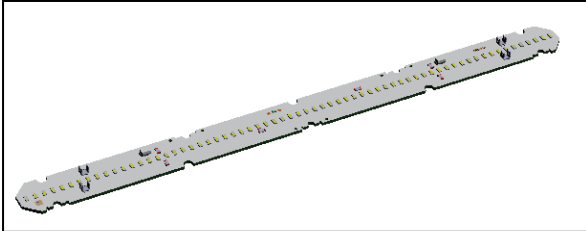


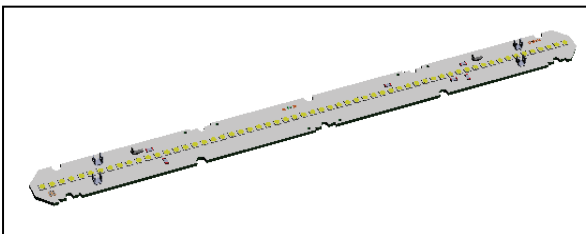
PrevaLED® Linear Slim

Preliminary Data sheet

Light Engines 630lm and 1000lm



Light Engines 2000lm



Benefits

- Efficacy: Over 100 lm/W
- Homogeneous light distribution (4.2 mm pitch) for 630lm and 1000lm, (4.7 mm pitch) 2000lm
- Consistent white light < 3 SDCM
- Seamless: no shadows between modules
- Non-SELV ECG for compact drivers
- Dimmable (5-100%)

Application

- Office (such as workplace illumination, corridor)
- Industry (such as storage, warehouse, retail)

Technical operation data

Product name	Flux [lm] @ T _c 65°*	CCT [K]	Typ. CRI	SDCM	Module P [W]	Module [lm/W] @ T _c 65°	Module [lm/W] @ T _c 35°	L80 B50 [h] @ T _c 65°**
LEP-2000-830-LS ¹	2000	3000	85	< 3	18.3	109	113	60.000
LEP-2000-840-LS ¹	2000	4000	85	< 3	17.8	112	119	60.000
LEP-1000-830-LS ¹	1000	3000	85	< 3	9.5	105	109	60.000
LEP-1000-840-LS ¹	1000	4000	85	< 3	8.3	120	125	60.000
LEP-1000-850-LS ¹	1000	5000	85	< 3	8.3	120	125	60.000
LEP-630-830-LS ¹	630	3000	85	< 3	5.9	107	111	60.000
LEP-630-840-LS ¹	630	4000	85	< 3	5.4	117	123	60.000
LEP-2000-830-LS560 ¹	2000	3000	85	< 3	19.0	99	-	60.000
LEP-2000-840-LS560 ¹	2000	4000	85	< 3	16.5	112	-	60.000
LEP-4000-830-LS560 ¹	4000	3000	85	< 3	36.6	103	-	60.000
LEP-4000-840-LS560 ¹	4000	4000	85	< 3	35.7	115	-	60.000

Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

* Tolerance for optical and electrical data: +/-10%

**average Lifetime L80B50 (lumen maintenance) up to 60.000h

Attention: due to NON-SELV Concept the Light Engines has to be protected against physical contact in operation

¹ Target values, available in September

Technical Features

- Dimension (l x w): 279.4 x 20 mm and 559.4 x 20 mm
- Lumen package: 630, 1000, 2000lm – 280mm and 2000, 4000lm – 560mm
- Color temperature:
3000K, 4000K, 5000K – 280mm and
3000K, 4000K – 560mm
- 66 LED for 630 & 1000lm – 280mm modules,
60 LED for 2000lm – 280mm,
- 132 LED for 2000lm – 560mm,
120 LED for 4000lm – 560mm
- Wire connection module to ECG & module to module
- Various fixation (M3 and M4 screw) possibilities enable good thermal contact
- Operation by dedicated OPTOTRONIC® OT

