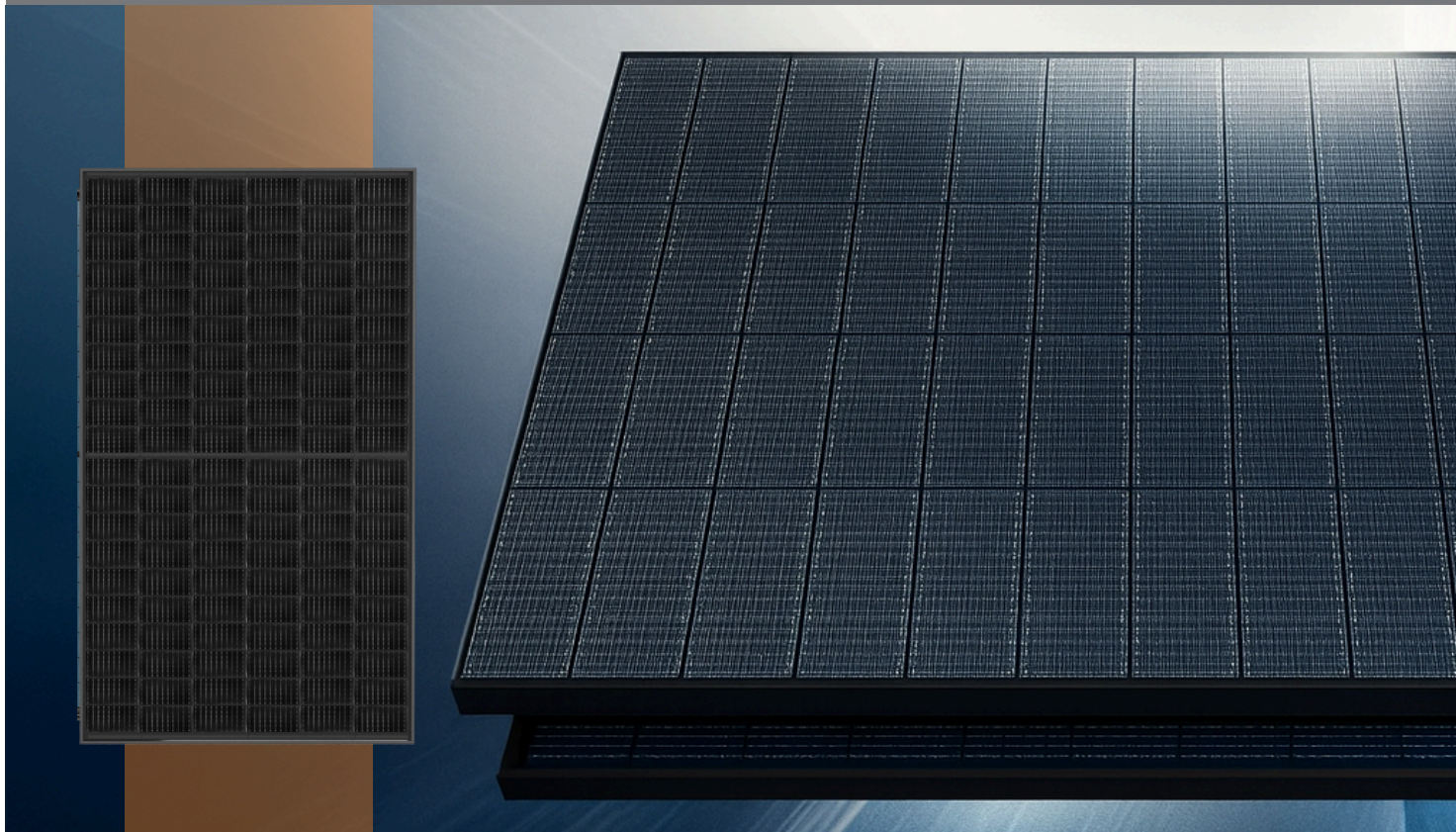


ELIOS | Voltaic 440HC-BF







440W Bifacial Glass Mono-Crystalline Solar Panel

Data Sheet



ELIOS 440W N-Type Mono-Crystalline Bifacial solar panel, designed with dual-sided power generation, maximizes energy output by harnessing both direct and reflected sunlight. Built using advanced robotic production lines and premium materials, these panels offer exceptional efficiency and durability in all weather conditions. Perfect for reliable, year-round energy generation in residential and commercial applications.

