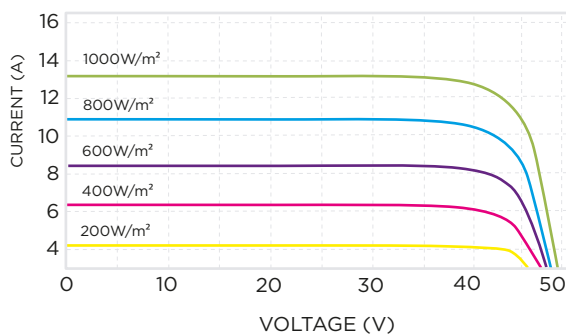
Modules are approved and tested under IEC 61730 and Class C Fire Test.

Mechanical Characteristics

Dimensions	2278 x 1134 x 35mm
Solar Cells	144 Monocrystalline Cells
Weight	32,0 kg
Frame	Anodized Aluminium Alloy
Frontal Glass	2mm High Transmission, Low Iron Tempered
Back Sheet	2mm Tempered Glass
J-Box	IP68 / 3 bypass diodes
Cables	4mm ² / length 1200mm

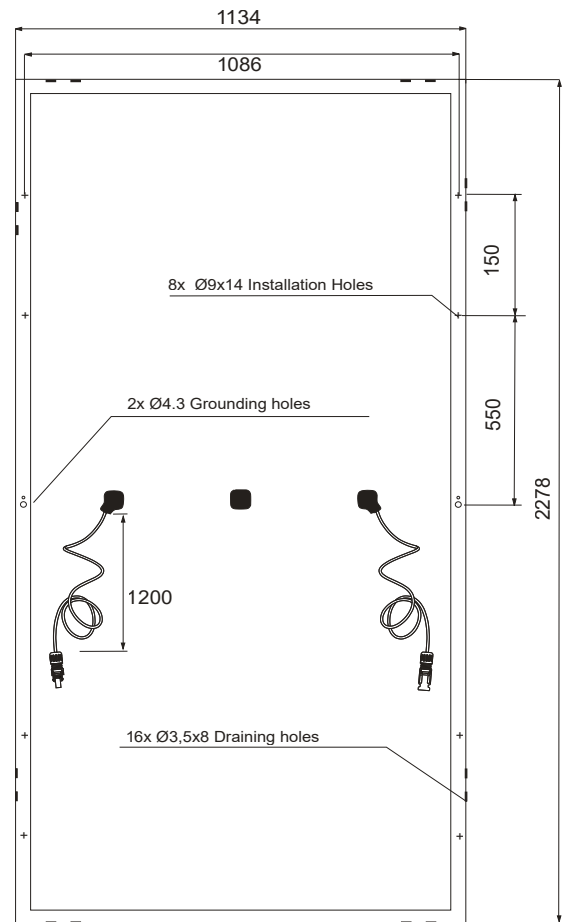
Temperature Characteristics

Temperature Coefficient I _{sc}	0,045% / °C
Temperature Coefficient V _{oc}	-0,275% / °C
Temperature Coefficient P _{max}	-0,34% / °C
Nominal Module Operating Temperature NMOT	45°C + -2°C
Operational Temperature	-40°C a +85°C



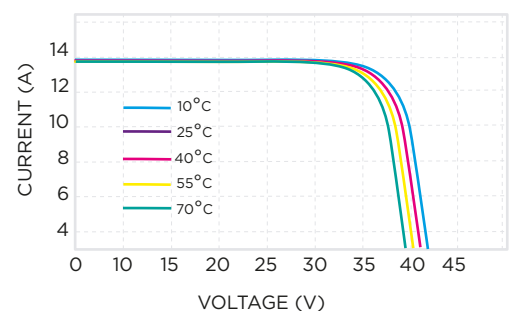
Cell Temperature: 25°C.

Technical Dimensions (mm)



Electrical Characteristics

HMB144M10	550HL	560HL	570HL	580HL
Maximum Power P _{Max} (W)	550	560	570	580
Maximum Power Voltage V _{mp} (V)	41,97	42,29	42,61	42,93
Maximum Power Current I _{mp} (A)	13,11	13,24	13,38	13,51
Open Circuit Voltage V _{oc} (V)	49,87	50,21	50,50	50,76
Short Circuit Current I _{sc} (A)	13,98	14,14	14,28	14,37
Module Efficiency	21,52%	21,92%	22,27%	22,50%
Maximum System Voltage	1500VCC			
Test Conditions: 1000W/m ² , 25°C, AM =1,5				



Irradiation: 1000W/m²

Electrical Characteristics with Rear Power Gain (550W)

P _{max} Gain (%)	10%	20%	30%	40%
Maximum Power P _{Max} (W)	605	660	715	770
Maximum Power Voltage V _{mp} (V)	41,97	41,97	41,97	41,97
Maximum Power Current I _{mp} (A)	14,41	15,72	17,03	18,34

Packaging Configuration

Modules per Container 40HQ	620 pcs
Pallets per Container 40HQ	20
Modules per Pallet	31
Pallet Dimensions	2306 x 1623 x 1196mm
Gross Weight per Pallet (kg)	1017

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