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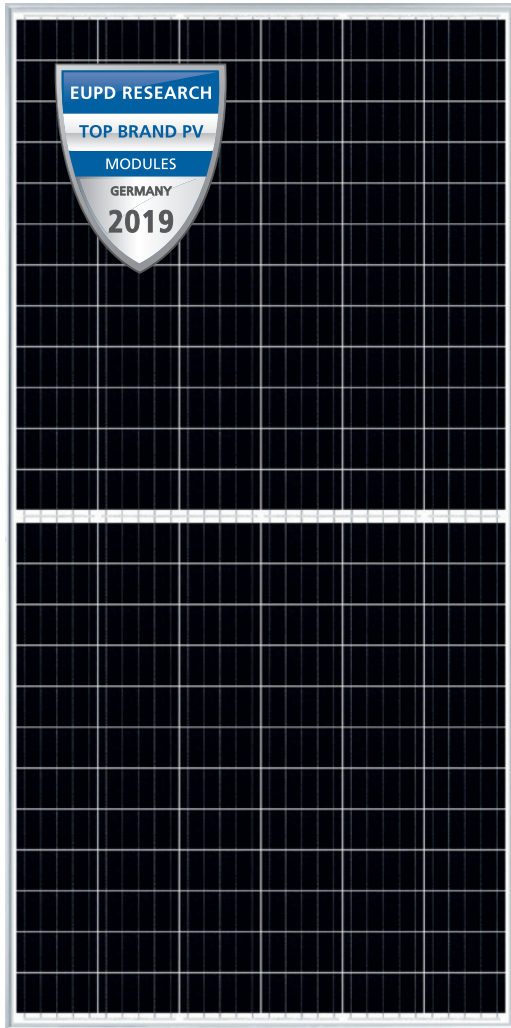
**Email: [contact@energypal.com](mailto:contact@energypal.com)**

# **EnergyPal**

## **Solar Panel Guide Specification Data Sheet**

**Luxor Solar GmbH  
Eco Line Half Cell M144/390-410W  
LX - 405M/158-144+**

Also available on the web at  
[EnergyPal.com/luxor-solar-gmbh-solar-panels/lx-405m-158-144](http://EnergyPal.com/luxor-solar-gmbh-solar-panels/lx-405m-158-144)



- + REDUCED LOSSES DURING PARTIAL SHADING
- + HIGHER YIELD: MORE REFLECTION ON CELL SURFACE
- + APPLICATIONS: INDUSTRIAL AND COMMERCIAL POWER PLANTS
- + ECO: ESPECIALLY ECONOMIC AND RELIABLE



product guarantee<sup>1</sup>



linear performance guarantee<sup>1</sup>

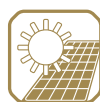


## ECO LINE HALF CELL M144 / 390 - 410 W

### 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 HALF CELL M144 / 390 - 410 W

Monocrystalline module family

Module type LX - XXXM/158-144+ | XXX = Rated power P<sub>mpp</sub>

## Electrical data at STC

Rated power P <sub>mpp</sub> [Wp]	390.00	395.00	400.00	405.00	410.00
P <sub>mpp</sub> range to	396.49	401.49	406.49	411.49	416.49
Rated current I <sub>mpp</sub> [A]	9.55	9.60	9.65	9.70	9.75
Rated voltage V <sub>mpp</sub> [V]	40.85	41.16	41.47	41.78	42.09
Short-circuit current I <sub>sc</sub> [A]	10.08	10.14	10.19	10.24	10.30
Open-circuit voltage U <sub>oc</sub> [V]	49.40	49.77	50.14	50.52	50.90
Efficiency at STC up to	19.69%	19.93%	20.18%	20.43%	20.68%
Efficiency at 200 W/m <sup>2</sup>	19.13%	19.37%	19.62%	19.87%	20.12%

## Electrical data at NOCT

Power at P <sub>mpp</sub> [Wp]	287.94	292.01	296.13	300.30	304.53
Rated current I <sub>mpp</sub> [A]	7.64	7.68	7.73	7.78	7.83
Rated voltage V <sub>mpp</sub> [V]	37.71	38.02	38.31	38.60	38.90
Short-circuit current I <sub>sc</sub> [A]	8.14	8.18	8.23	8.27	8.32
Open-circuit voltage U <sub>oc</sub> [V]	45.60	45.95	46.31	46.68	47.04

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]	25 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)	144 (6 x 24)   158 x 79 mm
Module dimensions (LxWxH) <sup>3</sup>   Weight	2010 mm x 1002 mm x 40 mm   24 kg
Front-side glass	3.2 mm tempered highly transparent, anti-reflection solar glass
Frame	stable, anodised aluminium frame
Junction Box	At least IP67
Cable	symmetrical cable lengths > 1.1 m and 1.1 m, 4 mm <sup>2</sup> solar cable
Diodes	3 Schottky Diodes
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.

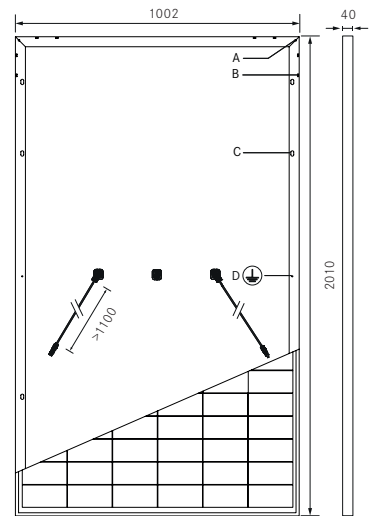
1 The specific warranty conditions are given under [www.luxor-solar.com/download.htm](http://www.luxor-solar.com/download.htm)

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>

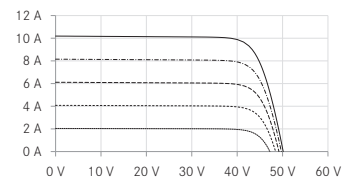


## Drilled holes<sup>4</sup>

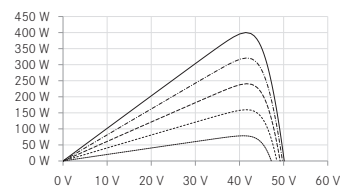
- A: 4 x drainage
- B: 16 x ventilation
- C: 8 x mounting
- D: 2 x earthing

## Electrical characteristics

UI-diagram e.g. LX-400M/158-144+



UP-diagram e.g. LX-400M/158-144+



- 200 W/m<sup>2</sup>
- - - - 400 W/m<sup>2</sup>
- - - - 600 W/m<sup>2</sup>
- - - - 800 W/m<sup>2</sup>
- 1000 W/m<sup>2</sup>

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)