

# Datasheet

## athena



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## SELF-SUFFICIENT SOLAR LED STREET LAMP WITH MODULAR DESIGN

### USE

The athena is available to ensure a secure supply even in critical weather regions. Thanks to the modular system, the athena can be put together individually and gives every place in the world an individual design with impressive light output. This clever solar light adapts perfectly to your needs and can use flexible light heads to direct the lighting specifically onto facades, objects, streets or paths. The unique, modular design of the solar light enables it to be transported on just one Euro pallet, which significantly reduces freight costs.

The athena solar light is solar-powered LED street lighting that is used wherever there is no power supply or it would be uneconomical to implement. Due to the cubic aluminium construction with 16 photonus high performance photovoltaic modules, sufficient energy can be generated in a targeted manner via the diffuse light component especially in regions with poor weather (snow, fog, etc.). The vertically arranged modules prevent snow from accumulating on it in winter. A sophisticated energy management system guarantees secure functionality over several nights even in poor weather conditions.

She stands there confident and futuristic and can be integrated into any landscape concept.

### FUNCTION

The integrated battery is charged during daytime by the efficient photovoltaic solar module. At nightfall, the LED light module is automatically activated.

The light output of a solar lamp is defined by the incident solar irradiation at the respective location, which is why the quality of the individual components and their optimum interaction play a decisive role.

The LiFeP04 battery used in his solar light is shored in the ground together with the post so that an optimum, constant temperature is achieved. The long service life of the battery and efficient theft protection are the results.

### GUARANTEE

5 years

The warranty of the solar illumination is provided, as far as the illumination is installed like described in the installation instruction. The warranty is void, if the product settings haven't been changed by photonus authorized employees/partners and/or using non photonus approved tools.

SOLAR LIGHT	athena
SOLAR MODULES	
Solar modules	Monocrystalline silicon cells with exceptional efficiency specially processed by photinus
Efficiency	22%
Max. performance of the energy column Pmpp	460 Wp / 16 solar modules, they are also charged up in cloudy conditions.
BATTERY (IN THE POLE)	
Battery	LiFeP04 / 1152 Wh (12,8 V 90Ah)
Operating temperature	-20°C to +60°C
Battery life	up to 10 years
Protection class	IPX8
LIGHTS	
Max. luminous flux	Depending on the location where the light is staying. <u>Location: Luminous flux / autonomy time / normal mode / smart mode</u> 52. degrees lat. (Amsterdam): 12 W, 2400 lm / V5 / 7 days / 10 days 47. degrees lat. (Munich): 23 W, 4600 lm / V5 / 5,5 days / 7 days 40. degrees lat. (Madrid): 45 W, 9000 lm / V5 / 3 days / 4 days
Efficiency	200lm/W at 600mAh
LED module / max. watts	15 x LED max. 1500W/4000K, 1x LED 400W/4000K
Colour temperature	4000K (By request changeable: Amber Light, 2000K, 3000K, 5000K)
Life of LED	>75 000 h (L80)
Protection-class	IP 67
MATERIALS	
Pole	galvanised and powder-coated steel „Sparkling iron effect dark“
Metal parts	powder-coated aluminium „Sparkling iron effect dark“

Technical changes reserved!

DIMENSIONS	
Total height from ground level	5480 mm
Height of light 1 from ground level	3900 mm
Height of light 2 from ground level	min. 5000 mm (Mounting height depending on inclination)
Total lenght pole	5000 mm
Length of the pole in the ground	1200 mm
Solartower	5000 mm x 300 mm x 114 mm
Light housing 1	463,5 mm x 212,5 mm x 72 mm
Light housing 2	300 mm x 1000 mm x 72 mm
Total weight	Differentiated according to the number of modules
Wind load	Wind load zone 4, with 30m/s (110km/h) (Lloyds CLAME 2016)

