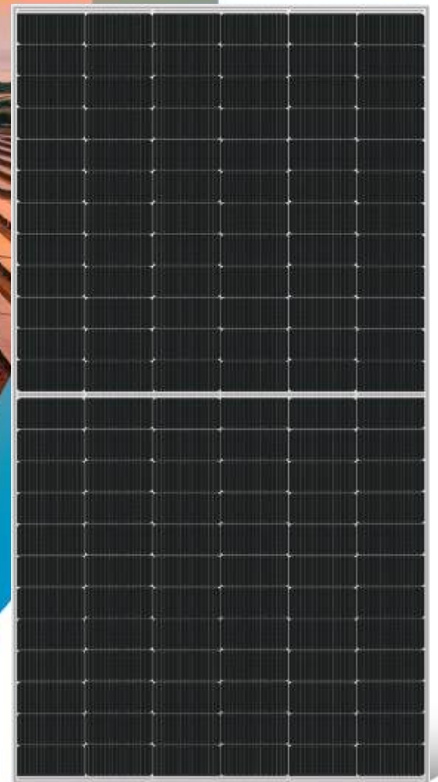




YOUR RELIABLE
PARTNER FOR
SOLAR ENERGY
SINCE 1992

EMMVEE CRAFTING SMART AND ADVANCED SOLAR ENERGY SOLUTIONS



TITANIUM DUO

N-TYPE TOPCon 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.

144 HALF CUT CELL N-TYPE TOPCON 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	E560HCBG144-T	E565HCBG144-T	E570HCBG144-T	E575HCBG144-T	E580HCBG144-T
Rated Power at STC	560	565	570	575	580
Power Tolerance	+5W	+5W	+5W	+5W	+5W
Module Efficiency at STC	21.68%	21.87%	22.07%	22.26%	22.45%
Open Circuit Voltage-VOC(Volts)(±10%)	50.67	50.87	51.07	51.27	51.47
Short Circuit Current-ISC (AMPS)(±10%)	14.13	14.19	14.25	14.31	14.37
Max Power Voltage-VPM(Volts)	41.95	42.14	42.29	42.44	42.59
Max Power Current-IPM (AMPS)	13.35	13.41	13.48	13.55	13.62

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

Test uncertainty for Pmax $\pm 3\%$

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 83km/h
Protection Class Against Electrical Shock	II
Maximum Reverse Current	30A
Bifaciality	80±5%

Thermal Data

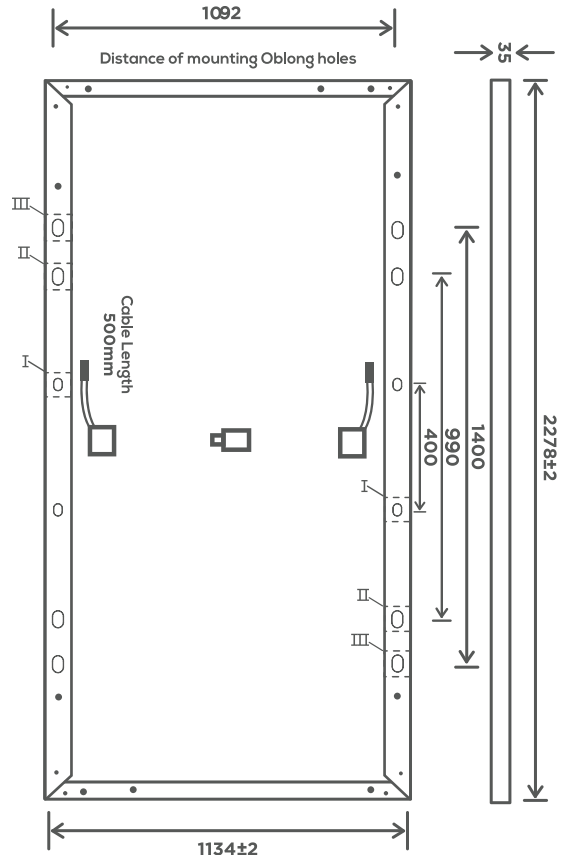
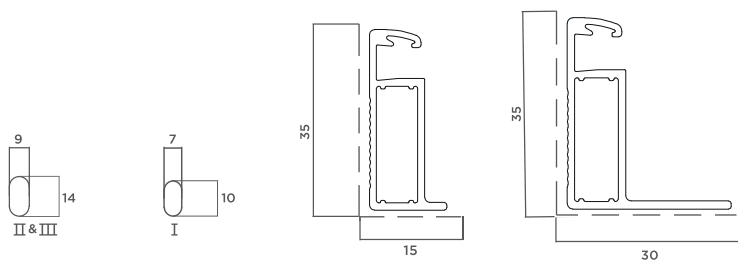
Temp. Coefficient Open-circuit Voltage	-0.25%/°C
Temp. Coefficient Short Circuit Current	0.045%/°C
Temp. Coefficient Rated Power	-0.29%/°C
NOCT (Normal operating cell temperature)	45°C ±2°C

