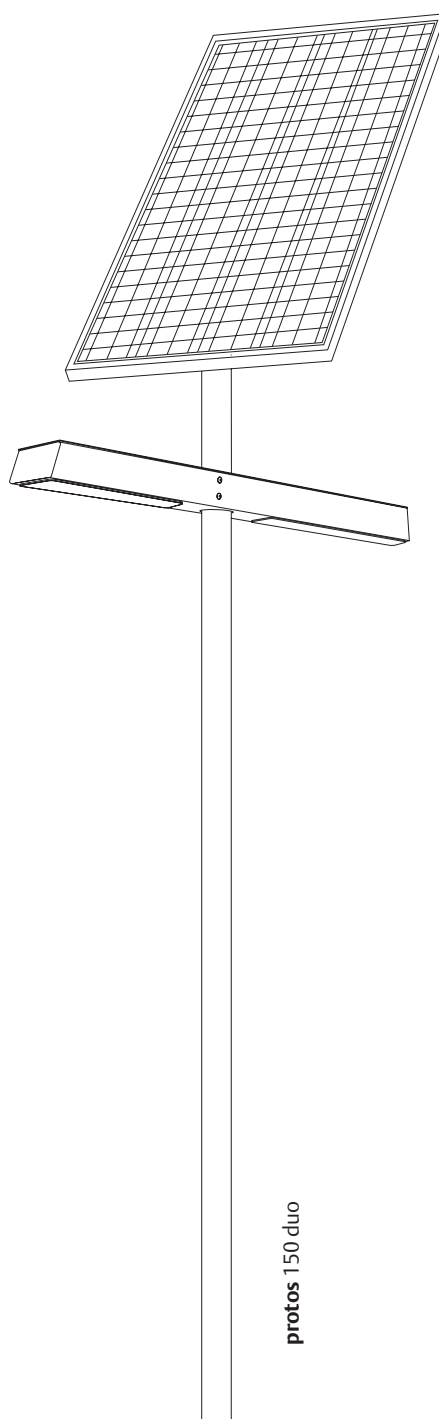
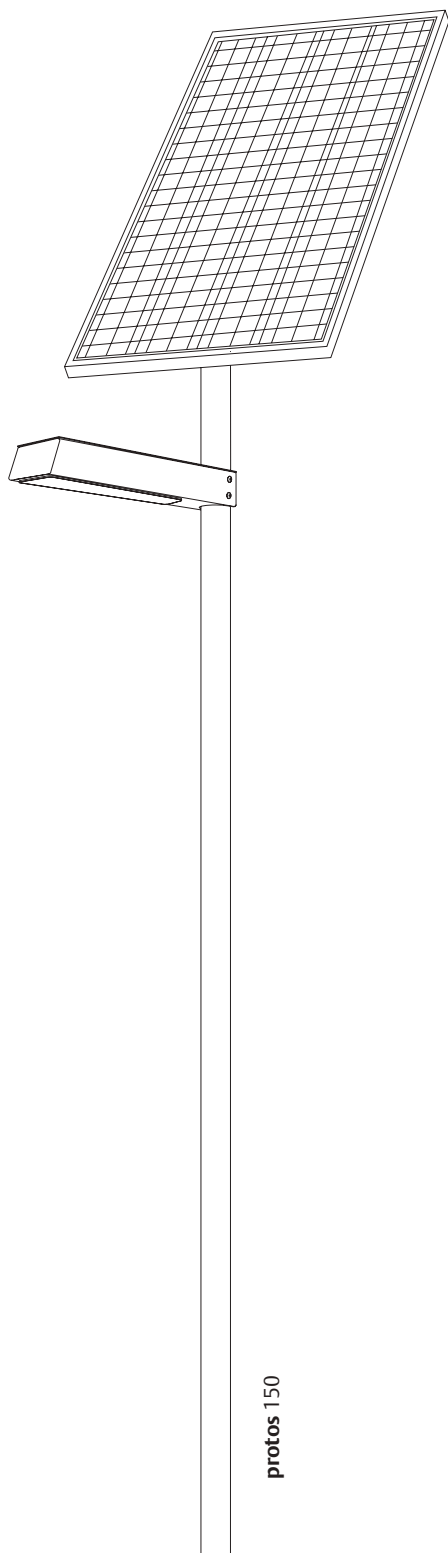

