



- + SECURE: ESPECIALLY DURABLE AND RELIABLE
- + DOUBLE GLASS: HIGHER MECHANICAL STABILITY AND FIRE SAFETY
- + THERMAL EDGE SEALING: BEST PROTECTION AGAINST HUMIDITY AND OTHER ENVIRONMENTAL INFLUENCES
- + APPLICATION: WHEREVER DURABILITY AND ROBUSTNESS ARE REQUIRED
- + ALL BLACK: COMPLETELY BLACK MODULE SURFACE



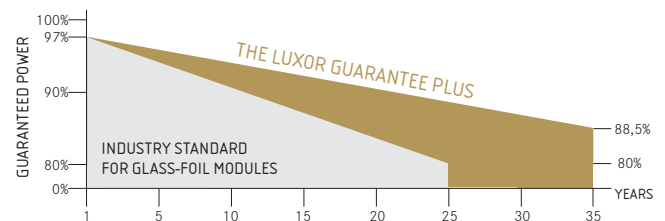
laminare guarantee<sup>1</sup>



product guarantee<sup>1</sup>



linear performance guarantee<sup>1</sup>



## SECURE LINE ALL BLACK

## M60/300 – 320 W

### GLASS-GLASS MODULE FAMILY, MONOCRYSTALLINE



Longlife tested



Power proofed



Safety provided



Selection of components



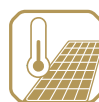
Back glass



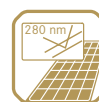
Edge sealing



Performance surplus of 0 Wp to 6.49 Wp



Higher heat dispending



Wider light spectrum absorbed



100% PID free cells



Special packing to avoid micro cracks in the cells



German warrantor

# SECURE LINE ALL BLACK M60/300 - 320 W

Glass-glass module family, monocrystalline

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

## Electrical data at STC

Rated power Pmpp [Wp]	300.00	305.00	310.00	315.00	320.00
Pmpp range to	306.49	311.49	316.49	321.49	326.49
Rated current Impp [A]	9.44	9.52	9.58	9.65	9.72
Rated voltage Vmpp [V]	31.80	32.09	32.38	32.67	32.96
Short-circuit current Isc [A]	9.88	9.97	10.03	10.10	10.18
Open-circuit voltage Uoc [V]	37.82	38.16	38.50	38.85	39.20
Efficiency at STC up to	18.22%	18.52%	18.82%	19.11%	19.41%
Efficiency at 200 W/m <sup>2</sup>	17.14%	17.48%	17.80%	18.13%	18.48%

## Electrical data at NOCT

Power at Pmpp [Wp]	221.57	225.76	229.54	233.61	237.75
Rated current Impp [A]	7.55	7.62	7.67	7.74	7.81
Rated voltage Vmpp [V]	29.36	29.64	29.91	30.19	30.46
Short-circuit current Isc [A]	7.98	8.05	8.10	8.16	8.22
Open-circuit voltage Uoc [V]	34.90	35.23	35.56	35.89	36.23

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

## Limiting values

Max. system voltage [V]	1000 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   -0.39% /°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	1682 mm x 1000 mm x 40 mm   23 kg
Front-side glass	2.1 mm tempered highly transparent, anti-refelction solar glass
Back-side glass	2.1 mm hardened solar glass, DIN 12150
Frame	stable, anodised aluminium frame
Junction Box	At least IP65
Cable	4 mm <sup>2</sup> solar cable, cable length 1.0m
Diodes	3 Schottky Diodes 15A/45V
Plug-in connection	MC4 or equivalent (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.

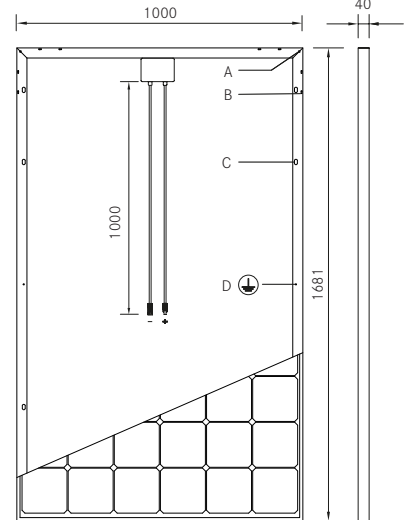
1 The specific warranty conditions are given under [www.luxor-solar.com/download.htm](http://www.luxor-solar.com/download.htm)

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>

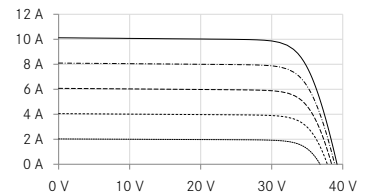


## Drilled holes<sup>4</sup>

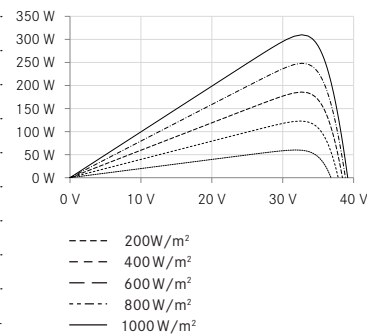
- A: 4 x drainage
- B: 16 x ventilation
- C: 8 x mounting
- D: 2 x earthing

## Electrical characteristics

UI-diagram e.g. LX-310M/156-60+ GG



UP-diagram e.g. LX-310M/156-60+ GG



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)