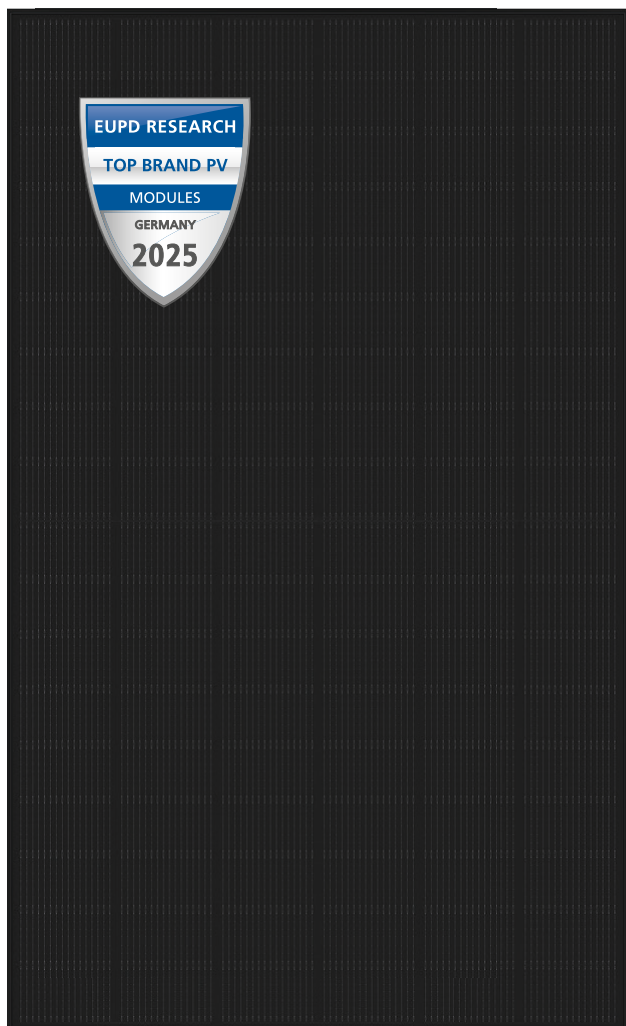




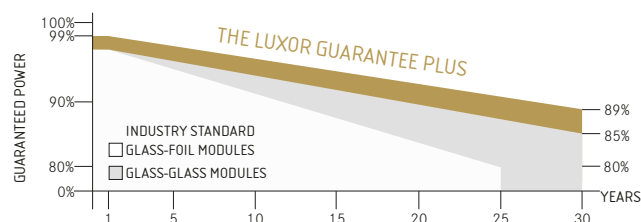
- + POWERFUL N-TYPE TOPCON CELLS
- + DOUBLE GLASS: HIGHER MECHANICAL AND THERMAL STABILITY
- + BIFACIAL: DOUBLE-SIDED POWER GENERATION FOR MORE YIELD
- + HIGH CLASS APPEARANCE: EASY INTEGRATION IN BUILDINGS
- + APPLICATION: WHEREVER LONGEVITY AND ROBUSTNESS ARE REQUIRED



product guarantee¹



linear performance guarantee¹



ECO LINE PRO 450-470W

TOPCON FULL BLACK

GLASS-GLASS, BIFACIAL, 1762MM X 1134MM



Longlife tested



Power proofed



Safety provided



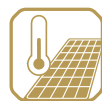
Selection of components



Back glass



Performance surplus of 0 Wp to 6.49 Wp



Higher heat dispensing



PID free
LID Free



German warrantor

ECO LINE PRO 450-470W

TOPCON, GLASS-GLASS, BIFACIAL, BB, 182R-96+

Module type LX - XXXM/182R-96+ GG | XXX = Rated power Pmpp

Electrical data at STC

Rated power Pmpp [Wp]	450.00	455.00	460.00	465.00	470.00
Pmpp range to	456.49	461.49	466.49	471.49	476.49
Rated current Imp [A]	15.27	15.36	15.46	15.55	15.65
Rated voltage Vmpp [V]	29.50	29.64	29.78	29.92	30.06
Short-circuit current Isc [A]	16.14	16.24	16.34	16.44	16.54
Open-circuit voltage Uoc [V]	35.71	35.88	36.05	36.22	36.39
Efficiency at STC up to	22.85%	23.10%	23.35%	23.60%	23.85%
Efficiency at 200 W/m ²	22.31%	22.54%	22.80%	23.04%	23.29%