## Salt spray test (ISO 9227:2012)

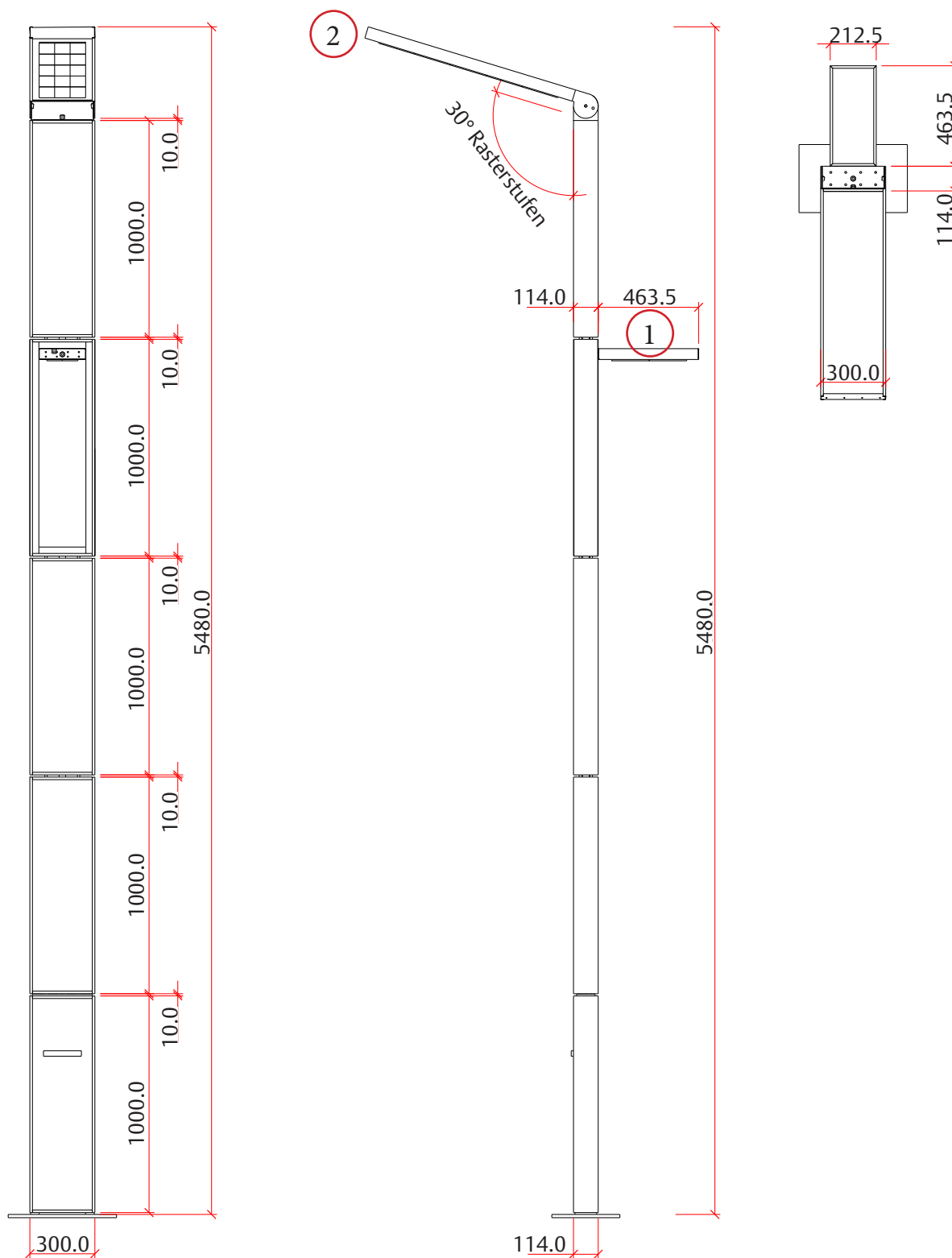
### Corrosion test in artificial atmosphere - salt spray test (ISO 9227:2012)

All solar lights have successfully passed the salt spray test.

