



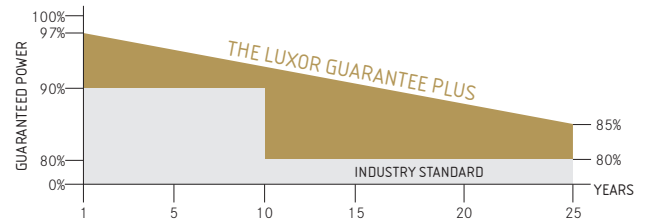
- + HIGH CLASS APPEARANCE: EASY INTEGRATION IN BUILDINGS
- + APPLICATIONS: INDUSTRIAL, COMMERCIAL AND RESIDENTIAL POWER PLANTS
- + ECO: ESPECIALLY ECONOMIC AND RELIABLE



product guarantee<sup>1</sup>



linear performance guarantee<sup>1</sup>



**ECO LINE FULL BLACK**  
**M60/ 290 - 310 W**  
 MONOCRYSTALLINE MODULE FAMILY



Longlife tested



Power proofed



Safety provided



Selection of components



Cross-linking degree test



Performance surplus of 0 Wp to 6.49 Wp



100% PID free cells



Special packing to avoid micro cracks in the cells



German warrantor

# ECO LINE FULL BLACK M60/290 - 310 W

Monocrystalline module family

Module type LX - XXXM/156-60+ | XXX = Rated power Pmpp

## Electrical data at STC

Rated power Pmpp [Wp]	290.00	295.00	300.00	305.00	310.00
Pmpp range to	296.49	301.49	306.49	311.49	316.49
Rated current Impp [A]	9.26	9.32	9.38	9.44	9.50
Rated voltage Vmpp [V]	31.37	31.68	32.02	32.33	32.68
Short-circuit current Isc [A]	9.78	9.83	9.88	9.93	9.98
Open-circuit voltage Uoc [V]	38.50	38.70	38.89	39.08	39.28
Efficiency at STC up to	18.22%	18.53%	18.84%	19.15%	19.45%
Efficiency at 200 W/m <sup>2</sup>	17.25%	17.51%	17.78%	18,06%	18.34%

## Electrical data at NOCT

Power at Pmpp [Wp]	214.58	217.95	221.68	225.18	228.89
Rated current Impp [A]	7.38	7.43	7.48	7.53	7.58
Rated voltage Vmpp [V]	29.06	29.33	29.64	29.91	30.21
Short-circuit current Isc [A]	7.80	7.84	7.88	7.92	7.96
Open-circuit voltage Uoc [V]	35.47	35.63	35.76 V	35.92	36.07

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 [V]	1000 V or 1500 V
Max. return current [I]	15 A
Operating Temperature	-40 to 85°C
Safety class	II
Max. tested pressure load [Pa] <sup>2</sup>	5400
Max. tested tensile load [Pa] <sup>2</sup>	2400

## Temperature coefficient

Temperature coefficient [V]   [I]   [P]	-0.30% /°C   0.06% /°C   -0.40% /°C
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## Specifications

Number of cells (matrix)	60 (6 x 10), three strings in a row   156 mm x 156 mm
Module dimensions (LxWxH) <sup>3</sup>   Weight	1640 mm x 992 mm x 35 mm   18.5 kg
Front-side glass	3.2 mm tempered highly transparent, anti-reflection solar glass
Frame	stable, anodised aluminium frame
Junction Box	At least IP65
Cable	4 mm <sup>2</sup> solar cable, cable length 1.0 m
Diodes	3 Schottky Diodes 15A/45V
Plug-in connection	MC4 or equivalent with IP67
Hail test (max. hailstorm)	∅ 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.

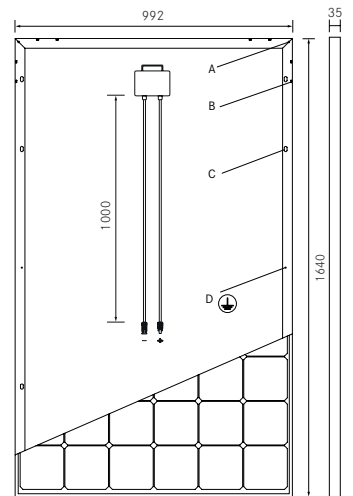
1 The specific warranty conditions are given under [www.luxor-solar.com/download.htm](http://www.luxor-solar.com/download.htm)

2 Horizontal mounted

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

4 Location and dimensions of holes on request

## Back - / Front -/ Side view<sup>3</sup>

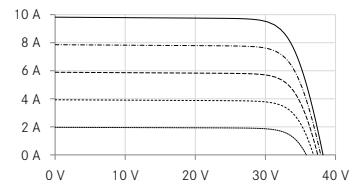


## Drilled holes<sup>4</sup>

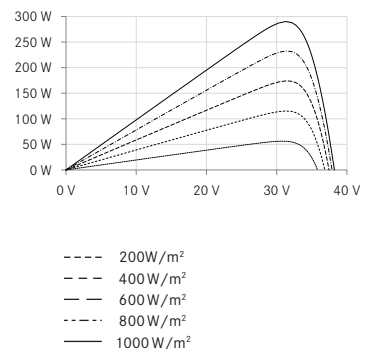
- A: 4 x drainage
- B: 16 x ventilation
- C: 8 x mounting
- D: 2 x earthing

## Electrical characteristics

UI-diagram e.g. LX-290M/156-60+



UP-diagram e.g. LX-290M/156-60+



Luxor, your specialised company



**IEC**  
IEC 61215  
IEC 61730



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.com/download.htm](http://www.luxor-solar.com/download.htm)