Mechanical Data

Number of Cells and Cell Type	144 TOPCon Solar Cells
Dimensions: (L X W X H)	2278 mm X 1134 mm X 35 mm
Weight	31.5 kg
Front Glass	2 mm High Transmission, Solar Glass
Embedding	EVA/POE/EPE
Back Glass	2 mm High Transmission Solar Glass
Junction Box	3 Split Junction Box IP68
Number of Bypass Diodes	3
Cables	4mm² Solar Cables, Length 500±10mm
Connectors	MC4 Compatible

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%

144 HALF CUT CELL N-TYPE TOPCON 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	E585HCBG144-T	E590HCBG144-T	E595HCBG144-T	E600HCBG144-T	E605HCBG144-T
Rated Power at STC	585	590	595	600	605
Power Tolerance	+5W	+5W	+5W	+5W	+5W
Module Efficiency at STC	22.65%	22.84%	23.03%	23.23%	23.42%
Open Circuit Voltage-VOC(Volts)(±10%)	51.67	51.87	52.07	52.27	52.47
Short Circuit Current-ISC (AMPS)(±10%)	14.43	14.49	14.55	14.61	14.67
Max Power Voltage-VPM(Volts)	42.78	42.93	43.08	43.23	43.42
Max Power Current-IPM (AMPS)	13.68	13.75	13.82	13.89	13.95

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

Test uncertainty for Pmax $\pm 3\%$

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 83km/h
Protection Class Against Electrical Shock	II
Maximum Reverse Current	30A
Bifaciality	80±5%

