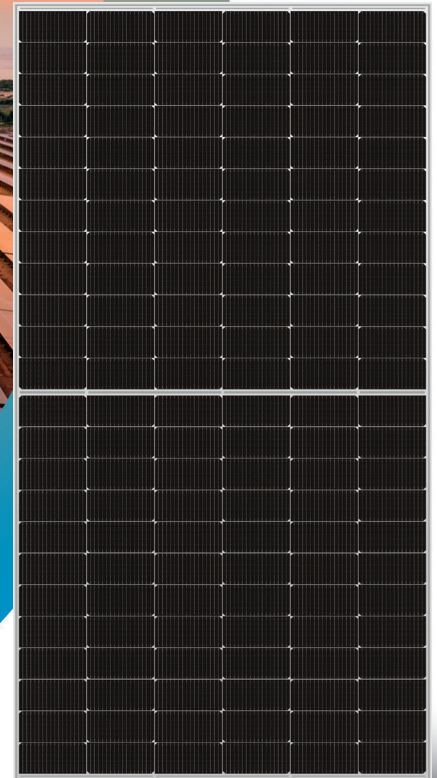




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SOLUTIONS**



## TITANIUM DUO

**G12R N-TYPE TOPCon BIFACIAL GLASS TO GLASS MODULE**



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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.

# 132 CUT CELL G12R N-TYPE TOPCON BIFACIAL GLASS TO GLASS MODULE

## TECHNICAL SPECIFICATION

Electrical data at 1000W/m<sup>2</sup> 25°C, and A M1 5 (STC in accordance with IEC 60904-3)

Model Name	E590HCBG132-T	E595HCBG132-T	E600HCBG132-T	E605HCBG132-T
Rated Power at STC*	590	595	600	605
Power Tolerance	0 - +5Wp	0 - +5Wp	0 - +5Wp	0 - +5Wp
Module Efficiency at STC	21.84%	22.03%	22.21%	22.40%
Open Circuit Voltage-VOC (Volts) ±10%	48.21	48.42	48.57	48.72
Short Circuit Current-ISC (AMPS) ±10%	15.60	15.66	15.74	15.81
Max Power Voltage-VPM(Volts)	40.02	40.19	40.33	40.46
Max Power Current-IPM (AMPS)	14.75	14.82	14.90	14.98

At low irradiance (200W/M<sup>2</sup> 25°C and AM15) the module yields at least 95% of the STC efficiency.

\*Test Uncertainty ± 3%

Electrical data at NOCT at 800 W/m<sup>2</sup>, 20 °C ambient temperature, 1 m/s Wind Velocity

Model Name	E590HCBG132-T	E595HCBG132-T	E600HCBG132-T	E605HCBG132-T
Rated Power at STC*	447.59	451.81	455.62	459.45
Module Efficiency at STC	16.57%	16.73%	16.87%	17.01%
Open Circuit Voltage-VOC (Volts) ±10%	46.04	46.24	46.38	46.53
Short Circuit Current-ISC (AMPS) ±10%	12.58	12.63	12.69	12.75
Max Power Voltage-VPM(Volts)	37.93	38.10	38.22	38.35
Max Power Current-IPM (AMPS)	11.80	11.86	11.92	11.98

At low irradiance (200W/M<sup>2</sup> 25°C and AM15) the module yields at least 95% of the STC efficiency.