## Details

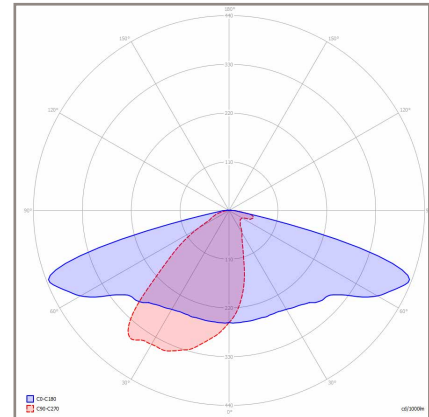
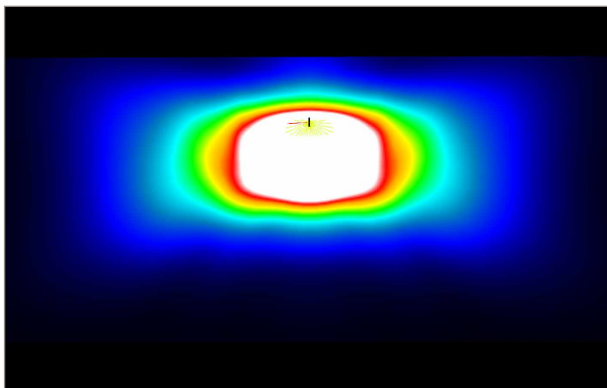


## Dimensions



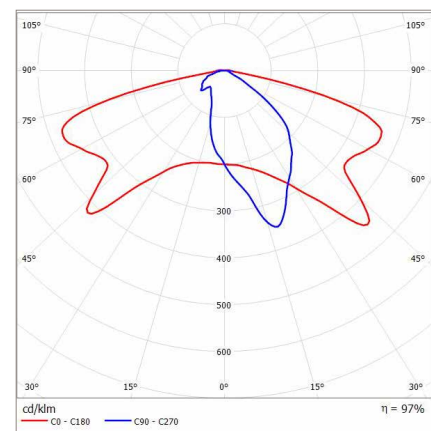
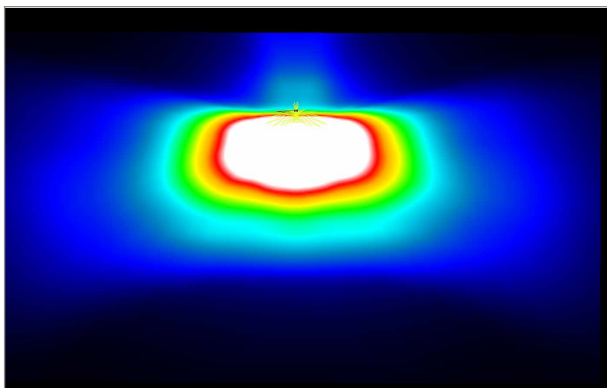
## photonus OPTIC

Standard optic with optimum compromise between illumination width and illumination depth



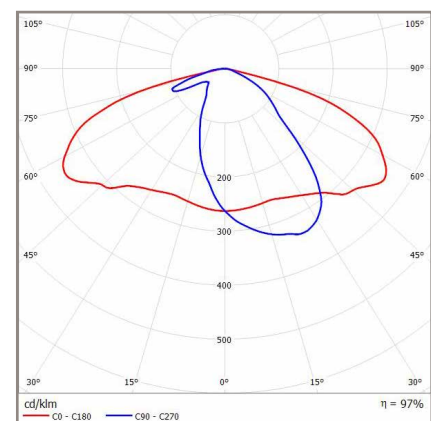
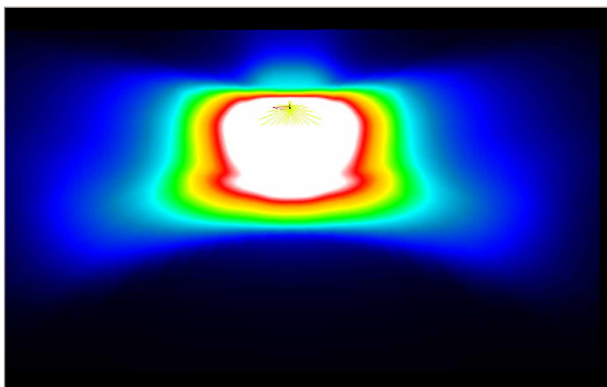
## SCL OPTIC