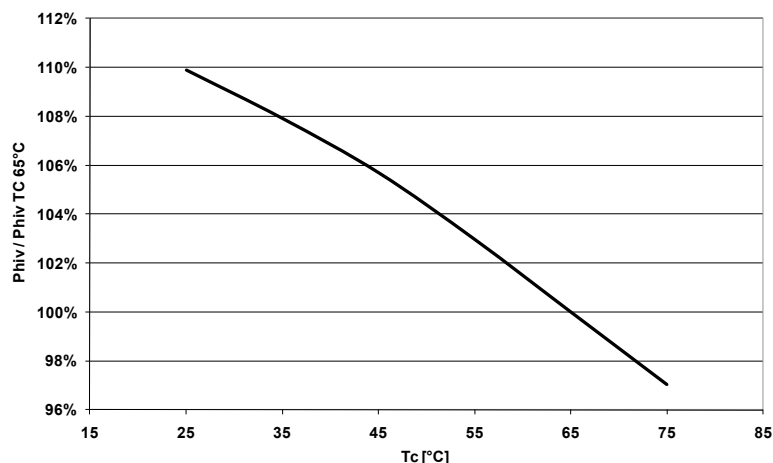
Minimum and Maximum Ratings

Product	Storage temperature [°C]	Tc max.* (@ typ. current)	L80 B50 @ Tc max. 75°C
LEP-2000-830-LS	-20 ... 85	75°C	45.000 h
LEP-2000-840-LS	-20 ... 85	75°C	45.000 h
LEP-1000-830-LS	-20 ... 85	75°C	45.000 h
LEP-1000-840-LS	-20 ... 85	75°C	45.000 h
LEP-1000-850-LS	-20 ... 85	75°C	45.000 h
LEP-630-830-LS	-20 ... 85	75°C	45.000 h
LEP-630-840-LS	-20 ... 85	75°C	45.000 h
LEP-2000-830-LS-560	-20 ... 85	75°C	45.000 h
LEP-2000-840-L-S560	-20 ... 85	75°C	45.000 h
LEP-4000-830-L-S560	-20 ... 85	75°C	45.000 h
LEP-4000-840-L-S560	-20 ... 85	75°C	45.000 h

The modules are designed for operation with OTp OPTOTRONIC® ECG.

*) Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the light engine. The temperature of the LED module must be measured at the t_c -point according to EN60598-1 in thermally settled conditions with a temperature sensor. For exact location of the T_c -point see drawing below (marked as Tc1 and Tc2).

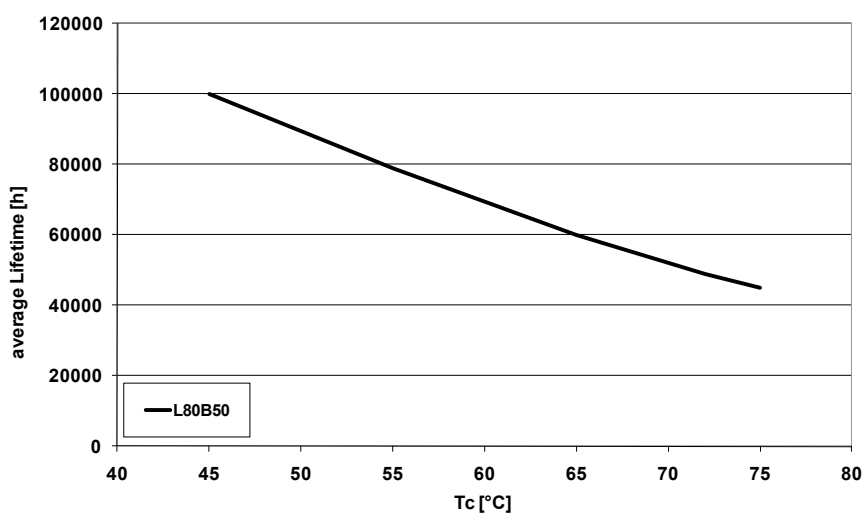
Luminous Flux over Tc



valid for specified typical current

Product name	Typ. Current	Typ. Forward Voltage
LEP-2000-830-LS	213 mA	86 V
LEP-2000-840-LS	208 mA	86 V
LEP-1000-830-LS	102 mA	93 V
LEP-1000-840-LS	90 mA	92 V
LEP-1000-850-LS	90 mA	92 V
LEP-630-830-LS	58 mA	101 V
LEP-630-840-LS	54 mA	100 V
LEP-2000-830-LS-560	204 mA	93 V
LEP-2000-840-LS-560	180 mA	92 V
LEP-4000-830-LS-560	426 mA	86 V
LEP-4000-840-LS-560	416 mA	86 V

