

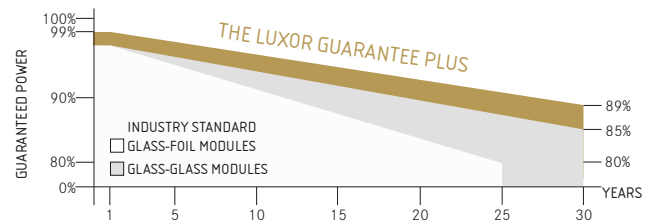
- + POWERFUL N-TYPE TOPCON CELLS
- + GLASS-GLASS: HIGHER MECHANICAL AND THERMAL STABILITY
- + BIFACIAL: DOUBLE-SIDED POWER GENERATION FOR MORE YIELD
- + REDUCTION OF BALANCE-OF-SYSTEM-COSTS THROUGH HIGHER PERFORMANCE PER MODULE
- + APPLICATION: WHEREVER LONGEVITY AND ROBUSTNESS ARE REQUIRED



product guarantee¹



linear performance guarantee¹



ECO LINE N-TYPE TOPCON GLASS-GLASS BIF

M108 / 410 - 430W

MONOCRYSTALLINE MODULE FAMILY, FULLBLACK



Longlife tested



Power proofed



Safety provided



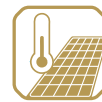
Selection of components



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 BIFACIAL

M108 / 410 - 430 W, FULLBLACK

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

Electrical data at STC

	410.00	415.00	420.00	425.00	430.00
Rated power Pmpp [Wp]	410.00	415.00	420.00	425.00	430.00
Pmpp range to	416.49	421.49	426.49	431.49	436.49
Rated current Impp [A]	13.20	13.28	13.36	13.44	13.52
Rated voltage Vmpp [V]	31.08	31.27	31.46	31.65	31.84
Short-circuit current Isc [A]	13.92	14.01	14.09	14.18	14.26
Open-circuit voltage Uoc [V]	37.63	37.86	38.09	38.32	38.55
Efficiency at STC up to	21.33%	21.58%	21.84%	22.10%	22.35%
Efficiency at 200 W/m ²	20.78%	21.04%	21.30%	21.55%	21.81%

Electrical data at NOCT

	308.32	312.08	315.84	319.60	323.36
Power at Pmpp [Wp]	308.32	312.08	315.84	319.60	323.36
Rated current Impp [A]	10.66	10.72	10.78	10.85	10.91
Rated voltage Vmpp [V]	28.92	29.11	29.30	29.46	29.64
Short-circuit current Isc [A]	11.24	11.31	11.37	11.45	11.51
Open-circuit voltage Uoc [V]	34.73	34.96	35.18	35.40	35.63

Specification as per STC (Standard test conditions): irradiance 1000W/m² | module temperature 25°C | Air Mass = 1.5
 NOCT (nominal operating cell temperature): irradiance 800W/m² | wind speed 1m/sec | ambient temperature 20°C |
 cell operating temperature 45 +/-2°C | Air Mass = 1.5

Bifacial Gain* (e.g. 415 Wp)

	5%	10%	15%	20%	25%
Backside power gain [Wp]	5%	10%	15%	20%	25%
Rated power Pmpp [Wp]	435.75	456.50	477.25	498.00	518.75
Rated current Impp [A]	13.94	14.60	15.26	15.92	16.58
Rated voltage Vmpp [V]	31.27	31.27	31.27	31.28	31.28
Short-circuit current Isc [A]	14.71	15.41	16.11	16.81	17.51
Open-circuit voltage Uoc [V]	37.86	37.86	37.86	37.87	37.87

*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 ²	5400 Pa / 2400 Pa

Temperature coefficient

Temperature coefficient [U] [I] [P]	-0.25 %/°C 0.045 %/°C -0.30 %/°C
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Specifications

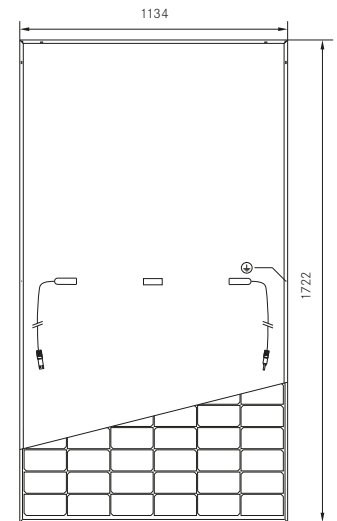
Cells (matrix) Wafer Type	108 (6 x 18) M10, Half-Cell N-Type TOPCon
Module dimensions (L x W x H) ³ Weight	1722 mm x 1134 mm x 30 mm 21.5 kg / 24 kg
Bifaciality factor ⁵	Up to 80 %
Front-side glass	1.6 mm / 2 mm highly transparent, anti-reflection solar glass
Back-side	1.6 mm / 2 mm highly transparent solar glass, black 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 ² solar cable
Connectors	MC4 or equivalent with IP67
Hail test (max. hailstorm)	Ø 35mm / Ø 45mm 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
- 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
- Frame drawing, location and dimensions of holes on request
- N-Type Topcon bifaciality factor 77 % +/- 3 %

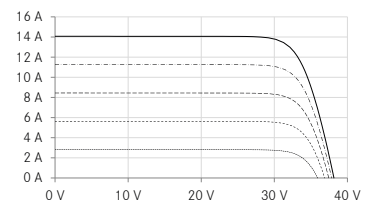
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Back - / Frontview^{3,4}

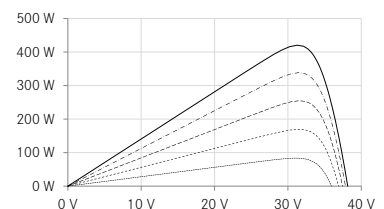


Electrical characteristics

UI - diagram e.g. 420 Wp



UP - diagram e.g. 420 WP



----- 200W/m²
 - - - - 400W/m²
 - - - - 600W/m²
 - - - - 800W/m²
 ——— 1000W/m²



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