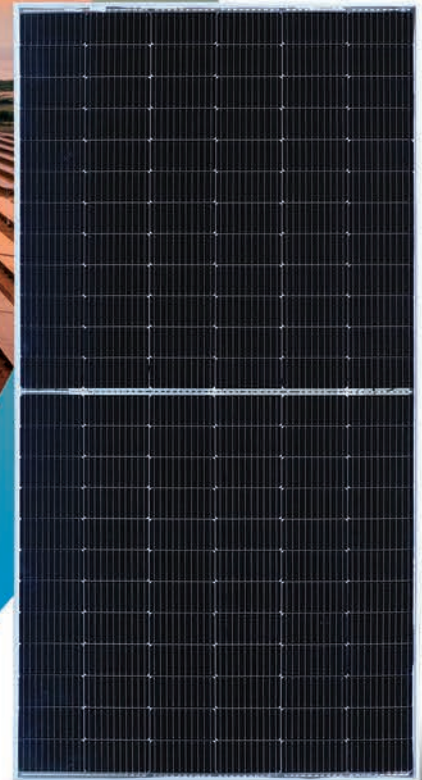




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SAPPHIRE

Monoperc Bifacial Glass to Glass Module



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Over 15 Years of Sustainable Power with Photovoltaic Modules, New High WP Modules United with Quality and Efficiency



With presence in Green Energy Projects Across the Globe.



Our Mission: Delivering Clean, Reliable Energy while Reducing Carbon Footprint through wide range of Residential and Commercial Solar Offerings.

144 HALF CUT CELL MONOPERC BI-FACIAL GLASS TO GLASS MODULE

TECHNICAL SPECIFICATION

Electrical data at 1000W/m², 25°C and A.M1.5 (STC in accordance with IEC 60904-3)

Model Name	E535HCBG144	E540HCBG144	E545HCBG144	E550HCBG144
Rated Power at STC	535	540	545	550
Power Tolerance	+5W	+5W	+5W	+5W
Module Efficiency at STC	20.71%	20.90%	21.10%	21.29%
Open Circuit Voltage-VOC(Volts)(±10%)	49.35	49.5	49.75	49.9
Short Circuit Current-ISC (AMPS)(±10%)	13.59	13.62	13.88	14.01
Max Power Voltage-VPM(Volts)	41.32	41.54	41.61	41.62
Max Power Current-IPM (AMPS)	12.95	13	13.1	13.22

At low irradiance (200W/M², 25°C and AM1.5) the module yields at least 95% of the STC efficiency.

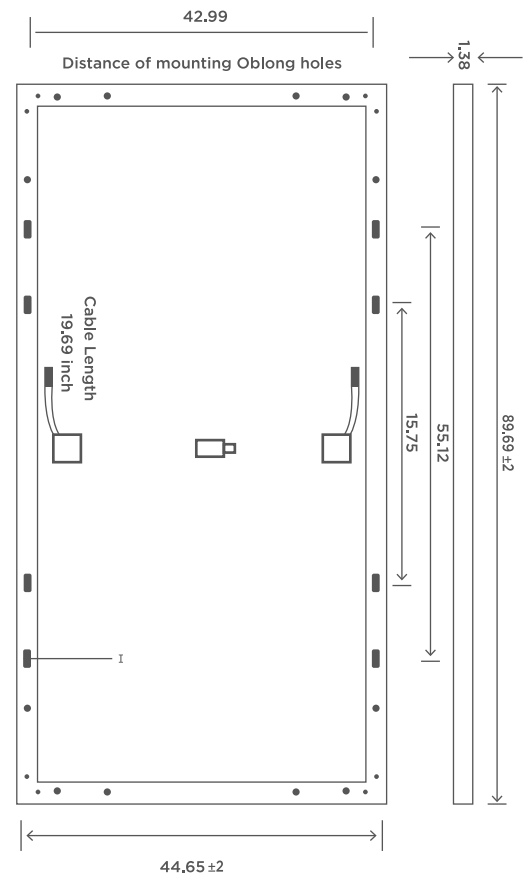
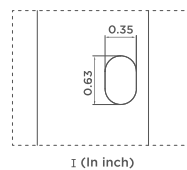
Test uncertainty for Pmax ±3%

Permissible Operating Conditions	
Operating Temperature Range	-40° C TO 85° C
Max.system Voltage	1500V DC
Maximum Snow Load Capacity	5400PA
Resistance Against Hail	Max Ø24mm with Impact Speed of 51 Mph
Protection Class Against Electrical Shock	II
Maximum Reverse Current	30 A
Bifaciality	70±5%

Thermal Data	
Temp. Coefficient Open-circuit Voltage	-0.28%/°C
Temp. Coefficient Short Circuit Current	0.05%/°C
Temp. Coefficient Rated Power	-0.35%/°C
NOCT (Normal operating cell temperature)	45° C ±2°C

Mechanical Data	
Number of Cells and Cell Type	144 Monoperc Bi-Facial Solar Cells (182mm X 91mm)
Dimensions: (L X W X H)	89.69 inch X 44.65 inch X 1.38 inch
Weight	66.14 pounds
Front Glass	2 mm High Transmission, Solar Glass
Embedding	Top EVA, Bottom POE
Back Glass	2 mm High Transmission, Solar Glass
Junction Box	3 Split Junction Box IP68
Number of Bypass Diodes	3
Cables	4mm ² Solar Cables, Length 19.69±10inch
Connectors	MC4 Compatible /Staubli Option Available
Application Class	A

Warranty	
Product Warranty	12 years
Performance Warranty	30 years

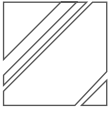


1ST YEAR DEGRADATION <2.0%

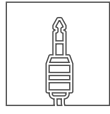
YEAR 2-30 POWER DEGRADATION <0.45%

END OF 30 YEARS <84.95%

FEATURES



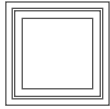
AR Coated High Transmission Glass



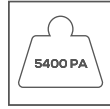
MC4 Compatible Connectors



PID Resistance



Anodised Aluminium Frame

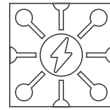


Snow Load Resistance upto 5400 Pa

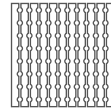
BENEFITS



Low LCOE, Faster Payback Period



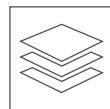
30% More Power Best In Class Efficiency upto 21.5%



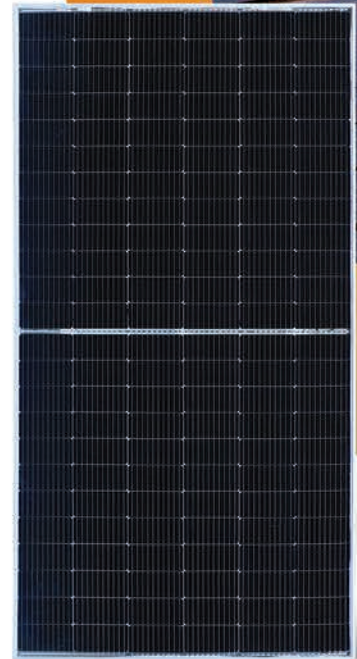
Multi-Bus Bar Technology for Better Current Collection



Lowest Guaranteed First Year and Annual Degradation



Well-Composed Components Stress to Reduce Micro Cracks



*Product under testing at TUV for IEC standards.



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