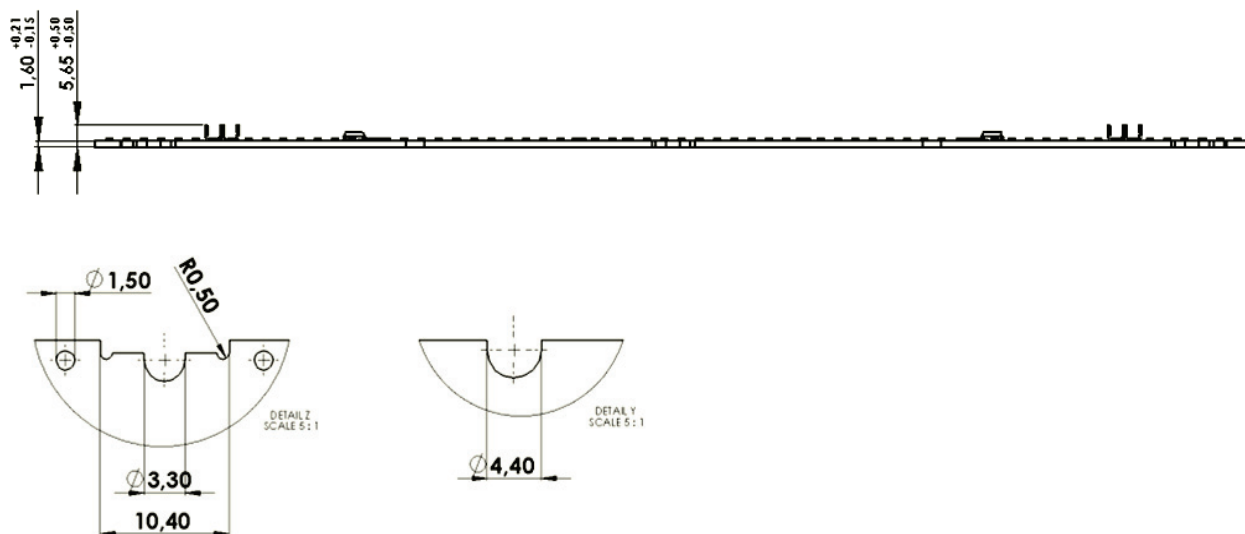
Average Lifetime (lumen maintenance) over Tc (case temperature)



Estimated average lifetime versus case temperature (indication only)
valid for specified typical current

