

brilliance in solar lighting

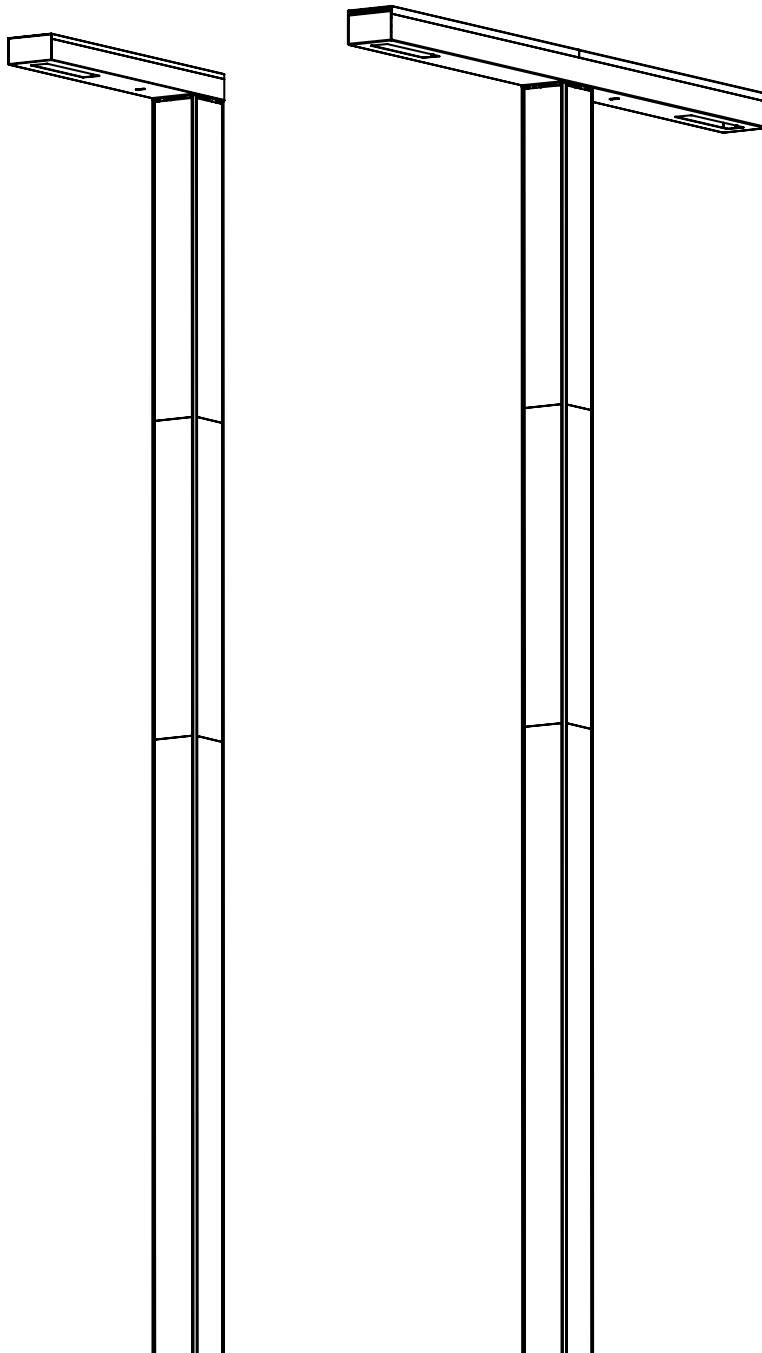
photinus



**GERMAN
DESIGN
AWARD
WINNER
2019**

DATASHEET V1 | 2019

merkur300 / merkur300 duo



1

merkur300

SELF-SUFFICIENT SOLAR LED STREET LAMP

APPLICATION

The merkur300 stands out for its exceptional, cubic design and guarantees a secure supply in all different climate zones. The merkur300 solar light is a solar powered LED street lamp, which is used in regions without electrical infrastructure or in which it would not be economically feasible to implement one. The luminaire is especially used in areas that demand a secure supply and excellent light quality even in dim conditions.