DATA SHEET V.1 | 2017

protos150 | protos150 duo



1

protos

FUNCTIONAL SOLAR LAMP WITH APPEALING DESIGN

USAGE

It is „functional with appealing design“ and it is called protos. It is a self-sustaining, exterior solar LED lamp with various technical options. The energy supply is based on an efficient mono-crystalline photovoltaic module, the inclination of which can be adjusted. Intelligent controls with independent day- and night-time recognition enables different time programs. Given the short assembling and disassembling times, protos is excellently suitable as street lighting or for temporary usage wherever cordless lighting is required, such as construction sites, parking lots, access roads, outdoor events or company premises.

The high-efficiency LEDs and advanced optical components ensure impressive light distribution. protos meets the country-specific light-technical requirements of DIN 13201 for residential streets with low traffic, cycle paths and footpaths, parking lots and company premises.

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 LiFePo₄ battery used in protos 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.

2

TECHNICAL DATA

SOLAR MODULE

Solarmodule	mono- or poly-cristalline silicon cells
Efficiency	17%
Module performance	150 W
Module dimensions	1508 mm x 680 mm x 45 mm

BATTERY (IN THE POLE)

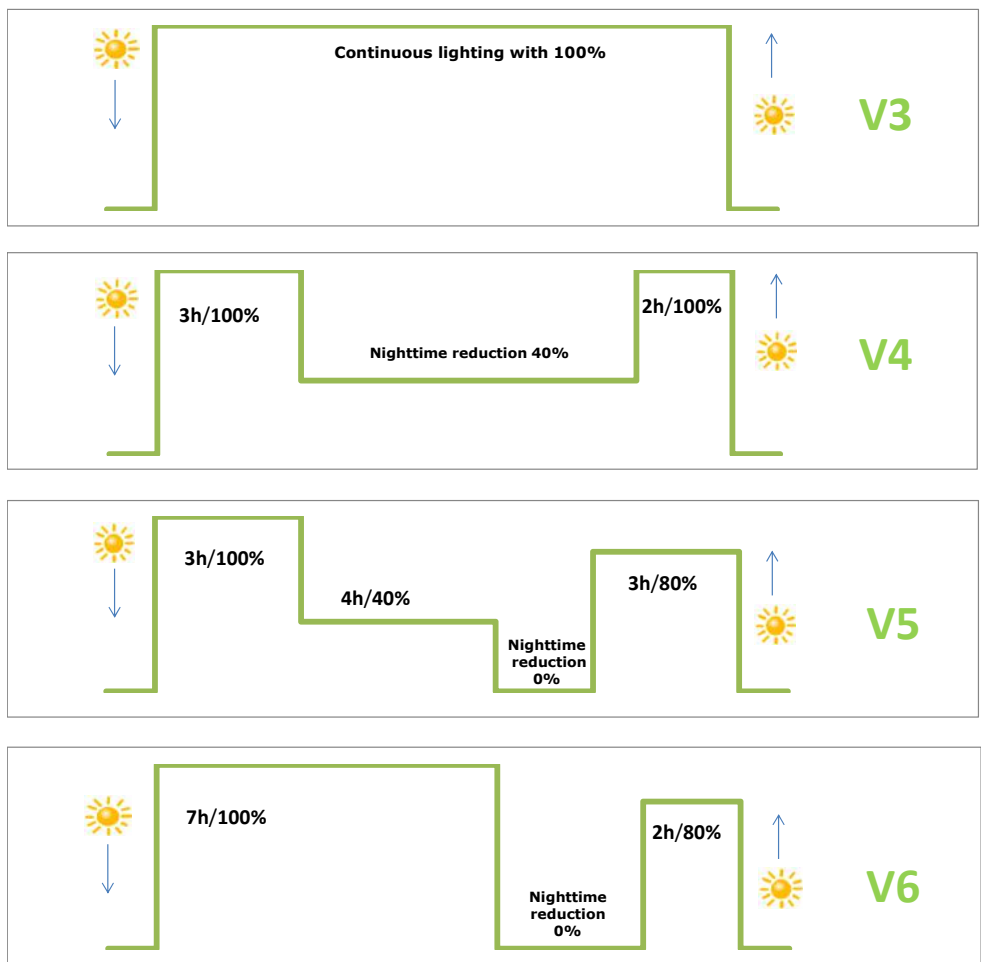
Battery	LiFePo4 / 12V 36Ah up to 66 Ah
Operating temperature	-20°C to +60°C
Battery life	Cycle stability 8 to 10 years

