

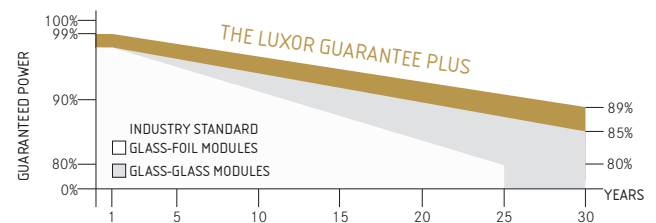
- + POWERFUL N-TYPE TOPCON CELLS
- + DOUBLE GLASS: HIGHER MECHANICAL STABILITY AND FIRE SAFETY
- + BIFACIAL: DOUBLE-SIDED POWER GENERATION FOR MORE YIELD
- + REDUCTION OF BALANCE-OF-SYSTEM-COSTS THROUGH HIGHER PERFORMANCE PER MODULE
- + APPLICATION: WHEREVER LONGEVITY AND ROBUSTNESS ARE REQUIRED



product guarantee<sup>1</sup>



linear performance guarantee<sup>1</sup>



## ECO LINE N-TYPE TOPCON GLASS-GLASS BIF

### M108 / 415 - 435W

MONOCRYSTALLINE N-TYPE MODULE FAMILY, WHITE MESH



Longlife tested



Power proofed



Safety provided



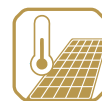
Selection of components



Back glass



Performance surplus of 0 Wp to 6.49 Wp



Higher heat dispensing



PID free LID Free



German warrantor

# ECO LINE N-TYPE TOPCON GLASS-GLASS BIF

## M108 / 415 - 435 W, WHITE MESH

Module type LX - XXX M/182-108+ GG | XXX = Rated power Pmpp

### Electrical data at STC

	415.00	420.00	425.00	430.00	435.00
Rated power Pmpp [Wp]	415.00	420.00	425.00	430.00	435.00
Pmpp range to	421.49	426.49	431.49	436.49	441.49
Rated current Impp [A]	13.26	13.34	13.42	13.49	13.57
Rated voltage Vmpp [V]	31.32	31.51	31.70	31.89	32.08
Short-circuit current Isc [A]	13.99	14.07	14.16	14.23	14.31
Open-circuit voltage Uoc [V]	37.92	38.15	38.38	38.61	38.84
Efficiency at STC up to	21.58%	21.84%	22.10%	22.35%	22.61%
Efficiency at 200 W/m <sup>2</sup>	21.04%	21.30%	21.55%	21.80%	22.06%

### Electrical data at NOCT

	312.08	315.84	319.60	323.36	327.12
Power at Pmpp [Wp]	312.08	315.84	319.60	323.36	327.12
Rated current Impp [A]	10.70	10.77	10.83	10.89	10.95
Rated voltage Vmpp [V]	29.17	29.33	29.51	29.69	29.87
Short-circuit current Isc [A]	11.29	11.36	11.43	11.49	11.55
Open-circuit voltage Uoc [V]	35.00	35.22	35.45	35.67	35.90

Specification as per STC (Standard test conditions): irradiance 1000W/m<sup>2</sup> | module temperature 25°C | Air Mass = 1.5  
 NOCT (nominal operating cell temperature): irradiance 800W/m<sup>2</sup> | wind speed 1 m/sec | ambient temperature 20°C | cell operating temperature 45 +/- 2°C | Air Mass = 1.5

### Bifacial Gain\* (e.g.420 Wp)

	5%	10%	15%	20%	25%
Backside power gain [Wp]	5%	10%	15%	20%	25%
Rated power Pmpp [Wp]	441.00	462.00	483.00	504.00	525.00
Rated current Impp [A]	14.00	14.66	15.33	15.99	16.66
Rated voltage Vmpp [V]	31.51	31.51	31.51	31.52	31.52
Short-circuit current Isc [A]	14.77	15.48	16.18	16.88	17.59
Open-circuit voltage Uoc [V]	38.15	38.15	38.15	38.16	38.16