The merkur300 is able to generate sufficient energy via the diffuse light component in regions with poor weather (snow, fog, etc.) due to the cubic aluminium construction with 8 photonus High Performance photovoltaic modules. 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. The merkur300 is best suited for residential streets, side streets, cycle routes and footpaths as well as car parks etc. in accordance with DIN EN13201 due to its light output.

FUNCTION

The integrated battery is charged during daytime by the efficient photovoltaic solar modules. 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 LiFePo4 battery used in his solar lamp 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 instructions. The warranty is void, if the product settings haven't been changed by photonus authorized employees/partners and/or using non-photonus approved tools.

2

TECHNICAL DATA

SOLAR MODULES

Solar modules	Monocrystalline silicon cells with exceptional efficiency specially processed by photonus.
Efficiency	20 %
Max. performance of the energy column Pmpp	280 Wp / 8 solar modules, they are also charged up in cloudy conditions

BATTERY IN THE POLE

Battery	LiFePO4 / 461Wh (12.8V 36Ah) or LiFePO4 / 845Wh (12.8V 66Ah) (depending on location/latitude)
Operating temperature	- 20°C bis + 60°C
Life of battery	up to 10 years
Protection class	IPX8

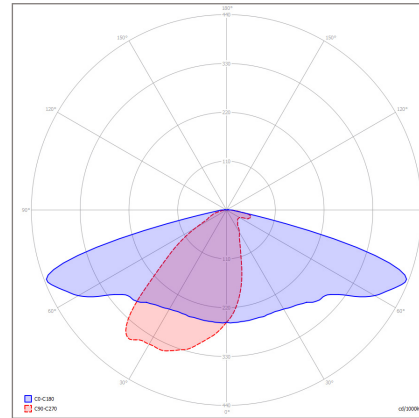
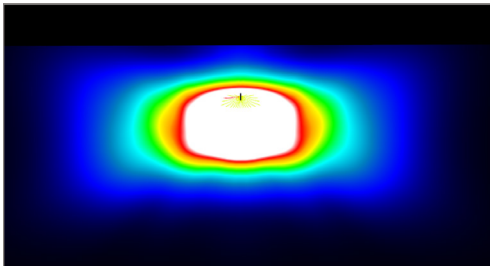
LIGHTS

Max. luminous flux	8000lm (Bregenz site / 47 degrees latitude / 2800 lm / V5)
Efficiency	200 lm/W
LED module / max. watts	100 W
Max. back-up time	Location: Normal Mode /Smart Mode 52 degrees latitude (Amsterdam): 9 days / 13 days 47 degrees latitude (Munich): 7 days / 10 days 40 degrees latitude (Madrid): 3 days / 5 days
Colour temperature	4000 K
Life of LED	> 75 000 h (L80)
Protection class	IP67

OPTICS

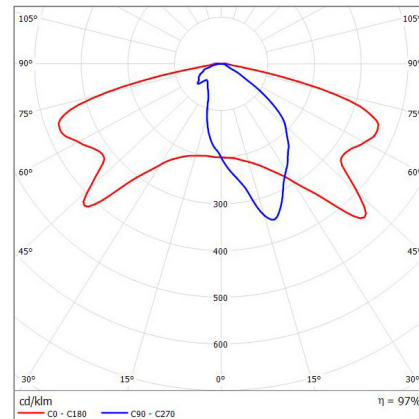
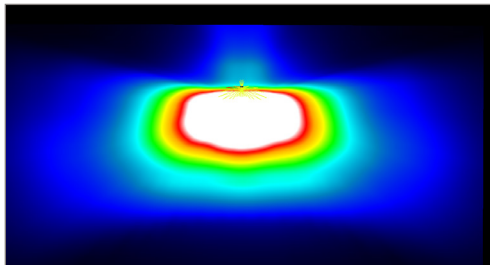
photonus OPTIC

Standard optic with optimum compromise between illumination width and illumination depth



