



132HC G12 SL Bifacial Module

132 Half-Cut Monocrystalline 650W-670W

21.6%

Utilizes the latest G12 size super high efficiency Monocrystalline PERC cells. Half cut design further reduces cell to module (CTM) losses.

Stability & Looks

Enhanced frame design to withstand higher wind, snow, and other mechanical stresses. Framed Glass-Backsheet aesthetic is ideal for high visibility installation.

Anti-Reflective

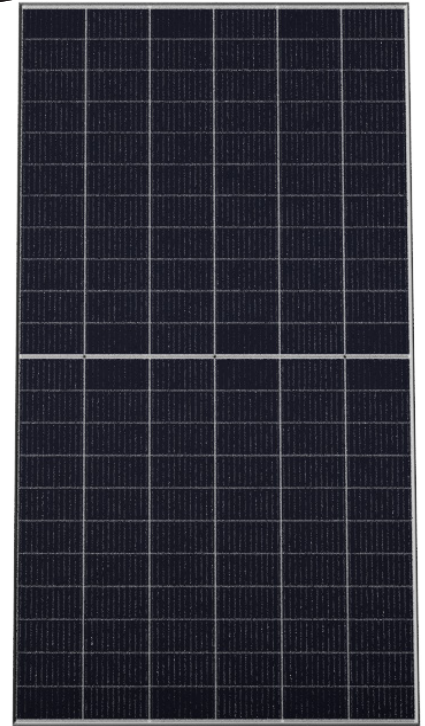
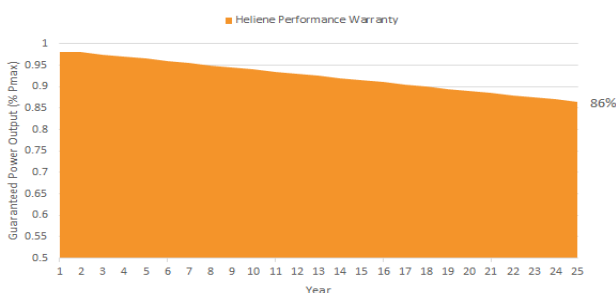
Premium solar glass with anti reflective coating delivers more energy throughout the day

High Reliability

Proven resistance to PID and reliable in high temperature and humidity environments.

No Compromise Guarantee

15 Year Workmanship Warranty
25 Year Linear Performance Guarantee



Manufactured Using International Quality System Standards: ISO9001

Half-Cut Design with Split Junction Box Technology

Bifacial Technology Enabling Additional Energy Harvest from Rear Side

1500V System Voltage Rating

World-class Quality

- Heliene's fully automated manufacturing facilities with state-of-the-art robotics and computer aided inspection systems ensure the highest level of product quality and consistency
- All manufacturing locations are compliant with international quality standards and are ISO 9001 certified
- Heliene modules have received Top Performer rankings in several categories from PV Evolution Labs (PV EL) independent quality evaluations

Bankable Reputation

- Established in 2010, Heliene is recognized as highly bankable Tier 1 manufacturer of solar modules and has been approved for use by the U.S. Department of Defense, U.S. Army Corps of Engineers and from numerous top tier utility scale project debt providers
- By investing heavily in research and development, Heliene has been able to stay on the cutting edge of advances in module technology and manufacturing efficiency

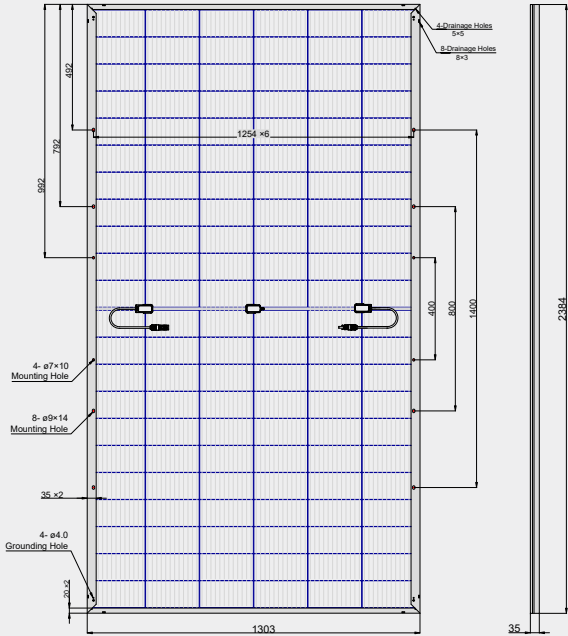
Local Sales, Service, and Support

- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization capability and just in time last-mile logistics support
- Local sales and customer support means answered phone calls and immediate answers to your technical and logistics questions. We understand your project schedules often change with little warning and endeavor to work with you to solve your project management challenges