Optimal for streets with a width from 2m to 4m (cycle paths, walkways and small streets)



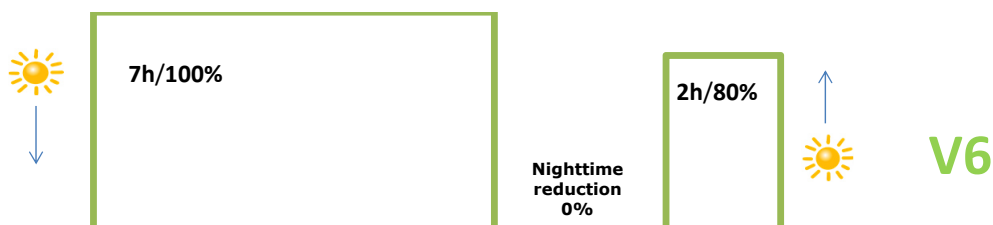
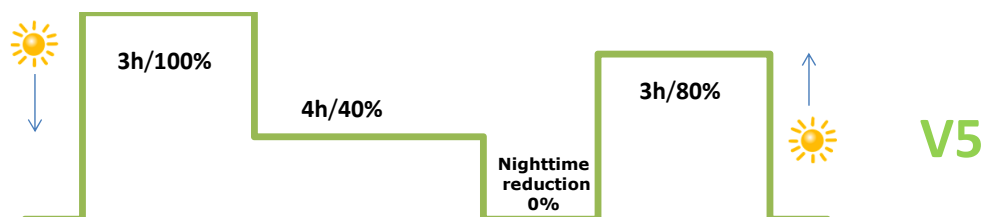
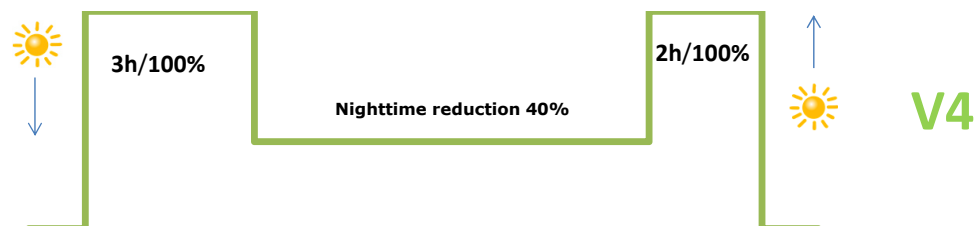
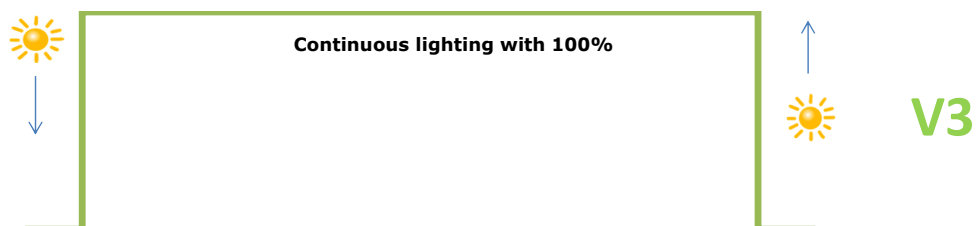
## DWC OPTIC

Optimal for streets with a width from 4m to 7m (residential roads, secondary roads and main roads, depending on location)