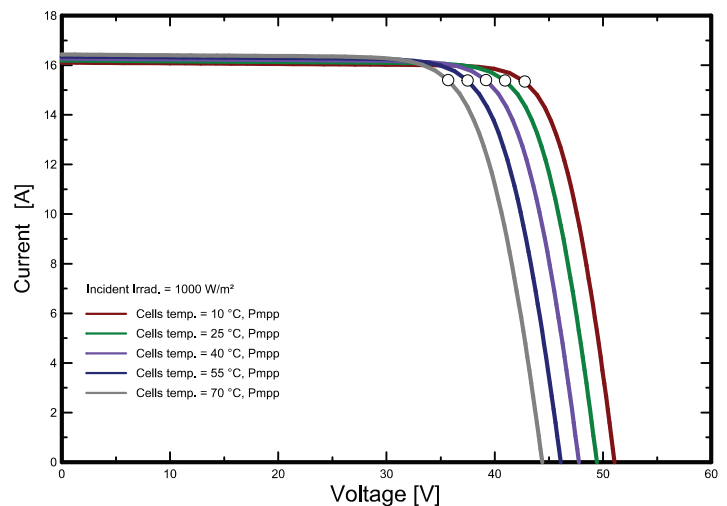
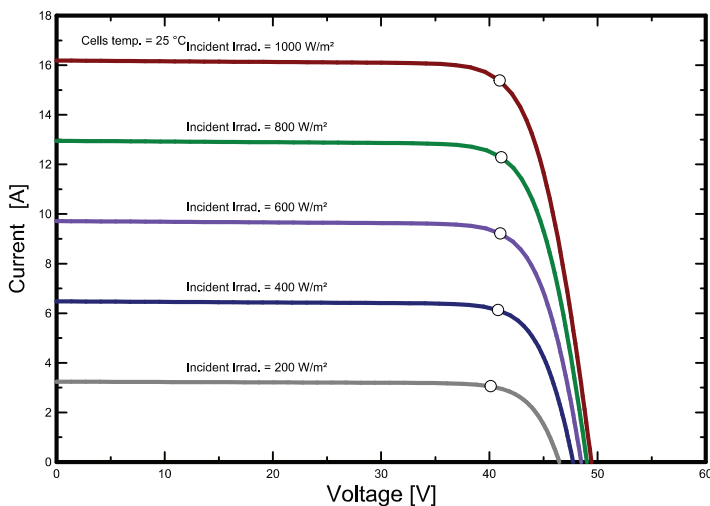
\*Test Uncertainty ± 3%

Bifacial Gain\*\*

Model Name	E590HCBG132-T		E595HCBG132-T		E600HCBG132-T		E605HCBG132-T	
% Power Gain	Pmax	Eff %	Pmax	Eff %	Pmax	Eff %	Pmax	Eff %
5%	619.5	22.9%	624.7	23.1%	630	23.3%	635.2	23.5%
10%	649	24.0%	654.5	24.2%	660	24.4%	665.5	24.6%
15%	678.5	25.1%	684.2	25.3%	690	25.5%	695.7	25.7%
20%	708	26.2%	714.	26.4%	720	26.6%	726	26.8%
25%	737.5	27.3%	743.7	27.5%	750	27.7%	756.2	28%

\*\*Note: Bifacial power gain will depend on plant design, tilt angle, structure height, Rear Surface condition, GCR, array shadow and Albedo.

### IV CURVE



# 132 CUT CELL G12R N-TYPE TOPCON BIFACIAL GLASS TO GLASS MODULE

## TECHNICAL SPECIFICATION

### Permissible Operating Conditions

Operating Temperature Range	-40° C to 85° C
Max.system Voltage	1500V DC
Maximun Snow Load Capacity	5400Pa Snow Load and 2400Pa Wind Load
Resistance Against Hail	Max 24mm with impact Speed of 83km/h (52Mph)
Protection Class Against Electrical Shock	II
Application Class	A
Fire Safety Class	Class C
Maximum Reverse Current/Series fuse rating	35A
Bifaciality	80 ± 5%