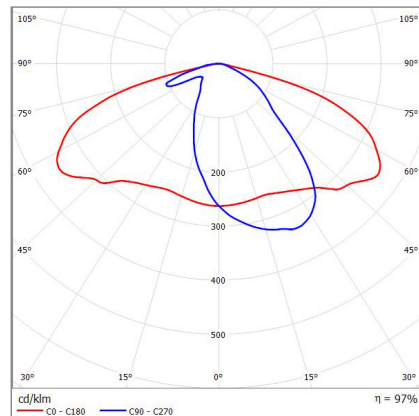
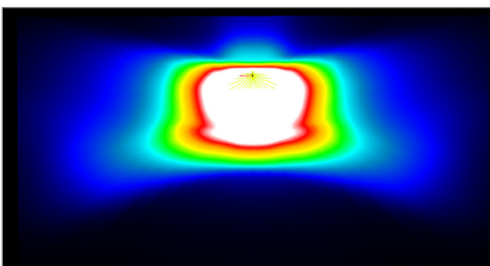
SCL OPTIC

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



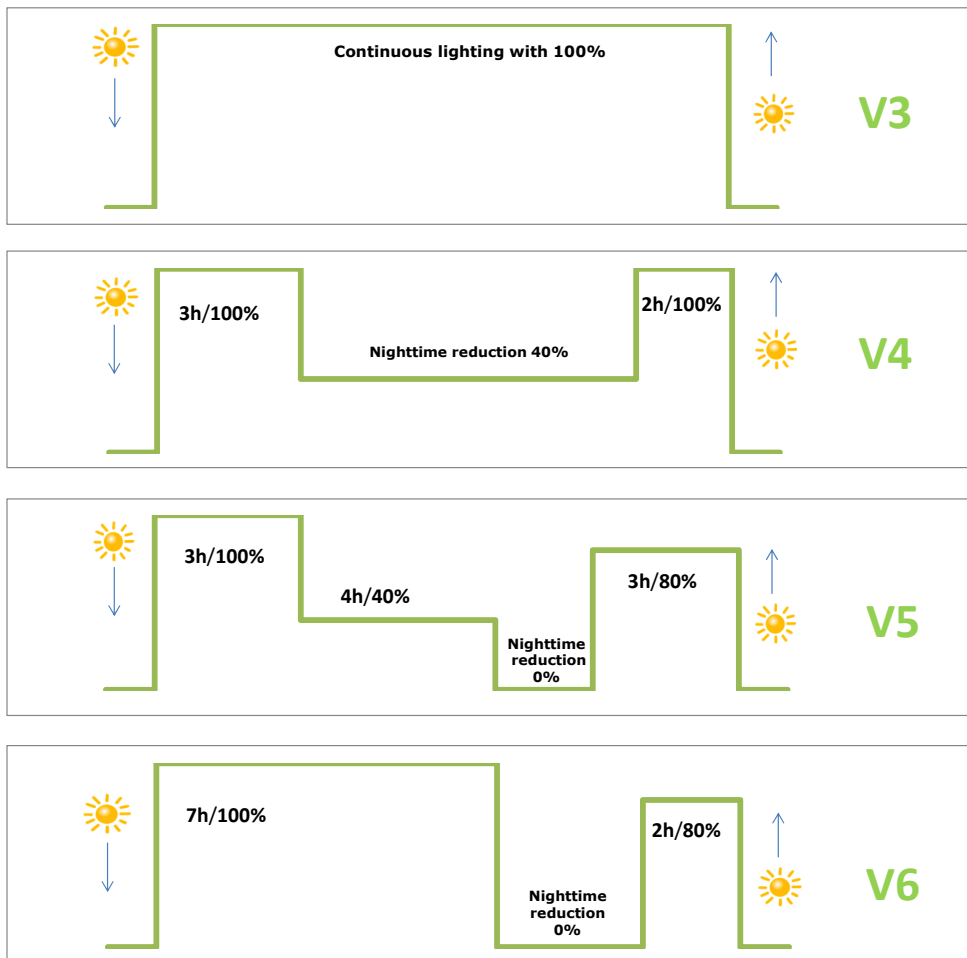
DWC OPTIC

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



ENERGY AND TIME MANAGEMENT

Standard factory setting V5



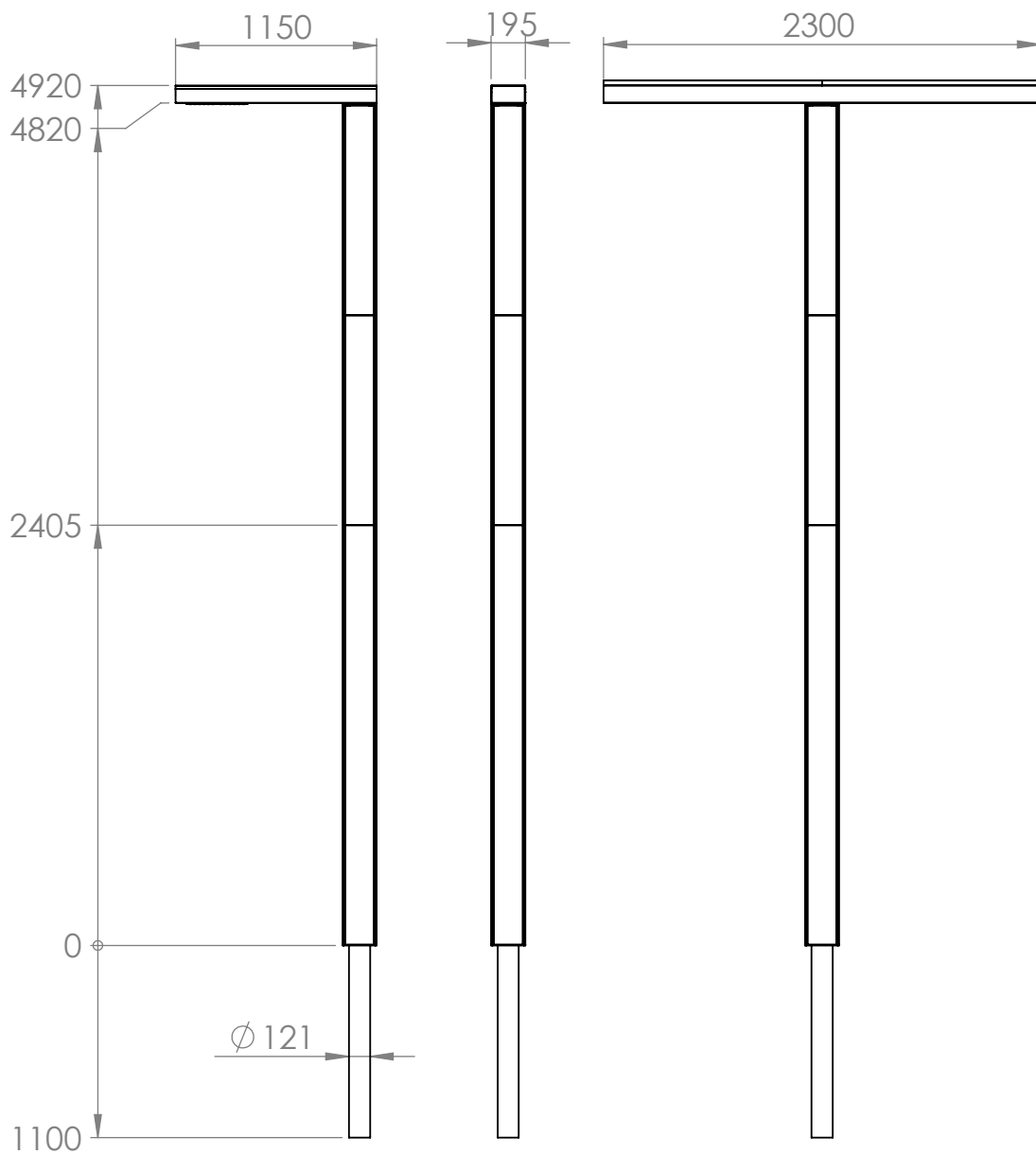
DIMENSIONS

Total height from ground level	4900 mm
Height of light from ground level	4800 mm
Height of vandalism protection	2400 mm
Height of energy column	2400 mm
Length of pole under ground	1100 mm
Total length of pole	6000 mm
Weight of solar light	110 kg
Wind load	Wind load zone 4, with 30m/s (110km/h) (Lloyds CLAME 2016)

