

product guarantee<sup>1</sup>



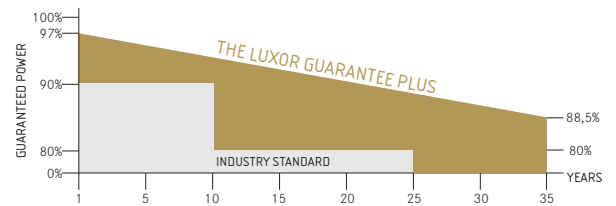
linear performance guarantee<sup>1</sup>



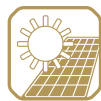
## SECURE LINE

### M60/280 – 300 W

Glass-Glass module family  
 Transparent Edition, Monocrystalline



Longlife tested



Power proofed



Safety provided



Selection of components



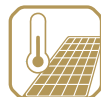
Back glass



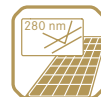
Edge-Sealing



Performance surplus of 0 Wp to 6.49 Wp



Higher heat dispensing



Wider light spectrum absorbed



100% PID free cells



Special packing to avoid micro cracks in the cells



German warranty

The premium 60-cell Glass-Glass Edition is the first choice for safety-conscious system owners. Secure stands for outstanding lifespan and a groundbreaking quality standard on components and manufacturing technology. Glass sheets on front and back side guarantee highest durability, mechanical stability as well as fire safety. As special edge sealing of the laminate used in automotive manufacturing provides for absolute protection from humidity and other harmful environmental influences. The use of PVB rather than EVA as encapsulant

allows for a higher transmission factor as well as 100% protection against PID. High-quality solar cells with highest efficiency at the best possible low light behaviour ensure the best energy output. And this at plus tolerances of 0Wp to 6.49Wp.

The premium Glass-Glass module is the best possible solution when it comes to extraordinary lifespan, reliability and durability. This is reflected by a surpassing 35-year warranty on workmanship and power.

# SECURE LINE TRANSPARENT M60/280 – 300 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]              | 280.00 | 285.00 | 290.00 | 295.00 | 300.00 |
| Pmpp range to                      | 286.49 | 291.49 | 296.49 | 301.49 | 306.49 |
| Rated current Impp [A]             | 9.12   | 9.22   | 9.32   | 9.43   | 9.53   |
| Rated voltage Vmpp [V]             | 30.95  | 31.14  | 31.33  | 31.52  | 31.71  |
| Short-circuit current Isc [A]      | 9.65   | 9.72   | 9.82   | 9.93   | 10.03  |
| Open-circuit voltage Uoc [V]       | 38.22  | 38.03  | 38.22  | 38.41  | 38.60  |
| Efficiency at STC                  | 16.78% | 17.07% | 17.37% | 17.67% | 17.97% |
| Efficiency at 200 W/m <sup>2</sup> | 16.38% | 16.66% | 16.97% | 17.23% | 17.57% |

## Electrical data at NOCT

|                               |        |        |        |        |        |
|-------------------------------|--------|--------|--------|--------|--------|
| Pmpp [Wp]                     | 209.19 | 212.57 | 216.28 | 219.92 | 223.79 |
| Rated current Impp [A]        | 7.30   | 7.38   | 7.46   | 7.54   | 7.63   |
| Rated voltage Vmpp [V]        | 28.67  | 28.82  | 29.00  | 29.16  | 29.35  |
| Short-circuit current Isc [A] | 7.72   | 7.78   | 7.86   | 7.94   | 8.02   |
| Open-circuit voltage Uoc [V]  | 35.41  | 35.19  | 35.37  | 35.53  | 35.72  |

Specification as per STC (Standard test conditions): irradiance 1000 W/m<sup>2</sup> | module temperature 25°C | AM = 1,5

NOCT (nominal operating cell temperature): irradiance 800 W/m<sup>2</sup> | wind speed 1 m/sec | temperature 20°C | @45 +/- 2°C | AM = 1,5