LIGHTS

Max. luminous flux	8000lm (Bregenz site, 47 degrees latitude:1200lm)
Efficiency	max. 200lm/W
LED module / max. watts	100W
Max. back-up time	18 days (Bregenz site, 47 degrees latitude: 7 days) „Intelligent plus Modus“ 25 days (Bregenz site: 18 days)
Colour temperature	4000 K
Optics Light distribution	situational
Life of LED	> 90000 h
Protection class	IP65
Others	insect neutral light

ENERGY AND TIME MANAGEMENT

Standard factory setting V5



DIMENSIONS

Total height from ground level	depending on the position of the solar module approximately 5200 mm
Height of light from ground level	4900 mm
Total length of the pole	6300 mm
Weight	70 kg
Length of the pole in the ground	1200 mm
Material pole	galvanized and powder-coated steel „Sparkling iron effect dark“
Solar module dimensions	1508 mm x 680 mm x 45 mm
Weight	11.8 kg
Light housing dimensions	725 mm x 105 mm x 92 mm
Weight	2kg
Wind load	up to 90km/h

MAINTENANCE CYCLES | WARRANTY

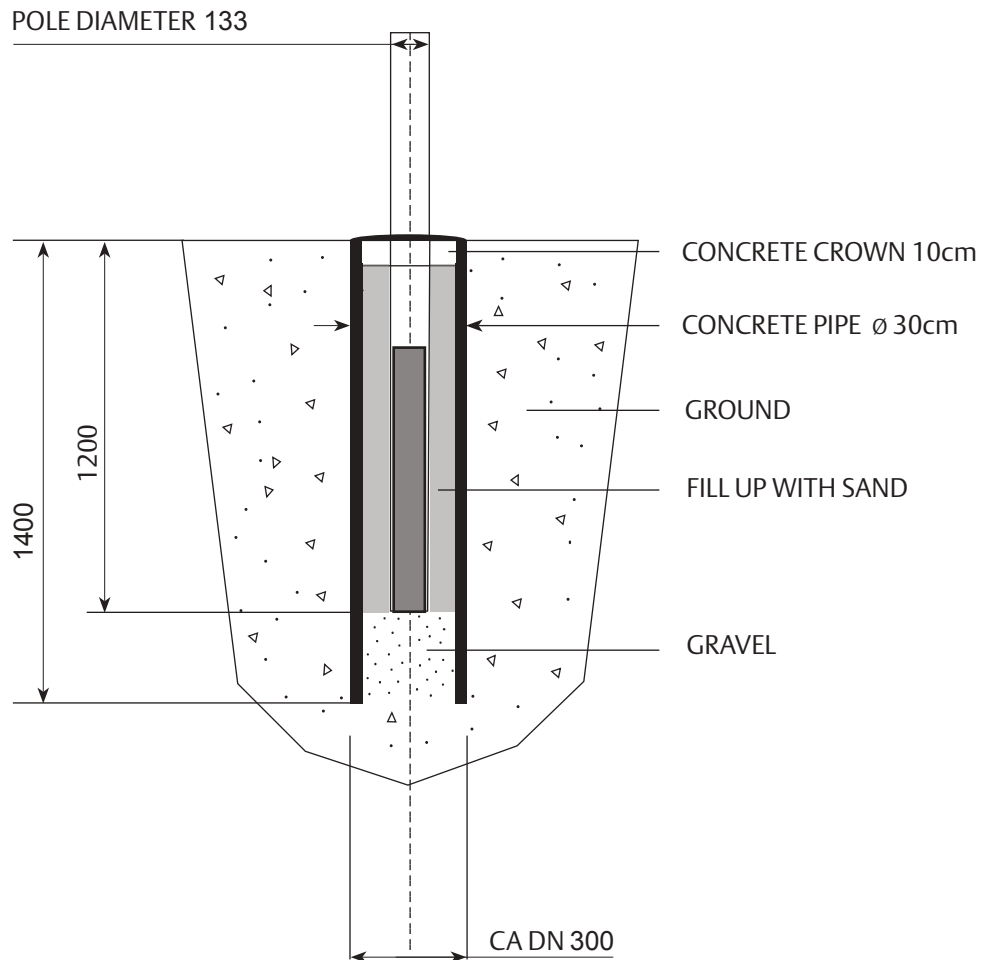
Battery change recommended	after 8 years
LED change recommended	after 12 years
Material warranty	2 years (incl. Battery)
PV module warranty (the warranty period starts at the manufacturing date)	2 years with 100 % product warranty 5 years warranty on 90 % minimum output 10 years warranty on 80% minimum output

