

# ECO LINE PRO 450-470W

## TOPCON, GLAS-GLAS, BBW, 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 Impp [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 <sup>2</sup>	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 Impp [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/m<sup>2</sup> | module temperature 25°C | Air Mass = 1.5  
 NOCT (nominal operating cell temperature): irradiance 800 W/m<sup>2</sup> | wind speed 1 m/sec | ambient temperature 20°C |  
 cell operating temperature 45 +/- 2°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 <sup>2</sup>	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 W x H) <sup>3</sup>   Weight	1762 mm x 1134 mm x 30 mm   24.5 kg
Front side	2.0 mm semi tempered anti-reflection solar glass
Back side	2.0 mm semi tempered solar glass, black from front, white from back
Frame	Stable anodised aluminium frame
Embedding material	POE / EVA
Junction Box	IP68
Diodes	3 Schottky Diodes
Cable	Symmetrical cable lengths > 1.1 m, 4 mm <sup>2</sup> solar cable
Connectors	MC4 or equivalent (IP67)
Hail test (max. hailstorm)	∅ 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.

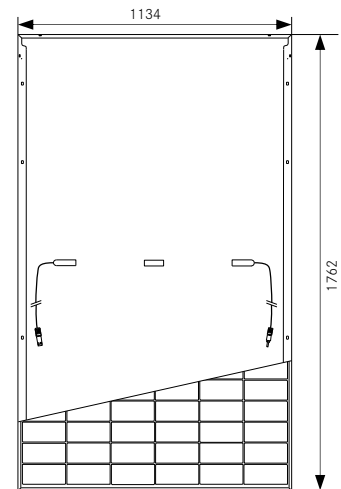
Measurement tolerance depending on equipment: rated power +/- 3%, other values +/- 10%.

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.

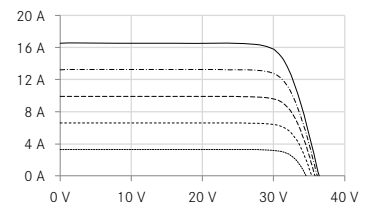
- 1 The specific warranty conditions are given under
- 2 Horizontal mounted (IEC61215), for details please check
- 3 Tolerance L/W = +/- 3 mm, H +/- 2 mm, the dimensions
- 4 Location and dimensions of holes on request

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

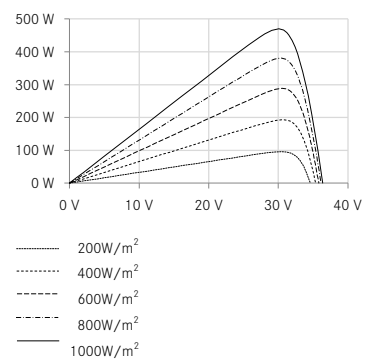


### Electrical characteristics

UI-diagram e.g. 470 Wp



UP-diagram e.g. 470 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)

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