Thermal Data

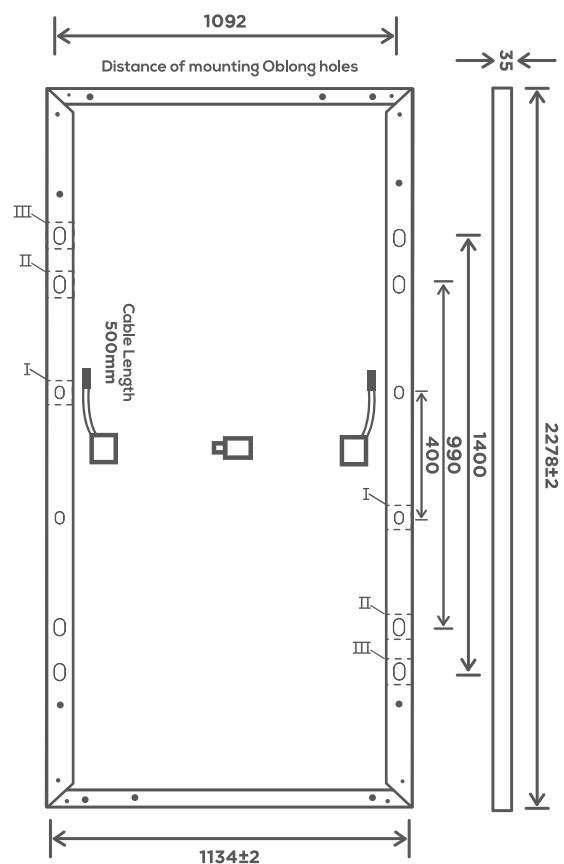
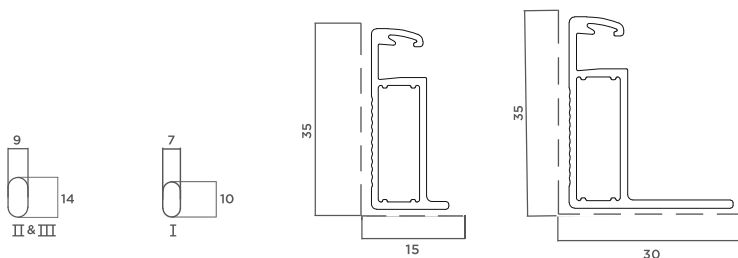
Temp. Coefficient Open-circuit Voltage	-0.25%/°C
Temp. Coefficient Short Circuit Current	0.045%/°C
Temp. Coefficient Rated Power	-0.29%/°C
NOCT (Normal operating cell temperature)	45°C ±2°C

Mechanical Data

Number of Cells and Cell Type	144 TOPCon Solar Cells
Dimensions: (L X W X H)	2278 mm X 1134 mm X 35 mm
Weight	31.5 kg
Front Glass	2 mm High Transmission, Solar Glass
Embedding	EVA/POE/EPE
Back Glass	2 mm High Transmission Solar Glass
Junction Box	3 Split Junction Box IP68
Number of Bypass Diodes	3
Cables	4mm² Solar Cables, Length 500±10mm
Connectors	MC4 Compatible

Warranty

Product Warranty	12 years
Performance Warranty	30 years



1ST YEAR DEGRADATION	1.0%
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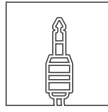
YEAR 2-30 POWER DEGRADATION	0.40%
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END OF 30 YEARS	87.40%
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FEATURES



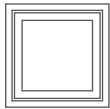
AR Coated High
Transmission
Glass



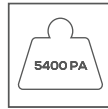
MC4
Compatible
Connectors



PID
Resistance



Anodised
Aluminium
Frame

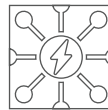


Snow Load
Resistance
upto 5400 Pa

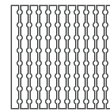
BENEFITS



Low LCOE,
Faster Payback
Period



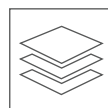
Best In Class
Efficiency
upto 23%



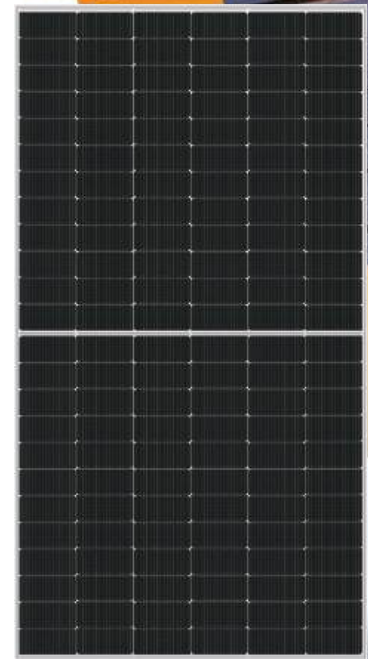
Multi-Bus Bar
Technology for
Better Current
Collection



Lowest
Guaranteed First
Year and Annual
Degradation



Well-Composed
Components
Stress to Reduce
Micro Cracks



IEC 61215
IEC 61738
Regular Production
Surveillance



IEC 61634
Regular Production
Surveillance



Average
Resistance
Regular Production
Surveillance



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