Electrical data at NOCT

Power at Pmpp [Wp]	339.12	342.89	346.66	350.42	354.19
Rated current Imp [A]	12.33	12.40	12.48	12.55	12.63
Rated voltage Vmpp [V]	27.50	27.65	27.78	27.92	28.04
Short-circuit current Isc [A]	13.03	13.11	13.19	13.27	13.35
Open-circuit voltage Uoc [V]	32.96	33.13	33.30	33.46	33.63

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

Electrical data at BNPI

Rated power Pmpp [Wp]	450.00	455.00	460.00	465.00	470.00
Maximum Rated power Pmpp [Wp]	498.60	504.14	509.68	515.22	520.76
Rated current Imp [A]	16.92	17.02	17.13	17.23	17.34
Rated voltage Vmpp [V]	29.47	29.62	29.75	29.90	30.03
Short-circuit current Isc [A]	17.88	17.99	18.10	18.22	18.33
Open-circuit voltage Uoc [V]	35.75	35.92	36.09	36.26	36.43

Specifications as per BNPI (Bifacial Nameplate Irradiance) : irradiance front 1000 W/m² | rear 135 W/m² | Temperature 25°C | Air Mass 1.5

Limiting values

Max. system voltage max. return current	1000 V or 1500 V 30 A
Safety class Fire safety class	II C (IEC 61730)
Operating temperature	-40 up to 85°C
Max. tested pressure/tensile load ²	6000 Pa / 4000 Pa

Temperature coefficient

Temperature coefficient [U] [I] [P]	-0.25 %/°C 0.045 %/°C -0.29 %/°C
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Specifications

Cells (matrix) Wafer Type	96 (6x16) M10 N-Type TOPCon
Module dimensions (L x B x H) ³ Weight	1762 mm x 1134 mm x 30 mm 24.5 kg
Bifaciality factor ⁵	Up to 80%
Front side	2.0 mm semi tempered anti-reflection solar glass
Back side	2.0 mm semi tempered solar glass, black mesh
Frame	Stable anodised aluminium frame
Embedding material	POE / EVA
Junction Box Diodes	IP68 3 Schottky Diodes
Cable	Symmetrical cable lengths > 1.1 m, 4 mm ² solar cable
Connectors	MC4 or equivalent (IP67)
Hail test (max. hailstorm)	Ø 45 mm impact velocity 30.7 m/s ± 110.5 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. 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.

1 The specific warranty conditions are given under www.luxor.solar/downloads.html

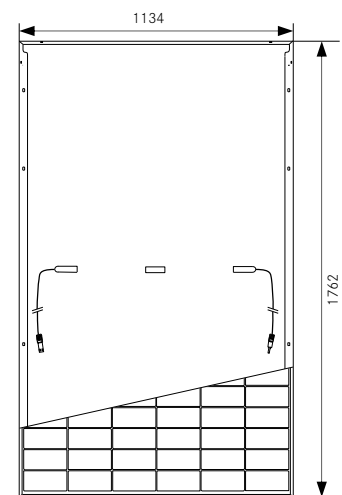
2 Horizontal mounted (IEC 61215), for details please check mounting instruction

3 Tolerance L/W = +/- 3 mm, H +/- 2 mm, the dimensions given in the order confirmation will be decisive

4 Location and dimensions of holes on request

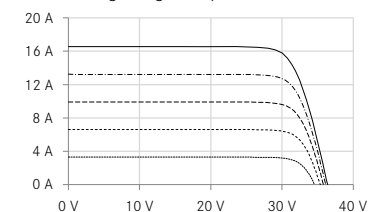
5 N-Type TOPCon Bifaciality factor 77 +/- 3 %

Back - / Frontview ^{3, 4}

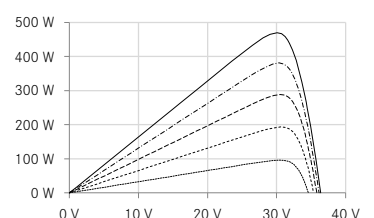


Electrical characteristics

UI-diagram e.g. 470 Wp



UP-diagram e.g. 470 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

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