

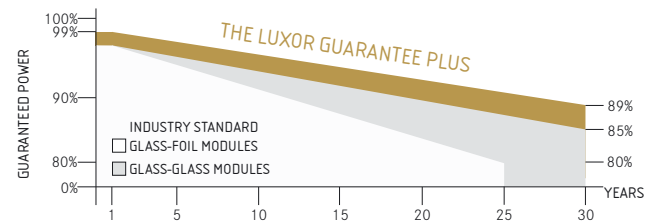
- + POWERFUL N-TYPE TOPCON CELLS
- + DOUBLE GLASS: HIGHER MECHANICAL STABILITY AND FIRE SAFETY
- + BIFACIAL: DOUBLE-SIDED POWER GENERATION FOR MORE YIELD
- + REDUCTION OF BALANCE-OF-SYSTEM-COSTS THROUGH HIGHER PERFORMANCE PER MODULE
- + APPLICATION: WHEREVER LONGEVITY AND ROBUSTNESS ARE REQUIRED



product guarantee¹



linear performance guarantee¹



ECO LINE N-TYPE TOPCON GLASS-GLASS BIF

M108 / 415 - 435W

MONOCRYSTALLINE N-TYPE MODULE FAMILY, WHITE MESH



Longlife tested



Power proofed



Safety provided



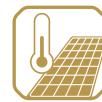
Selection of components



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 ² | 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/m² | module temperature 25°C | Air Mass = 1.5
 NOCT (nominal operating cell temperature): irradiance 800W/m² | 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 ² | 5400 Pa / 2400 Pa |

Temperature coefficient

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

Specifications

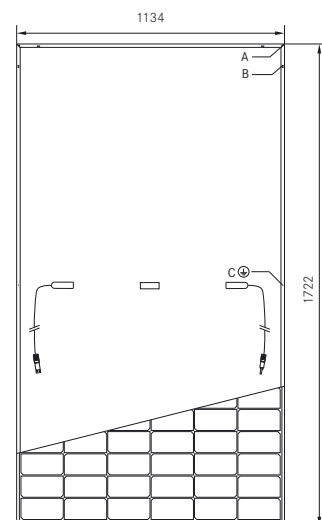
| | |
|---|--|
| Cells (matrix) Wafer Type | 108 (6 x 18) M10, Half Cell N-Type Topcon |
| Module dimensions (L x W x H) ³ Weight | 1722 mm x 1134 mm x 30 mm 21.5 kg / 24 kg |
| Bifaciality factor ⁵ | Up to 80 % |
| Front-side glass | 1.6 mm / 2 mm highly transparent, anti-reflection solar glass |
| Back-side | 1.6 mm / 2 mm highly transparent solar glass, 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 ² 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
- 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 %

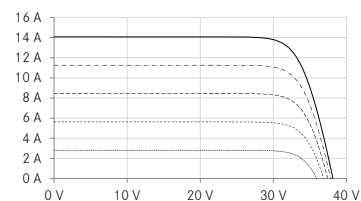
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Back - / Frontview^{3,4}

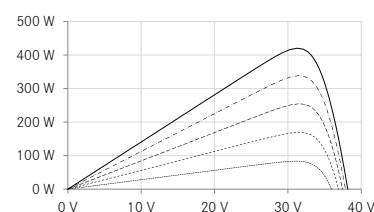


Electrical characteristics

UI-diagram e.g. 420Wp



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