Features & Benefits

-  More energy, even in partially shaded areas with half cut cell technology.
-  Designed to Withstand High Mechanical load : 5400 Pa (Front) and 5400 Pa (Back), ensuring durability in extreme weather conditions.
-  TOPCon technology with 16-busbar design for better performance in hot climates.
-  Delivers up to 25% extra power, thanks to its bifacial design.
-  Exceptional Anti-PID performance through the use of optimized mass-production processes and strict materials control
-  Better temperature coefficients come from half-cell design.

Certifications

TUV Austria | MCS | INTERTEK | UL | IECCE | Archiles| UL 61215 / UL 61730 | IEC 61215 / IEC 61730 | CSA C22.2#61730:2019 | HALT Test Highly Accelerated Life and Extended Reliability Test | IEC 61853 PAN File | IEC TS 62804 PID Resistance | IEC 60068 Dust and Sand Resistance | IEC 62716 Ammonia Resistance | IEC 61701 Salt Mist Resistance | Bankability Report | EN ISO 9001:2015 Quality Management System | EN ISO 14001:2015 Environmental Management System | EN ISO 45001:2018 Occupational Health and Safety Management Systems

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ELECTRICAL SPECIFICATIONS

Rated Peak Power (Pmax)	440 W
Open Circuit Voltage (Voc)	38.63 V
Short Circuit Current (Isc)	14.30 A
Maximum Power Voltage (Vmp)	32.98 V
Maximum Power Current (Imp)	13.36 A
Solar Cell Efficiency	22.57%
Bifaciality Ratio	80±5%
Power Tolerance	0~±3%
Standard Test Conditions	Air Mass AM 1.5 Irradiance 1000 W/m ² Cell Temperature 25°

THERMAL SPECIFICATIONS

Open Voltage Temperature Coefficient VOC (%/C°)	-0.25
Open Voltage Temperature Coefficient ISC (%/C°)	+0.046
Power Temperature Coefficient PMP (%/C°)	-0.30
NOCT (C°)	45±2

OPERATING CONDITIONS

Maximum System Voltage - Vmax (V)	1500
Maximum Series Fuse (A)	30
Operating Temperature	IEC: -40°C to +85°C UL: -40°C to +90°C

MECHANICAL SPECIFICATIONS

Cells Per Module	108 (54x2)
Solar Cell Type	Grade A - N Type (TopCon) Mono-Crystalline
Front Surface	3.2mm Tempered AR Coated Glass
Back Cover	Transparent Backsheet
Frame	Anodized Aluminum (Black/Silver)
Junction Box	IP 68 With original MC4
Wire Length	1200mm
Fire Classification	Type I
Dimensions (LxWxD)	67.8 x 44.65 x 1.18 in (1722 x 1134 x 30 mm)
Net Weight	20.5 ±1 kg (45.20 lb ± 2.2 lb)
Output Port	MC4
Output Cable	4.0 mm ²

PACKAGING & SHIPPING INFO

Retail Box: Dimensions (LxWxD)	69.29x46.46x49.61 in 1760x1180x1260 mm
Box Weight	6,480 kgs 14,285.95 lb
40 Feet High-Cube Container	962 Modules 37 Modules per Pallet

Applications

- Off-Grid Systems
- Residential roof-tops
- Commercial / Industrial
- Solar Power Plant

Warranty

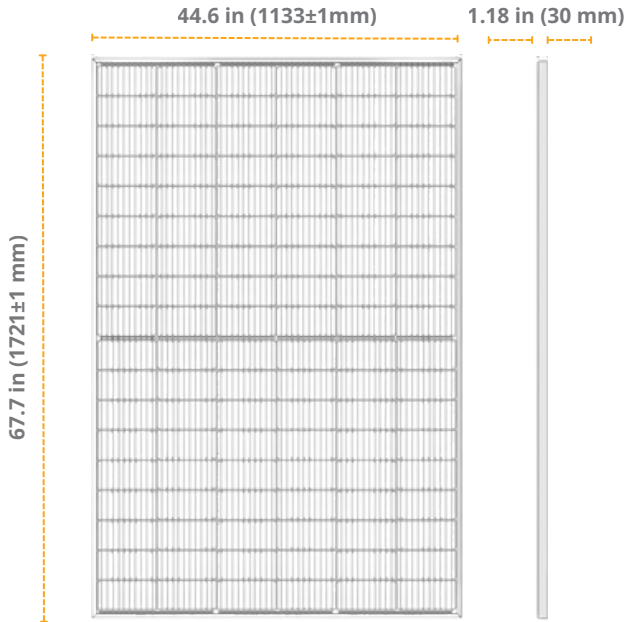
- 30-year linear power Warranty
- 12-year product warranty
- Only -0.4% annual degradation