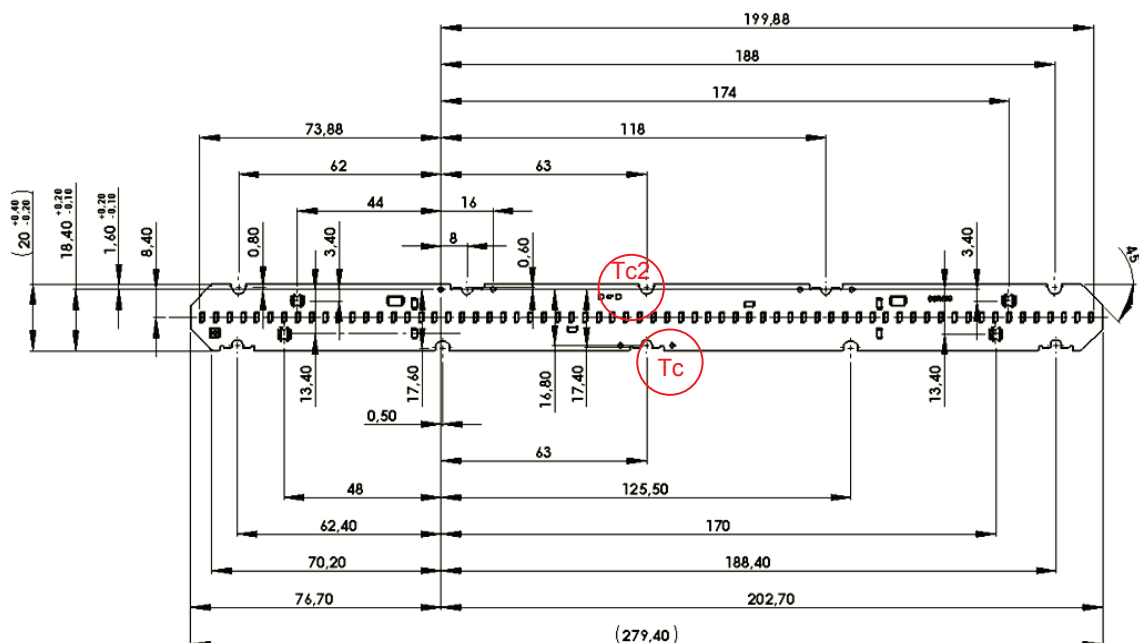
Drawings

General dimensions for all types of modules (incl. 560mm-long modules) are the same:

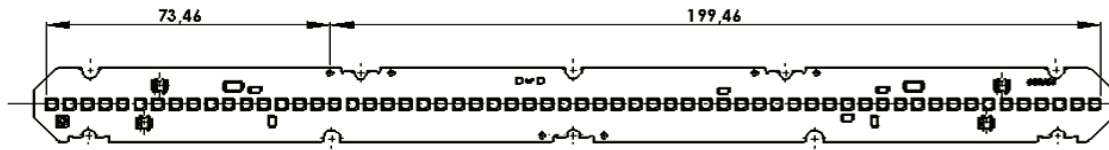


LEP-630-xxx-LS, LEP-1000-xxx-LS, LEP-2000-xxx-LS, LEP-1000-xxx-LS-560 & LEP-2000-xxx-LS-560.

Position of all mounting holes, connectors, as well as outer dimensions in case of 280mm-long PrevaLED Linear SLIM LEP-630-xxx-LS, LEP-1000-xxx-LS and LEP-2000-xxx-LS are the same. Please find below the technical sketch:



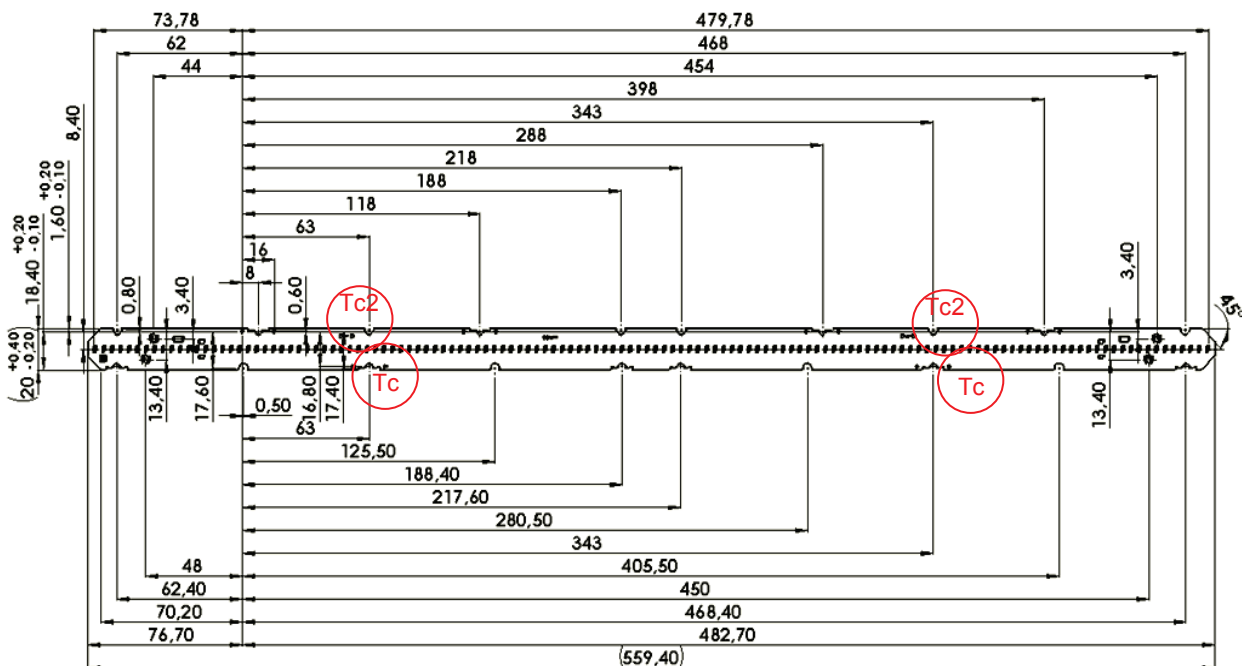
The only difference between LEP-2000-xxx-LS and LEP-1000-xxx-LS are the two dimensions, showed below for LEP-2000-xxx-LS:



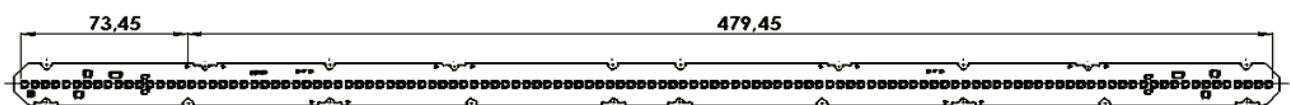
All dimensions: mm
General tolerances: +/-0.15 if not specified

Position of all mounting holes, connectors, as well as, outer dimension in case of PrevaLED Linear SLIM LEP-2000-xxx-LS-560 and LEP-2000-xxx-LS-560 are the same.

LEP-2000-xxx-LS-560



As in case of the 280mm-long module the only difference between LEP-2000-xxx-LS-560 and LEP-4000-xxx-LS-560 consists in the following two dimensions, due to different LED package. Please find below the LEP-4000-xxx-LS-560 dimensions:



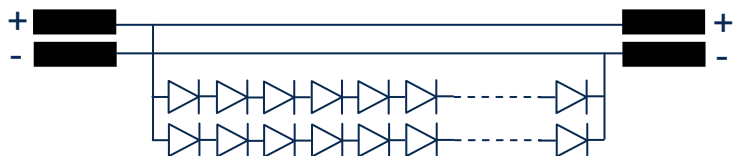
All dimensions: mm
General tolerances: +/-0.15 if not specified

Cable

For connecting the module OSRAM recommend to use an AWG 20 (0.5mm²) solid wire cable, max diameter for cable inclusive insulation ~2(+/-0,05)mm.

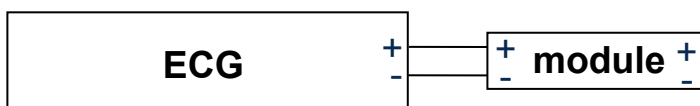
Electrical Connection

On module level

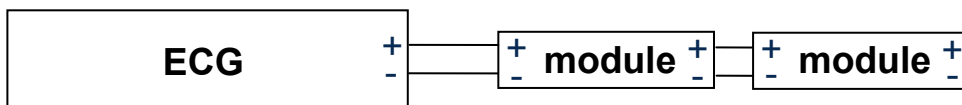


String configuration
280mm: 2 x 33 LED's for 630 and 1000lm
280mm: 2 x 30 LED's for 2000lm
560mm: 4 x 33 LED's for 2000lm
4 x 30 4000lm

Module to ECG



Module to Module



Example for 2 modules

Current & Power

for different parallel module configuration

	LEP-630-830-LS		LEP-1000-830-LS		LEP-2000-830-LS	
Number of modules	Current	Power*	Current	Power*	Current	Power*
1	-	-	-	-	213 mA	18.3 W
2	116 mA**	11.8 W**	204 mA	19.0 W	426 mA	36.6 W
3	174 mA**	17.7 W**	306 mA	28.5 W	639 mA**	54.9 W**
4	232 mA	23.6 W	408 mA	38.5 W	852 mA**	73.2 W**
5	250 mA	29.5 W	510 mA**	47.5 W**	-	-
6	348 mA	35.4 W	612 mA**	57.0 W**	-	-
7	406 mA	41.3 W	714 mA**	66.5 W**	-	-
8	464 mA	47.2 W	816 mA**	77.0 W**	-	-