(technical changes reserved)

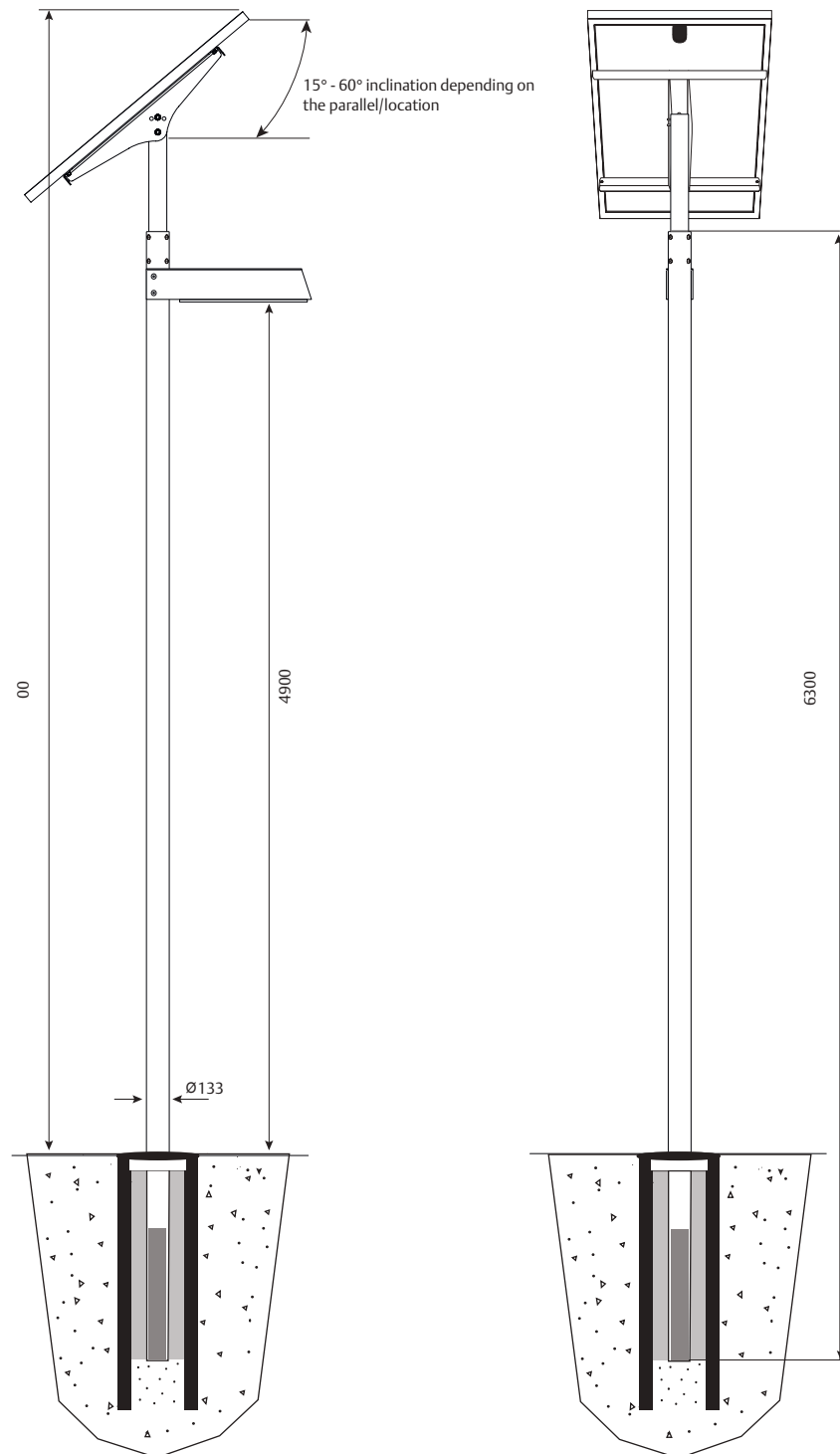
3

OPTIONS FOR ASSEMBLY