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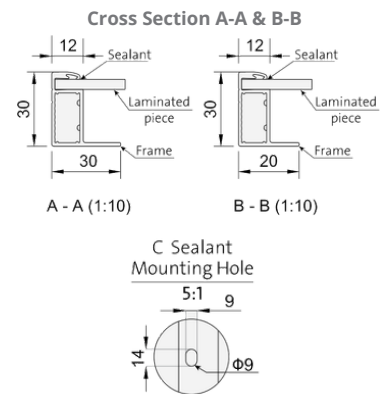
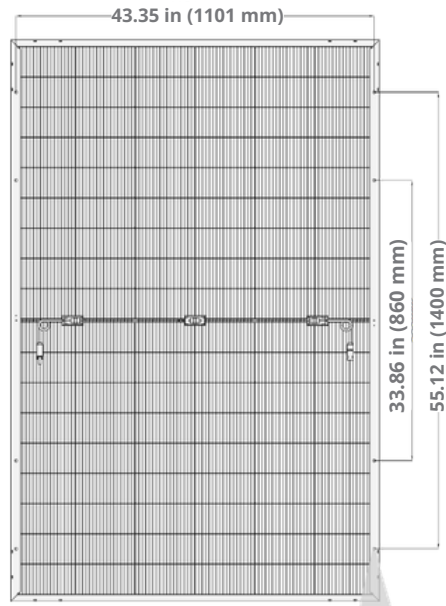
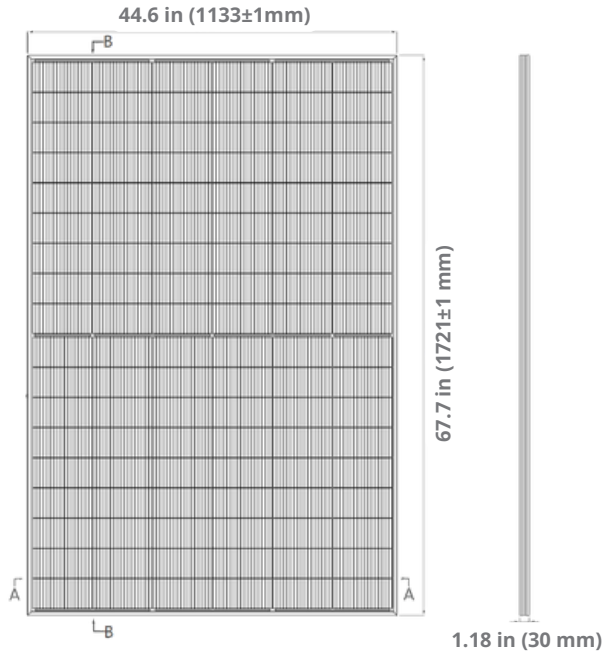
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Dimensions

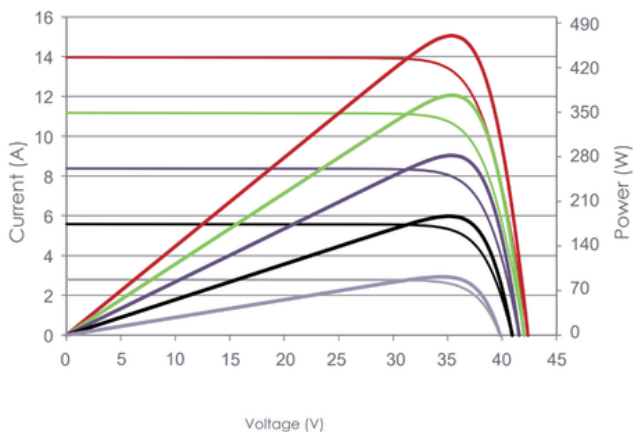


Module Drawings



I-V Curves

Current-Voltage & Power-Voltage Curves (430W)



Temperature Dependence of I_{sc} , V_{oc} , P_{max}

