

MONO

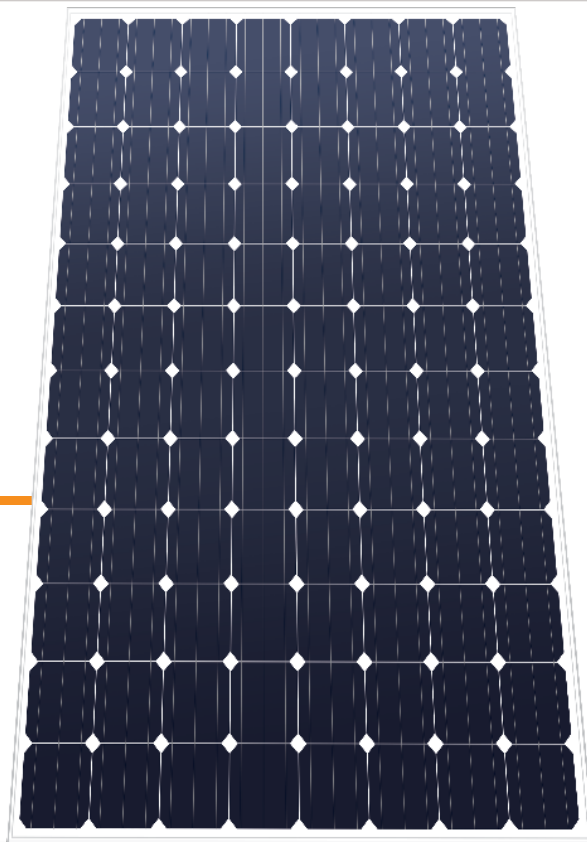
POLY



HELIENE

96^M

96-CELL MONOCRYSTALLINE MODULE



490 Wp

MAX POWER OUTPUT

19.1%

MAX EFFICIENCY

10 YEAR

PRODUCT WARRANTY

25 YEAR

LINEAR PERFORMANCE GUARANTEE



GUARANTEED POSITIVE POWER SORTING: [-0 : +4.99 WP]



AVAILABLE IN 1000V OR 1500V SYSTEM VOLTAGE RATING



MANUFACTURED ACCORDING TO INTERNATIONAL QUALITY SYSTEM STANDARDS: ISO9001



REDUCES SYSTEM TOTAL INSTALLED COST (TIC)

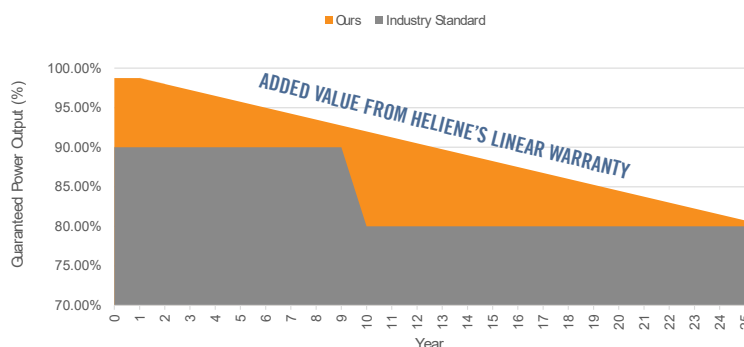
HELIENE INC. IS A PREMIER SOLAR MODULE MANUFACTURER, SERVICING THE GROWING SOLAR ENERGY MARKETS OF NORTH AMERICA.

COMBINING PROVEN EUROPEAN TECHNOLOGY WITH NORTH AMERICAN INGENUITY ALLOWS HELIENE TO MAKE A REAL COMMITMENT IN PROVIDING SMARTER ENERGY CHOICES FOR THE FUTURE.