OPTION 1 - PIPE FOUNDATION

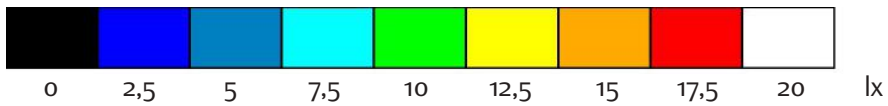
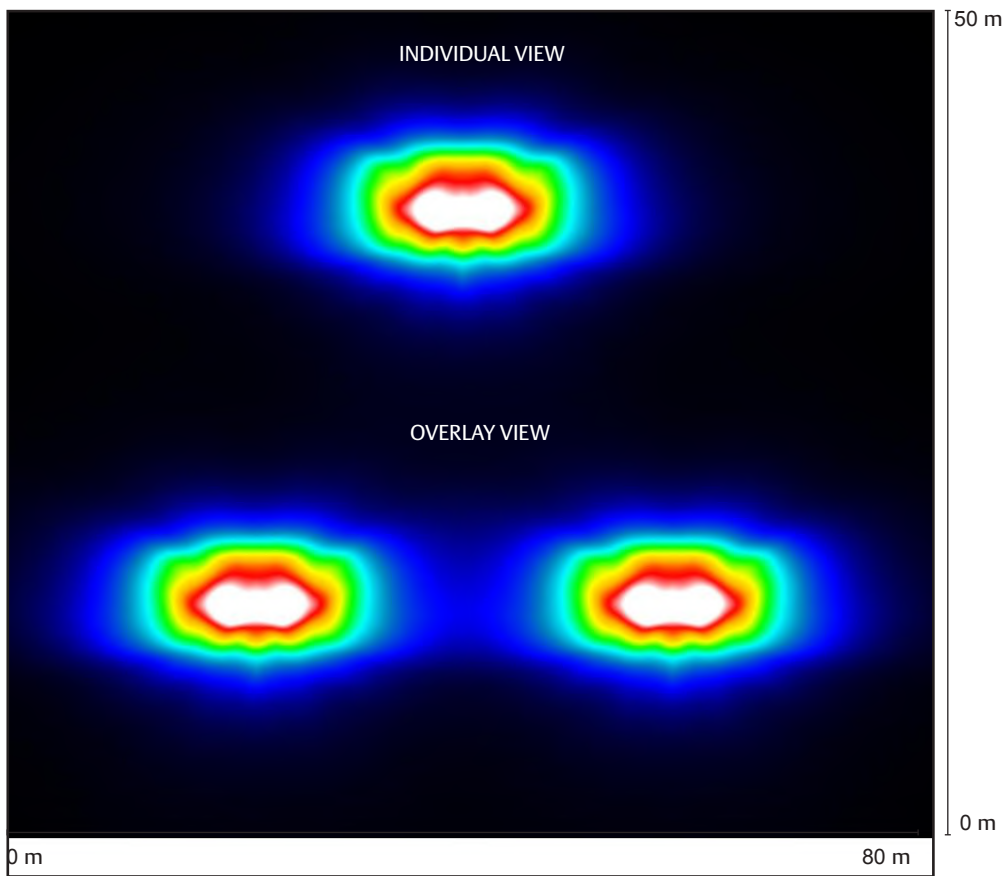