## ENERGY AND TIMEMANAGEMENT

Standard factory setting V5



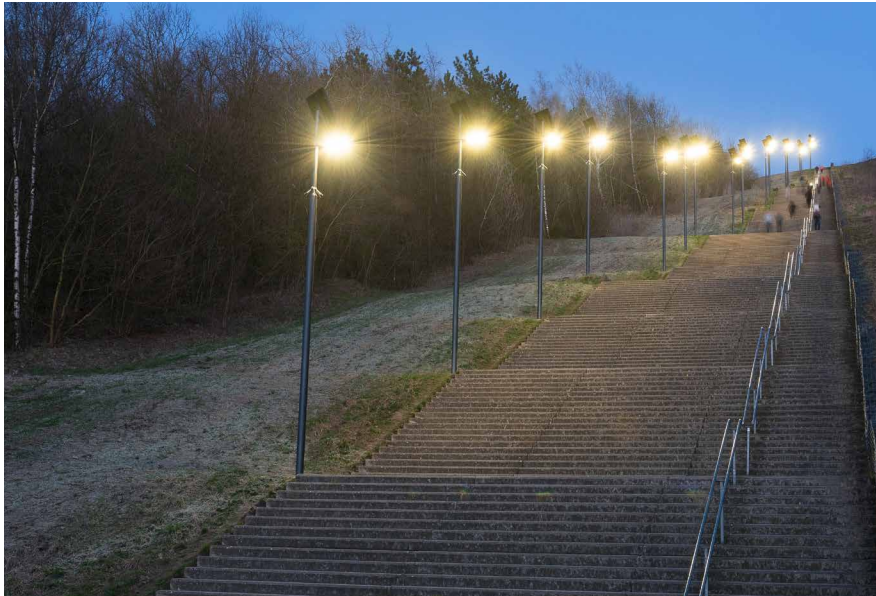


## References

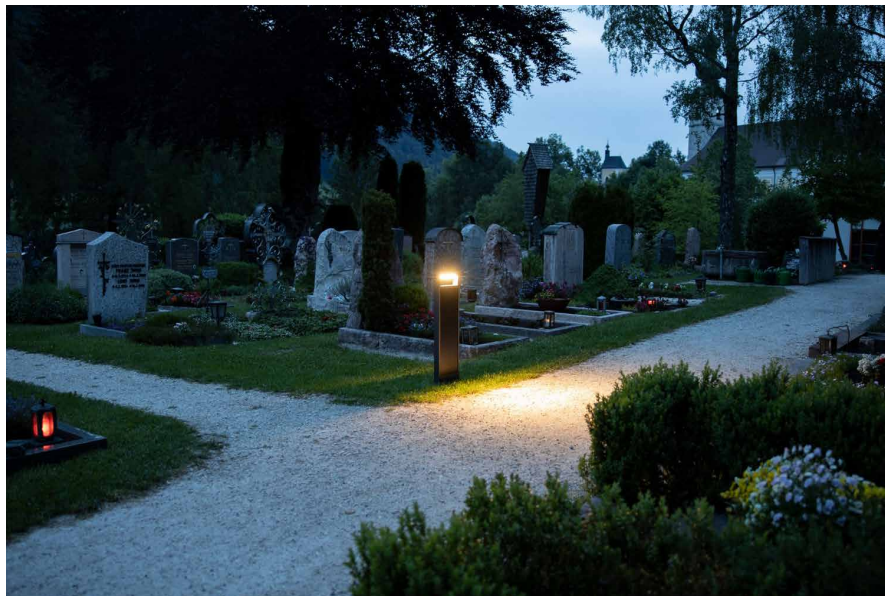
**merkur**  
Neuschwanstein / DE



**protos**  
stairs Wilhelminenberg / NL



**juno**  
graveyard / DE





## References



**hera**  
monument / PL

**aron**  
Larnaka / CYP



**alara**  
Diyar Park / BHR