

MONO

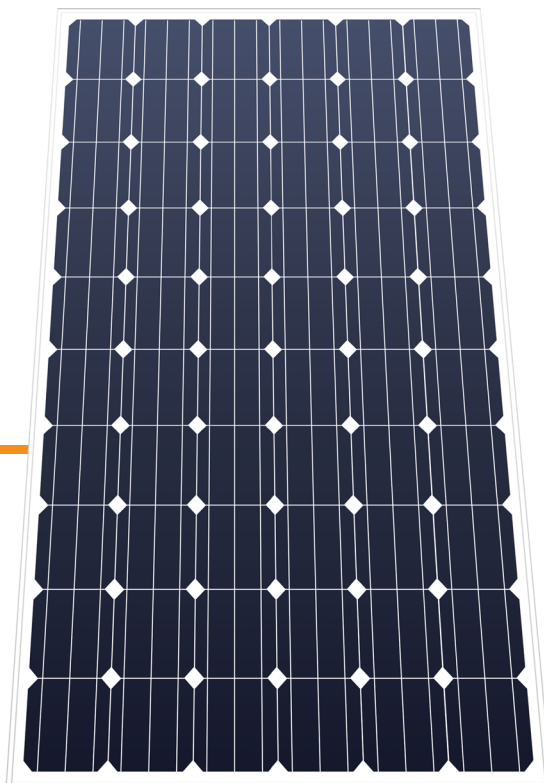
POLY



**HELIENE**

**60<sup>M</sup>**

60-CELL MONOCRYSTALLINE MODULE



**305 Wp**

MAX POWER OUTPUT

**18.9%**

MAX EFFICIENCY

**10 YEAR**

PRODUCT WARRANTY

**25 YEAR**

LINEAR PERFORMANCE GUARANTEE



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



DESIGNED FOR 1500V DC APPLICATIONS



MANUFACTURED ACCORDING TO INTERNATIONAL QUALITY SYSTEM STANDARDS: ISO9001



H-BLACK INTEGRATION AVAILABLE (ALL-BLACK MODULE)

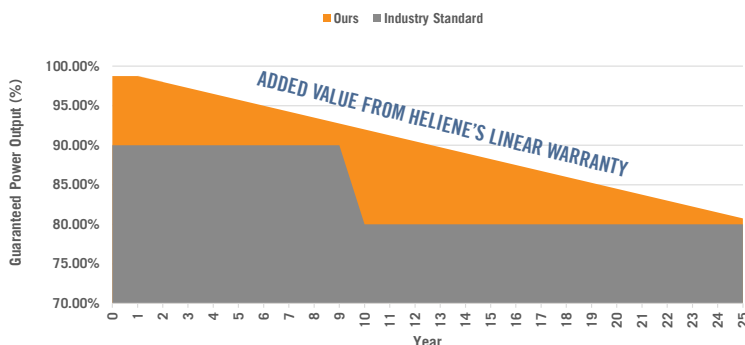
HELIENE INC. IS A PREMIER SOLAR MODULE MANUFACTURER, SERVICING THE GROWING SOLAR ENERGY MARKETS OF NORTH AMERICA.

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

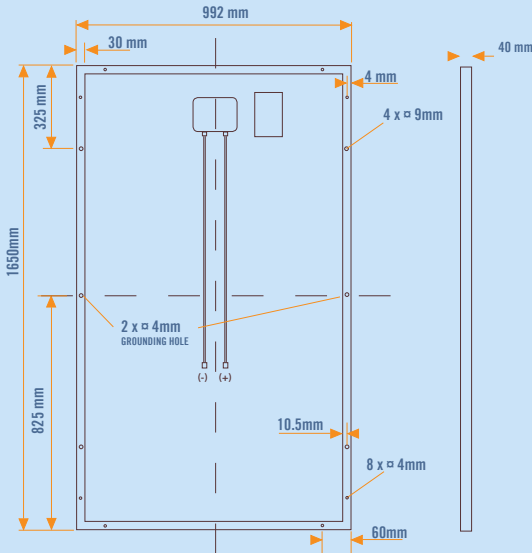
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### LINEAR PERFORMANCE GUARANTEE

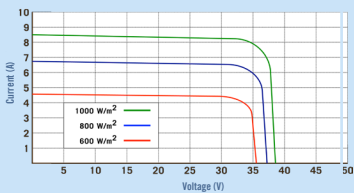
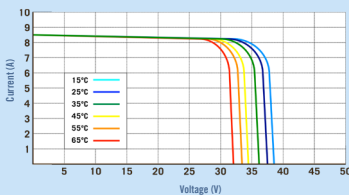
10 YEAR WORKMANSHIP WARRANTY • 25 YEAR LINEAR PERFORMANCE GUARANTEE



## DIMENSIONS FOR HELIENE 60M SERIES MODULES



## I-V CURVE FOR HELIENE 60M SERIES



## CERTIFICATIONS



## ELECTRICAL DATA (STC)

Peak Rated Power	$P_{mpp}$ (W)	305	300	295	290	285
Maximum Power Voltage	$V_{mpp}$ (V)	33.44	33.14	32.84	32.537	32.236
Maximum Power Current	$I_{mpp}$ (A)	9.196	9.127	9.06	8.989	8.92
Open Circuit Voltage	$V_{oc}$ (V)	39.981	39.83	39.68	39.528	39.38
Short Circuit Current	$I_{sc}$ (A)	9.673	9.59	9.51	9.424	9.34
Module Efficiency *	Eff (%)	18.9	18.6	18.3	18.0	17.7
Power Output Tolerance		[- 0 , + 4.99] Wp				

STC - Standard Test Conditions: Irradiation 1000 W/m<sup>2</sup> - 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)	1650 x 992 x 40 mm (65 x 39 x 1.6 inch)
Weight*	20 kg (43.9 lbs)
Output Cables	1.1 m (43.3 inch) symmetrical cables with MC4 type connectors
Junction Box	IP-67 rated with bypass diodes
Frame	Double webbed 15 micron anodized aluminum alloy
Front Glass	Low-iron content, high-transmission PV solar glass
Solar Cells	60 Monocrystalline cells (156 x 156 mm)

\* Calculated using 3.2mm PV glass, if 4mm profile is requested weight load will vary

## CERTIFICATIONS

UL Listed	ULC/ORD-C1703-1 , UL1703, UL1703 Fire Classification Type 1
IEC Listed	IEC 61215, IEC 61730

All Heliene modules are certified under the California Energy Commission (CEC) Listing Report

## 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

## PACKAGING CONFIGURATION

Modules per box:	25 pieces
Modules per 53' trailer:	750 pieces

## MAXIMUM RATINGS

Operational Temperature	-40°C - +85°C
Max System Voltage	1500V (UL / IEC)
Max Series Fuse Rating	15 A

## WARRANTY

10 Year Manufacturer's Workmanship Warranty

25 Year Linear Power Guarantee

(Refer to product warranty page for details)