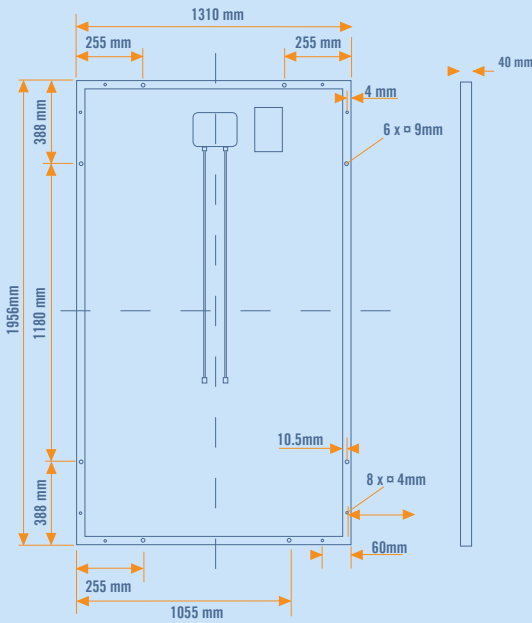
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LINEAR PERFORMANCE GUARANTEE

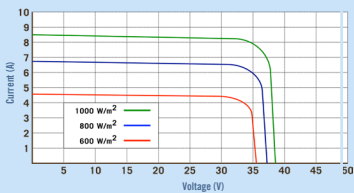
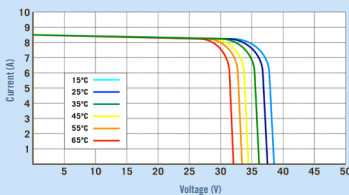
10 YEAR WORKMANSHIP WARRANTY • 25 YEAR LINEAR PERFORMANCE GUARANTEE



DIMENSIONS FOR HELIENE 96M SERIES MODULES



I-V CURVE FOR HELIENE 96M SERIES



CERTIFICATIONS



ELECTRICAL DATA (STC)

Peak Rated Power	P_{mpp} (W)	490	480	470	465	460
Maximum Power Voltage	V_{mpp} (V)	52.66	52.26	51.86	51.66	51.46
Maximum Power Current	I_{mpp} (A)	9.36	9.24	9.11	9.05	8.99
Open Circuit Voltage	V_{oc} (V)	62.99	62.59	62.19	61.99	61.79
Short Circuit Current	I_{sc} (A)	10.06	9.91	9.76	9.69	9.62
Module Efficiency *	Eff (%)	19.1	18.7	18.3	18.1	18.0
Maximum Series Fuse Rating	MF (A)	20	20	20	20	20
Power Output Tolerance		[- 0 , + 4.99] Wp				

STC - Standard Test Conditions: Irradiation 1000 W/m² - Air mass AM 1.5 - Cell temperature 25 °C

* Calculated using maximum power based on full positive output tolerance [-0 , +4.99] Wp

MECHANICAL DATA

Dimensions (L x W x D)	1956 x 1310 x 40 mm (77 x 51.6 x 1.6 inch)
Weight	38 kg (83.7 lbs)
Output Cables	1.5 m (47.2 inch) symmetrical cables with MC4 type connectors
Junction Box	IP-67 rated with bypass diodes
Frame	Double webbed 5 micron anodized aluminum alloy
Front Glass	Low-iron content, high-transmission PV solar glass
Solar Cells	96 Monocrystalline cells (156 x 156 mm)

CERTIFICATIONS

UL Certification	ULC/ORD-C1703-1, UL1703
IEC Certification	Optional

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P_{max}	-0.39%/°C
Temperature Coefficient of V_{oc}	-0.31%/°C
Temperature Coefficient of I_{sc}	0.045%/°C

MAXIMUM RATINGS

Operational Temperature	-40°C - +85°C
Max System Voltage	1000V (*1500V) *Optional

WARRANTY

10 Year Manufacturer's Workmanship Warranty

25 Year Linear Power Guarantee

(Refer to product warranty page for details)

PACKAGING CONFIGURATION

Modules per box:	25 pieces
Modules per 53' trailer:	550 pieces