

156HC M10 TPC SL Bifacial Module

156 Half-Cut Monocrystalline 605W – 625W

22.4%

Utilizes the latest M10 size super high efficiency TOPCon N-type 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.

High Energy Yield

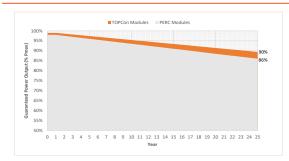
Highest Efficiency, Excellent Bifaciality & Low temperature coefficient of N-type TOPCon Solar Cells enable High Energy yield

High Reliability

TOPCon cells, based on N-type silicon result in low LID, reducing annual degradation and guaranteeing more power throughout the lifetime.

No Compromise Guarantee

15 Year Product Warranty 25 Year Linear Performance Guarantee







Highly efficient N-type Solar Cells based on TOPCon technology

Low LCOE enabled by High Power Output & Low BOS Cost

1% First year degradation & 0.4% Annual Power degradation

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

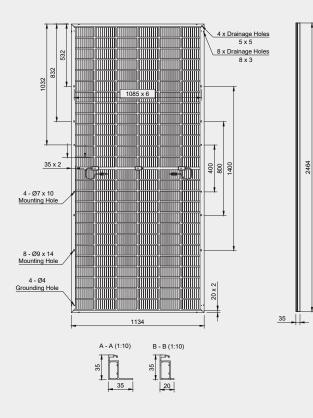
- · Established in 2010, Heliene is recognized as highly bankable Tier 1 manufacturer of solar modules and has been approved for use by the U.S. Department of Defense, U.S. Army Corps of Engineers and from numerous top tier utility scale project debt providers
- By investing heavily in research and development,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

Local Sales, Service, and Support

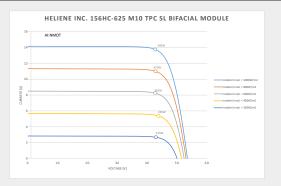
- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization 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 156HC M10 TPC SL Bifacial Series Modules



I-V Curves for 156HC M10 TPC SL Bifacial Series Modules



HELIENE INC. 156HC-625 M10 TPC SL BIFACIAL MODULE



Electrical Data (STC)

Peak Rated Power*	P _{mpp} (W)	625	620	615	610	605
Maximum Power Voltage	V_{mpp} (V)	47.01	46.75	46.48	46.20	45.92
Maximum Power Current	I _{mpp} (A)	13.29	13.25	13.21	13.17	13.13
Open Circuit Voltage*	V _{oc} (V)	55.80	55.65	55.50	55.35	55.22
Short Circuit Current**	I _{sc} (A)	14.06	14.02	13.99	13.95	13.92
Module Efficiency	Eff (%)	22.37	22.19	22.01	21.83	21.65
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30
Power Sorting Range			[- 0/+39	%]		

Bifaciality Factor***

80 ± 5%

STC - Standard Test Conditions: Irradiation 1000 W/m² - Air mass AM 1.5 - Cell temperature 25 °C, P_{moo} Production Tolerance ± 3%, V_{oc} Production Tolerance ± 3%, **I_{sc} Production Tolerance ± 4%, ***Bifaciality Factor= Pmpp_{rear}/Pmpp_{front} where Pmpp_{rear} and Pmpp_{front} are tested at STC

Electrical Data (NMOT)

Maximum Power	P _{mpp} (W)	475	471	467	463	459
Maximum Power Voltage	V _{mpp} (V)	45.01	44.76	44.50	44.24	43.97
Maximum Power Current	I _{mpp} (A)	10.54	10.52	10.49	10.47	10.45
Open Circuit Voltage	V _{oc} (V)	53.43	53.29	53.15	53.00	52.87
Short Circuit Current NMOT - Nominal Module Operatin	o	11.33	11.30	11.27	11.25	11.22

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

Mechanical Data

Solar Cells	156 Half Cut, M10, 182mm, TOPCon N-type Cells
Module Construction	Framed Glass-Backsheet
Backsheet	Transparent Backsheet with White Pattern
Dimensions (L x W x D)	2464 x 1134 x 35 mm (97.01 x 44.65 x 1.38 inch)
Weight	31 kg (68.34 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	4mm ² (12 AWG), 0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

Certifications

UL Certification	UL61215, UL61730 pending	
Temperature Ratings		
Nominal Module Operating		Operatio
Temperature (NMOT)	+42°C (±2°C)	Max Sys
Temperature Coefficient of I	P _{max} -0.30%/°C	Mech. L
Temperature Coefficient of	V _{oc} -0.25%/°C	Mech. L
Temperature Coefficient of	fl _{sc} 0.045%/°C	Fire Type
Warranty		Pacl
15 Year Product Warranty		Modules

25 Year Linear Power Guarantee

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 Type	Type 1			
Packaging Configuration				

Modules per Pallet 40' Container:	31 pieces
Modules per 40' Container:	620 pieces
Modules per Pallet 53' Trailer:	28 pieces
Modules per 53' Trailer:	588 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. Heliene 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 Heliene website before using Heliene PV modules. For warranty details, please refer to Product Warranty Document, also available for download from Heliene website.

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