	LEP-640-840-LS		LEP-1000-840-LS		LEP-1000-850-LS		LEP-2000-840-LS	
Number of modules	Current	Power*	Current	Power*	Current	Power*	Current	Power*
1	-	-	-	-	-	-	208 mA	17.8 W
2	108 mA**	10.8 W**	180 mA	16.6 W	180 mA	16.6 W	416 mA	35.6 W
3	162 mA**	16.2 W**	270 mA	24.9 W	270 mA	24.9 W	624 mA**	53.4 W**
4	216 mA	21.6 W	360 mA	33.2 W	360 mA	33.2 W	832 mA**	71.2 W**
5	270 mA	27.0 W	450 mA**	41.5 W**	450 mA**	41.5 W**		
6	324 mA	32.4 W	540 mA**	49.8 W**	540 mA**	49.8 W**		
7	378 mA	37.8 W	630 mA**	58.1 W**	630 mA**	58.1 W**		
8	432 mA	43.2 W	720 mA**	66.4 W**	720 mA**	66.4 W**		

	LEP-2000-830-LS-560		LEP-4000-830-LS-560	
Number of modules	Current	Power*	Current	Power*
1	204 mA	19.0 W	426 mA	36.6 W
2	408 mA	38.0 W	852 mA**	73.2 W**
3	612 mA**	57.0 W**		
4	816 mA**	76.0 W**		

	LEP-2000-840-LS-560		LEP-4000-840-LS-560	
Number of modules	Current	Power*	Current	Power*
1	180 mA	16.5 W	416 mA	35.7 W
2	360 mA	33.0 W	832 mA**	71.4 W**
3	540 mA**	49.5 W**		
4	720 mA**	66.0 W**		

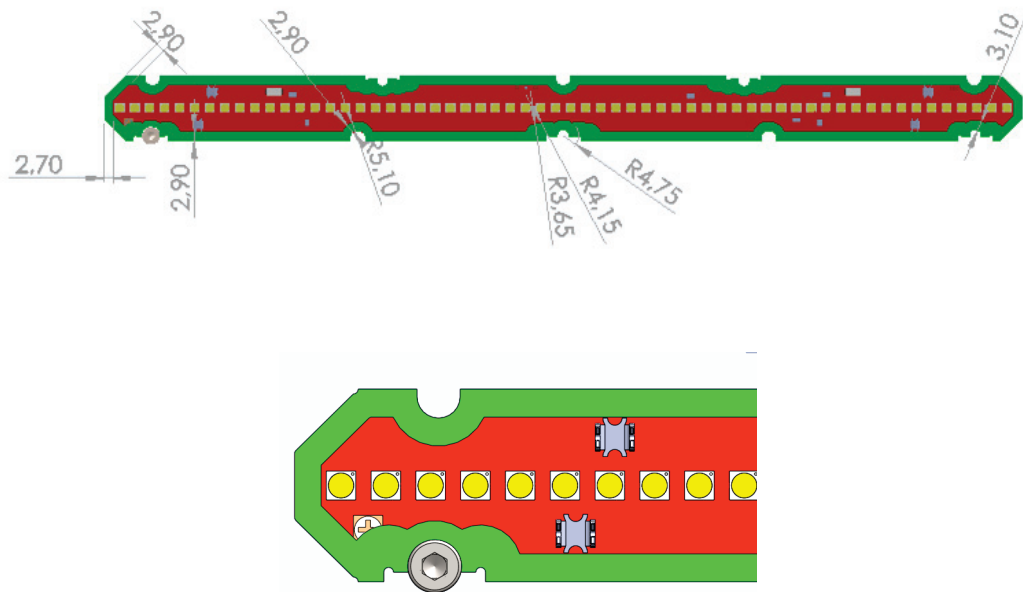
* Electrical Power of modules @ Tc 65°C

** Target configuration with upcoming brightness bin

Installation notes

The luminaire manufacturer is responsible for providing the required clearances and creepage distances and also for the protection against electrical shock, especially for the line and load wires according to EN 60598. Metal reflector must be earthed.

Distance between the module edge and the nearest conductive path on PrevaLED Linear SLIM module is 3,1mm (around M3 holes) and 2,9mm (around M4 holes) incl. tolerances.
CTI value for the module insulation layer ≥ 600 (basis insulation).



All values are in mm. Red – keep-out area, green – available space for mounting.

Please consider the creepage and clearance distance values according to DIN60598-1.