## Limiting values

|                                  |  |
|----------------------------------|--|
| Max. system voltage [V]          | 1000 V                                       |
| Max. return current [I]          | 15 A   |
| Temperature range                | -40 to 85°C                                  |
| Snow-load zone <sup>2</sup>      | approval up to SLZ 3 (according to DIN 1055) |
| Max. pressure load (static) [Pa] | 6600   |
| Max. dynamic load [Pa]           | 2400   |

## Temperature coefficient

|   |                                     |
|---|-------------------------------------|
| Temperature coefficient [V]   [I]   [P] | -0.30% /°C   0.06% /°C   -0.39% /°C |
|---|-------------------------------------|

## Specifications

|   |  |
|---|--|
| Number of cells (matrix)                            | 6 x 10, three strings in a row   156 mm x 156 mm             |
| Module dimensions (L x W x H) <sup>2</sup>   Weight | 1682 mm x 1000 mm x 41 mm   23 kg                            |
| Front-side glass                                    | 2.1 mm hardened solar glass with low iron content, DIN 12150 |
| Back-side glass                                     | 2.1 mm hardened solar glass with low iron content, DIN 12150 |
| Frame   | stable, anodised aluminium frame in a hollow-section design  |
| Socket  | plastic (PPO), IP67  |
| Cabel   | 4 mm <sup>2</sup> solar cable, cable length 1.0 m            |
| Diodes  | 3 Schottky Diodes 15A/45V                                    |
| Plug-in connection                                  | high-quality plug-in system, (IP67) MC4 or equivalent        |
| Hail test (max. hailstorm)                          | ∅ 45 mm   impact velocity 23 m/s                             |

The specifications and average values can vary slightly. What is important is the corresponding data of the individual measurement. Specifications are subject to change without notice. Measurement tolerance: rated power +/- 3%, other values +/- 10%, all information in this data sheet corresponds to DIN 50380. A potential light-induced degradation of the power after commissioning is not considered here, other information can be found in the installation guidelines.

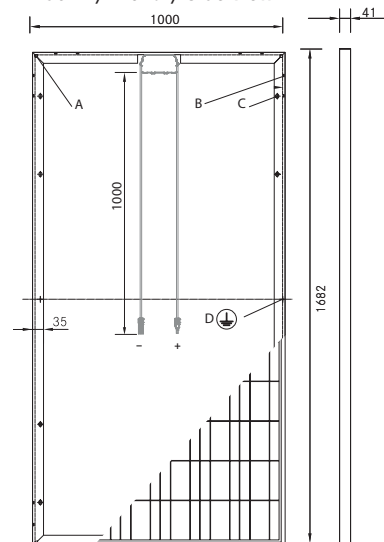
1 The specific warranty conditions are given under [www.luxor-solar.com/download.htm](http://www.luxor-solar.com/download.htm)

2 For standing installation

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

4 Location on request

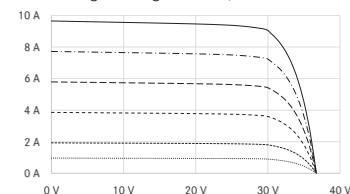
## Back - / Front -/ Side view<sup>3</sup>



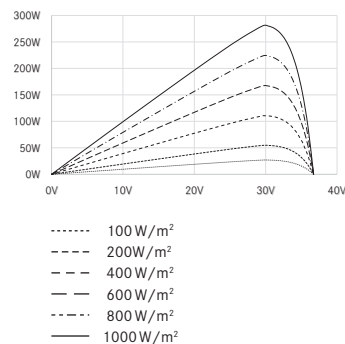
- A: 4 x drainage 10\*10 mm
- B: 8 x ventilation aperture 3\*7 mm
- C: 8 x mounting hole<sup>4</sup> d = 7 mm
- D: 2 x earthing d = 2 mm

## Electrical characteristics

UI-diagramm e.g. LX-280M/156-60+ GG



UP-diagramm e.g. LX-280M/156-60+ GG



Luxor, your specialised company

Guidelines: 2006/95/EG-2006/95/EC,89/336/EWG-89/336/EEC,93/68/EWG-93/68/EEC



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)