MATERIALS

Pole	galvanised steel
Metal parts	powder-coated aluminium „Sparkling iron effect dark“
	(technical changes reserved)

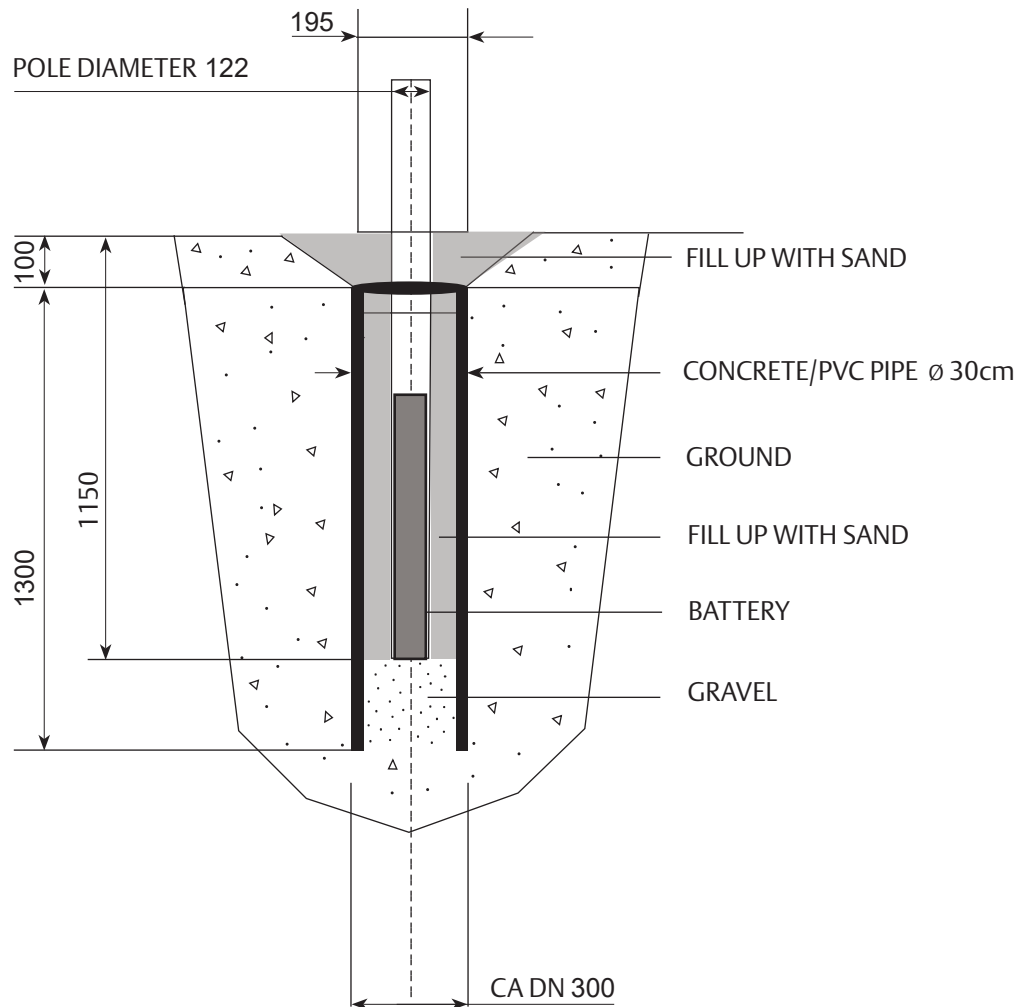
DIMENSIONS MERKUR300 / DUO



3

OPTIONS FOR ASSEMBLY

OPTION 1 - PIPE FOUNDATION



OPTION 2 - KRINNER GROUND SCREW

merkur Ground Screw