This value equals 1.5mm for max output voltage of 250V in case of OTpDALI45/220-240/450LS and CTI $\geq$ 600 (basis insulation). This value is valid, if the module is used within luminaire of min. IP20 or higher protection class.

To keep specified creepage distance of 1.5mm following screw and insulation washer standards are recommended (please see the next page):

Location on the module	Distance between module edge and keep-out area, mm	Creepage distance acc. to DIN60598-1: basis insulation CTI>=600 and Umax=250V, mm	Screw standard	Washer standard	Creepage with specified washer, mm
In the area of M3 screw	3.1	1.5	ISO 4762 Cylinderhead	No washer needed	>1.5
			ISO 7984	No washer needed	>1.5
			ISO 7380 Panhead	No washer needed	>1.5
In the area of M4 screw	2.9	1.5	DIN 920 Flathead Narrow	DIN125/ISO7089	2.7
				DIN9012	3.85
			ISO 7380 Panhead	DIN9012	2.8
				DIN 125/ISO7089	1.65
			ISO 4762/ DIN 912 Cylinderhead	DIN9012	2.99
				DIN125/ISO7089	1.84
Along the long side	2.9	1.5	-	-	-
Along the short side	2.7	1.5	-	-	-

If the listed components are used, all requirements of DIN60598-1 are fulfilled.

Clamps and clips can be applied taking into consideration clearance and creepage distances according to the drawing and the table.

Safety Information

- The LED module itself and all its components must not be mechanically stressed.
- When handling the module without use of mountain screws avoid excessive force on the cover as it may be separated from the PCB.
- The integrated mounting and locking mechanism on the cover of the module is intended to center and lock a reflector. Excessive force on this mechanism may cause permanent damage to the module.

The modules are intended for operation only with matching OPTOTRONIC® of OTp series.

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark and be ENEC certified. In Europe the declarations of conformity must include the following standards:

CE: EC 61347-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61347-2-13 and IEC/EN 62384.

Also check for the mark of an independent authorized certification institute.

Please see the relevant brochure for more detailed information (see "Related and Further Information")

OSRAM OPTOTRONIC® electronic control gear complies to all relevant standards and guarantees safe operation.

- Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
- Pay attention to standard ESD precautions when installing the module.
- Important information on photobiological safety is available in the application guide.

Assembly Information

- For optimum cooling a thermally conducting layer should be applied between module and heat sink.
- Further details and recommendation for mounting can be found in the application guide.

Ordering codes

Product group	Product name	EAN *	S-Unit **
PrevaLED Linear Slim	LEP-2000-830-LS	4008321 978929	16
PrevaLED Linear Slim	LEP-2000-840-LS	4008321 978905	16
PrevaLED Linear Slim	LEP-1000-830-LS	4008321 978882	16
PrevaLED Linear Slim	LEP-1000-840-LS	4008321 978868	16
PrevaLED Linear Slim	LEP-1000-850-LS	4008321 816108	16
PrevaLED Linear Slim	LEP-630-830-LS	4008321 978844	16
PrevaLED Linear Slim	LEP-630-840-LS	4008321 978820	16
PrevaLED Linear Slim	LEP-4000-830-LS560	4008321 816085	16
PrevaLED Linear Slim	LEP-4000-840-LS560	4008321 816061	16
PrevaLED Linear Slim	LEP-2000-830-LS560	4008321 816047	16
PrevaLED Linear Slim	LEP-2000-840-LS560	4008321 816023	16
OPTOTRONIC	OTp DALI 80/220-240/350 LS	4008321 824882	25
OPTOTRONIC	OTp DALI 80/220-240/700 LS	4008321 824905	25

*) EAN: Ordering number per single PRODUCT **) S-Unit: products per shipping unit

Note: Typical performance data are subject to change without any further notice, particularly as LED technology evolves.

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Sales and technical support is given by the local OSRAM subsidiaries.

On our world wide homepage all OSRAM subsidiaries are listed with complete address and phone numbers.

Related and Further Information

- PrevaLED® Application Guide
- OPTOTRONIC® Technical Guide
- OPTOTRONIC® Data Sheets

www.osram.com/prevaled-linear

www.osram.com/ecg-downloads

<http://catalog.myosram.com>