\*depending on the reflection of the underlying surface

### Limiting values

Max. system voltage   max. return current	1000 V or 1500 V   30 A
Safety class   Fire safety class	II   C (according to IEC 61730)
Operating Temperature	-40 up to 85°C
Max. tested pressure load-/tensile <sup>2</sup>	5400 Pa / 2400 Pa

### Temperature coefficient

Temperature coefficient [U]   [I]   [P]	-0.25 % /°C   0.045 % /°C   -0.3 % /°C
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### Specifications

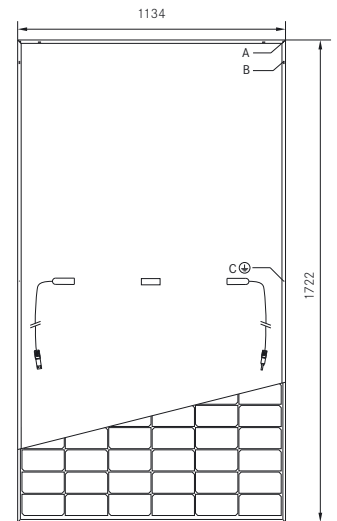
Cells (matrix)   Wafer   Type	108 (6 x 18)   M10, Half Cell   N-Type Topcon
Module dimensions (L x W x H) <sup>3</sup>   Weight	1722 mm x 1134 mm x 30 mm   21.5 kg / 24 kg
Bifaciality factor <sup>5</sup>	Up to 80 %
Front-side glass	1.6 mm / 2 mm highly transparent, anti-reflection solar glass
Back-side	1.6 mm / 2 mm highly transparent solar glass, white mesh
Frame	Stable, anodised aluminium frame
Embedding material	POE / EVA
Junction Box   Diodes	At least IP67   3 Schottky Diodes
Cable	Symmetrical cable lengths > 1.1 m, 4 mm <sup>2</sup> solar cable
Connectors	MC4 or equivalent with IP67
Hail test (max. hailstorm)	Ø 35 mm / Ø 45 mm   impact velocity 23 m/s ± 83 km/h

The specifications and average values can vary slightly. Relevant is the corresponding data of the individual measurement. Specifications are subject to change without notice. Measurement tolerance depending on equipment: rated power +/- 3%, other values +/- 10%. All information given in this data sheet corresponds to DIN EN 50380. A potential light-induced degradation of the power after commissioning is not considered here. Further information in the installation manuals.

- The specific warranty conditions are given under [www.luxor.solar/downloads.html](http://www.luxor.solar/downloads.html)
- Horizontal mounted, for details please check mounting instruction
- Tolerance L/W = +/- 3 mm, H +/- 2 mm, the dimensions given in the order confirmation will be decisive
- Location and dimensios of holes on request
- N-Type Topcon Bifaciality 77 % +/- 3 %

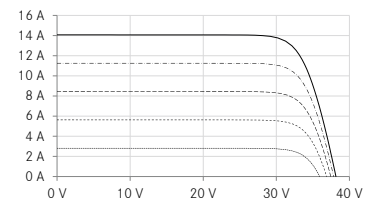
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### Back - / Frontview<sup>3,4</sup>

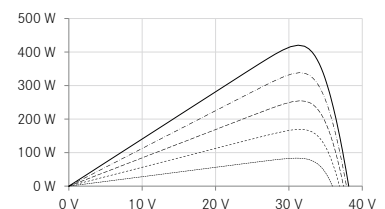


### Electrical characteristics

UI-diagram e.g. 420Wp



UP-diagram e.g. 420 Wp



----- 200W/m<sup>2</sup>  
 - - - - 400W/m<sup>2</sup>  
 - - - - 600W/m<sup>2</sup>  
 - - - - 800W/m<sup>2</sup>  
 ——— 1000W/m<sup>2</sup>



Guidelines:  
 93/68/EEC  
 2014/35/EU, (LVD)  
 2014/30/EU, (EMC)

The validity of the certificates/listings for a specific country has to be examined under: [www.luxor.solar/downloads.html](http://www.luxor.solar/downloads.html)