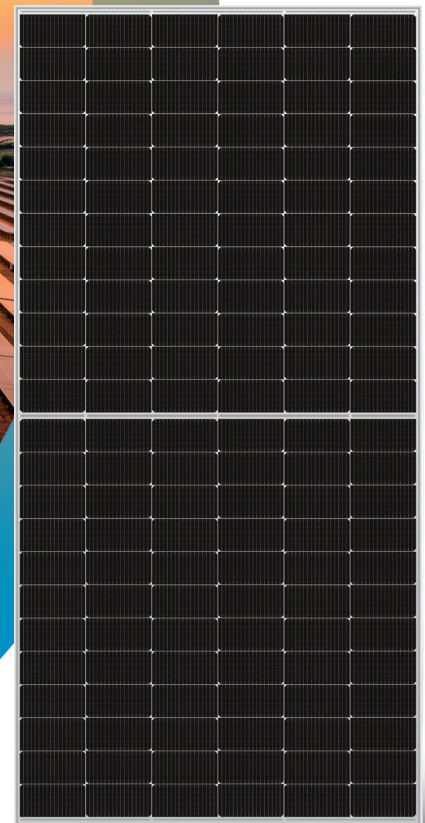




YOUR RELIABLE
PARTNER FOR
SOLAR ENERGY
SINCE 1992



**EMMVEE
CRAFTING SMART
AND ADVANCED
SOLAR ENERGY
SOLUTIONS**



TITANIUM DUO

N-TYPE BIFACIAL GLASS TO GLASS MODULE



Committed to Quality, Punctuality, and Customer Support since 1992.



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.

120 CUTCELL N-TYPE BIFACIAL 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	E465HCBG120-T	E470HCBG120-T	E475HCBG120-T	E480HCBG120-T	E485HCBG120-T
Rated Power at STC	465	470	475	480	485
Power Tolerance	+5W	+5W	+5W	+5W	+5W
Module Efficiency at STC	21.50%	21.7%	22.00%	22.20%	22.40%
Open Circuit Voltage-VOC(Volts)(±10%)	42.68	42.82	43.01	43.81	43.32
Short Circuit Current-ISC (AMPS)(±10%)	13.74	13.81	13.88	13.94	14.02
Max Power Voltage-VPM(Volts)	35.71	35.91	36.12	36.34	36.51
Max Power Current-IPM (AMPS)	13.02	13.09	13.15	13.21	13.12

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

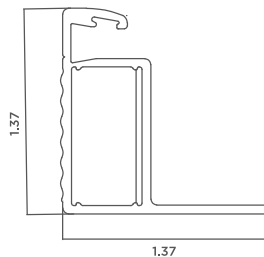
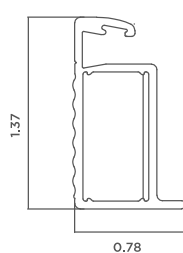
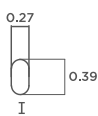
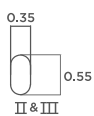
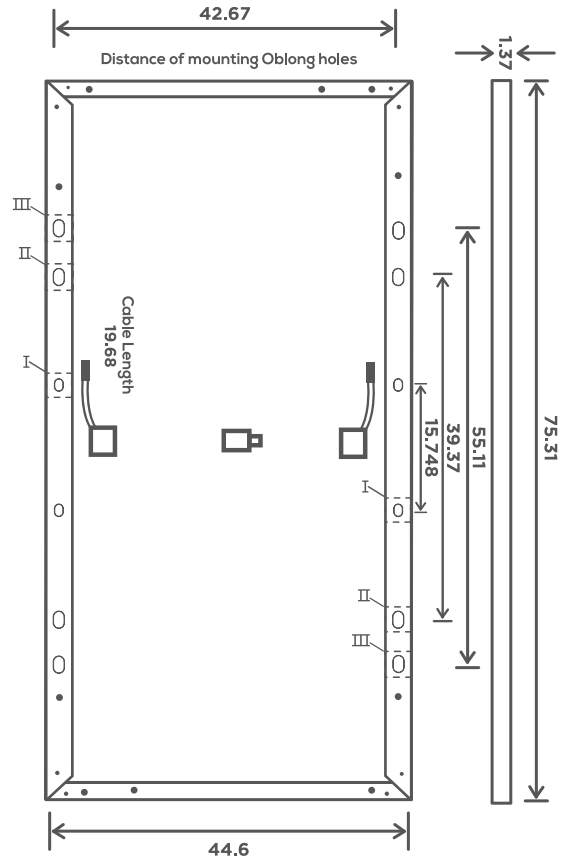
Test uncertainty for Pmax ±3%