Dimensions for 132HC G12 SL Bifacial Series Modules



Electrical Data (STC)

Peak Rated Power	P_{mpp} (W)	670	665	660	655	650
Maximum Power Voltage	V_{mpp} (V)	38.33	38.18	38.07	37.90	37.78
Maximum Power Current	I_{mpp} (A)	17.48	17.42	17.34	17.28	17.22
Open Circuit Voltage	V_{oc} (V)	45.85	45.73	45.60	45.37	45.15
Short Circuit Current	I_{sc} (A)	18.35	18.25	18.18	18.12	18.06
Module Efficiency	Eff (%)	21.6	21.4	21.3	21.1	20.9
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30
Power Output Tolerance		[- 0/+3%]				

Bifaciality Factor

70%

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

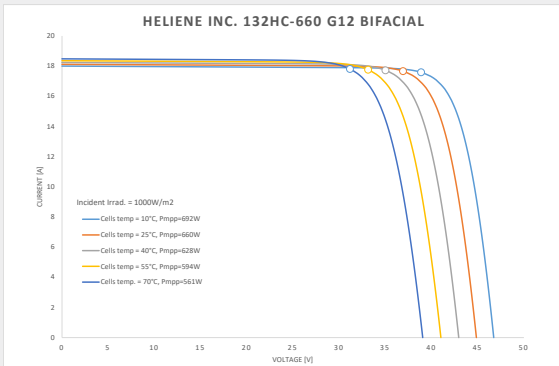
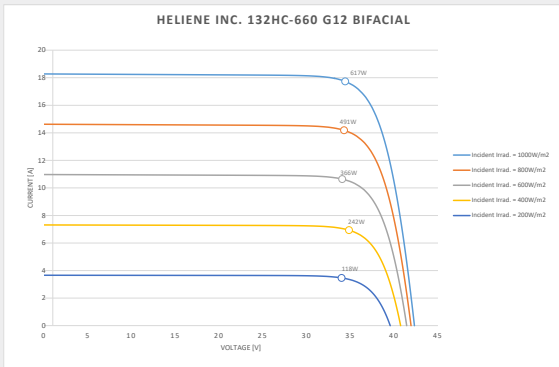
Electrical Data (NMOT)

Maximum Power	P_{mpp} (W)	503	500	496	492	488
Maximum Power Voltage	V_{mpp} (V)	36.61	36.46	36.36	36.19	36.08
Maximum Power Current	I_{mpp} (A)	13.75	13.71	13.65	13.60	13.53
Open Circuit Voltage	V_{oc} (V)	43.79	43.67	43.55	43.33	43.12
Short Circuit Current	I_{sc} (A)	14.79	14.71	14.65	14.60	14.55

NMOT - Nominal Module Operating Temperature:

Irradiance at 800W/m², Ambient Temperature 20°C, Wind speed 1m/s

I-V Curves for 132HC G12 SL Bifacial Series Modules



Certifications



Mechanical Data

Solar Cells	132 Half-Cut, G12, 210mm, PERC Cells
Module Construction	Framed Glass-Backsheet
Backsheet	Transparent Backsheet with White Pattern
Dimensions (L x W x D)	2384 x 1303 x 35 mm (93.86 x 51.30 x 1.38 inch)
Weight	33.7 kg (74.3 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Low-Iron Content, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

Certifications

UL Certification

UL61215, UL61730 Pending

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P_{max}	-0.34%/°C
Temperature Coefficient of V_{oc}	-0.25%/°C
Temperature Coefficient of I_{sc}	0.044%/°C

Maximum Ratings

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V
Mech. Load Test (Front)	113 psf / 5400 Pa
Mech. Load Test (Back)	50 psf / 2400 Pa
Fire Rating	Type 1

Warranty

15 Year Workmanship Warranty
25 Year Linear Power Guarantee

Packaging Configuration

Modules per Pallet 40' Container:	31 pieces
Modules per 40' Container:	558 pieces
Modules per Pallet 53' Trailer:	28 pieces
Modules per 53' Trailer:	560 pieces



The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the ongoing innovation and product enhancements. Helene Inc. reserves the right to make necessary adjustment to the information described herein at any time without prior notice. PV modules should be handled and installed only by qualified people. Please carefully read safety and installation instructions available for download from Helene website before using Helene PV modules. For warranty details, please refer to Product Warranty Document, also available for download from Helene website.