### 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

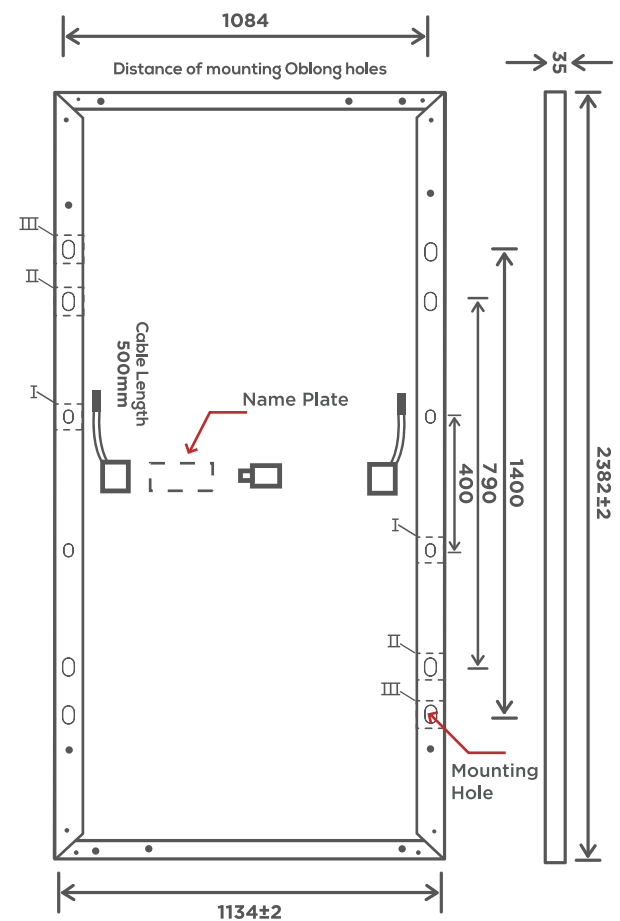
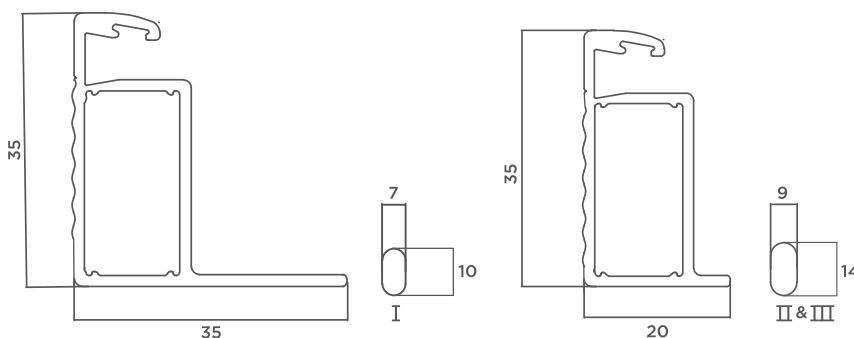
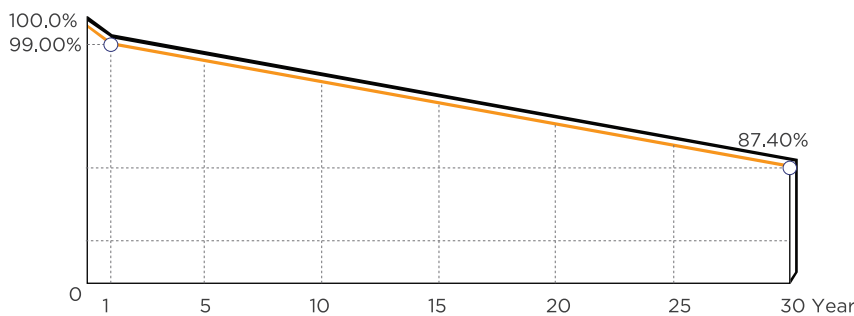
### Mechanical Data

Number of Cells and Cell Type	N Type TopCon132 Cut cell 105 X 182mm (4.13 X 7.16inch)
Dimensions:(LXWXH)	2382mm X 1134mm X 35mm (93.86inch X 44.65inch 1.37inch)
Weight	34kg(74.96lb)
Front Glass	2mm AR Coated Semi Tempered Glass
Embedding	EVA/POE/EPE
Back Glass	2mm Semi Tempered Glass
Junction Box	3 Split Junction Box IP68
Number of Bypass Diodes	3
Cables	4mm <sup>2</sup> (12AWG) length 500 ±10mm(19.68 ±0.5inch)
Connectors	MC4 Compatible

### Warranty

Product Warranty	12 Years
Performance Warranty	30 Years

### MODULE DEGRADATION CURVE

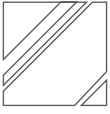


**1ST YEAR DEGRADATION 1.0%**

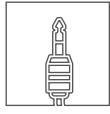
**YEAR 2-30 POWER DEGRADATION 0.40%**

**END OF 30 YEARS 87.40%**

# FEATURES



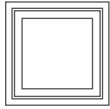
AR Coated High Transmission Glass



MC4 Compatible Connectors



PID Resistance



Anodised Aluminium Frame

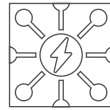


Snow Load Resistance upto 5400 Pa

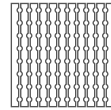
# BENEFITS



Low LCOE, Faster Payback Period



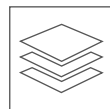
Best In Class Efficiency upto 23%



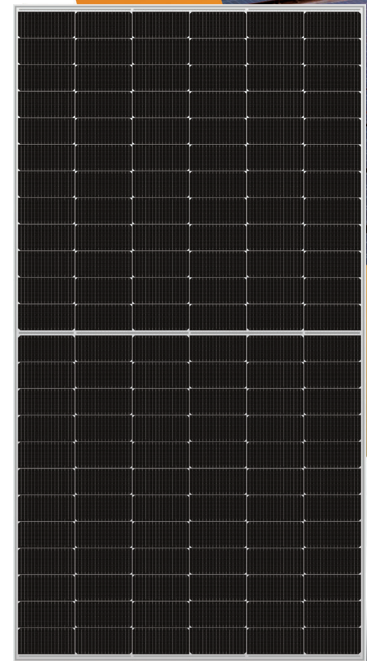
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