Permissible Operating Conditions	
Operating Temperature Range	-40° C TO 85° C
Max.system Voltage	1500V DC
Maximum Snow Load Capacity	5400PA
Resistance Against Hail	MaxØ24mm With Impact Speed of 51 Mph
Protection Class Against Electrical Shock	II
Maximum Reverse Current	30 A

Thermal Data	
Temp. Coefficient Open-circuit Voltage	-0.25%/°C
Temp. Coefficient Short Circuit Current	0.045%/°C
Temp. Coefficient Rated Power	-0.29%/°C
NOCT (Normal operating cell temperature)	45° C ±2°C

Mechanical Data	
Number of Cells and Cell Type	120 TOPCON Solar Cells (182mm X 91mm)
Dimensions: (L X W X H)	75.31 inch X 44.65 inch X 1.38 inch
Weight	57.32 Pounds
Front Glass	2 mm High Transmission, Solar Glass
Embedding	EVA/POE/EPE
Back Sheet	2 mm High Transmission, Solar Glass
Junction Box	3 Split Junction Box IP68
Number of Bypass Diodes	3
Cables	4mm ² Solar Cables, Length 500±10mm
Bifaciality	80±5%
Connectors	mc4 Compatible, Staubli Option Available

Warranty	
Product Warranty	12 years
Performance Warranty	30 years

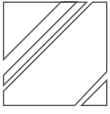


1ST YEAR DEGRADATION 1.0%

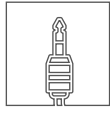
YEAR 2-30 POWER DEGRADATION 0.40%

END OF 30 YEARS 87.40%

FEATURES



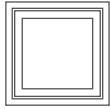
AR Coated High Transmission Glass



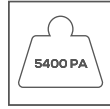
MC4 Compatible Connectors



PID Resistance



Anodised Aluminium Frame

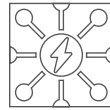


Snow Load Resistance upto 5400 Pa

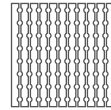
BENEFITS



Low LCOE, Faster Payback Period



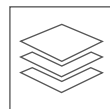
30% More Power Best In Class Efficiency upto 23%



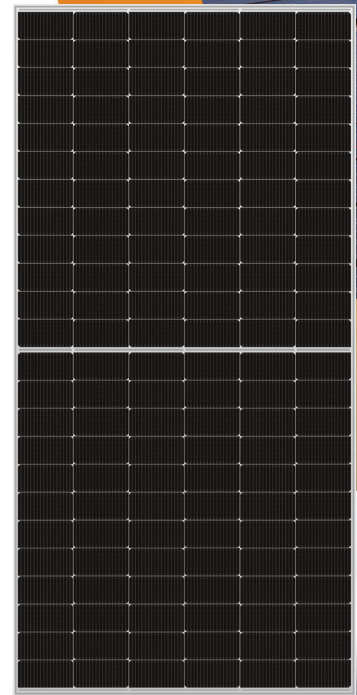
Multi-Bus Bar Technology for Better Current Collection



Lowest Guaranteed First Year and Annual Degradation



Well-Composed Components Stress to Reduce Micro Cracks



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(An ISO 9001:2015, ISO 14001:2015 & OHSAS 45000:2018 Certified Company)