DIMENSIONS



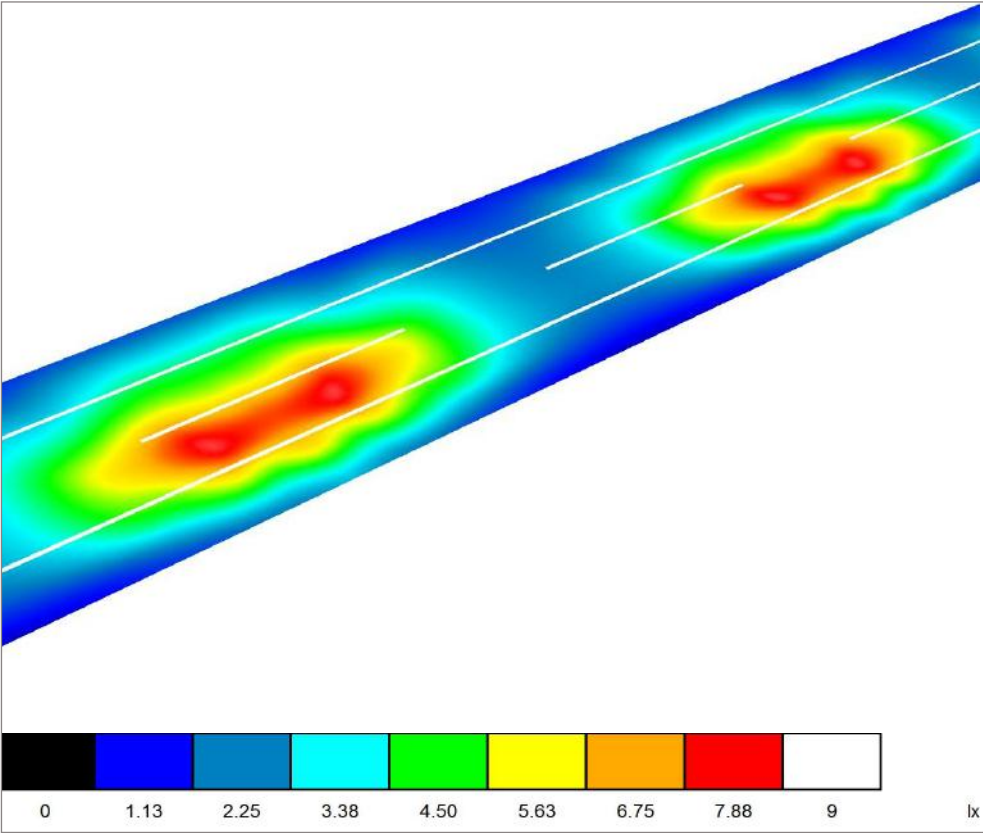
DIALUX LIGHT DISTRIBUTION CURVE (LDC)

EXAMPLE: POLE DISTANCE 35M, LUMINOUS CURRENT 3000LM



LIGHTING PLANNING

EXAMPLE OF LIGHTING PLANNING:
 ROAD 5M IN WIDTH, 30M SPACING BETWEEN LIGHTS



	E_{av} [lx]	E_{min} [lx]
Calculated value	4,30	2,16
Value required to fulfil lighting class S6	>2,00	>0,60
	OK	OK

