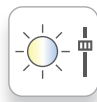




PI-LED® SPOT FLAT



Tunable white
1,800K - 16,000K



Brightness dimmable
1%-100%



RGB/CIE-xy adjustable
Colour points and
sequences



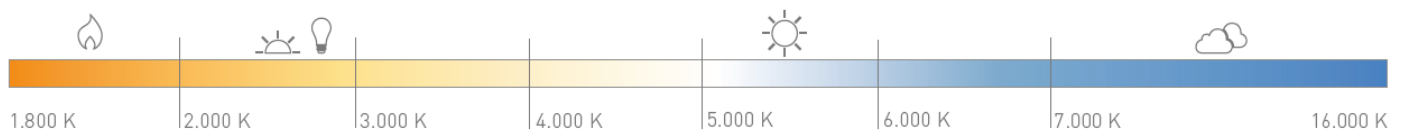
Biorhythmic lighting
Vitalisation and recreation



2 Control modes
DALI DT8, ZigBee 3.0




Excellent CRI
CRI>90





- Kompaktes und zeitloses Design in einer neuen, flachen Ausführung mit geringer Baugröße und Einbautiefen (Mindesteinbautiefe 48 mm)
- High colour rendition CRI >90
- Low tolerance for colour temperature MacAdam 1 (typisch / initial)
- 2 control modes: DALI DT8, ZigBee 3.0
- Integrated overtemperature protection
- Adjustable colour temperature 1.800K - 16.000K
- Adjustable CIE-xy colour points and RGB colours
- Dimming: 1%-100%

TECHNICAL DATA

Energie 

A⁺⁺
A⁺
A
B
C
D
E

} **L E D**



ORDERING DATA AND TECHNICAL DATA - SPOT FLAT

Type	Recessed luminaire	Type	Accessories
tbd	Spot Flat Recessed luminaire / PI-LED / ZigBee 3.0 / White RAL 9003	tbd	IP54-Schutzabdeckung Spot FLAT / White RAL 9003
tbd	Spot Flat Recessed luminaire / PI-LED / ZigBee 3.0 / brushed aluminium	tbd	IP54-Schutzabdeckung Spot FLAT / brushed aluminium
tbd	Spot Flat Recessed luminaire / PI-LED / DALI DT8 / White RAL 9003		
tbd	Spot Flat Recessed luminaire / PI-LED / DALI DT8 / brushed aluminium		

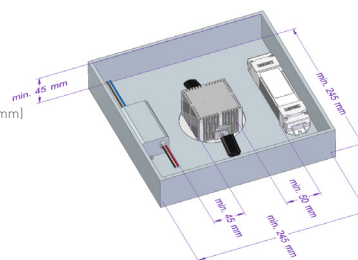
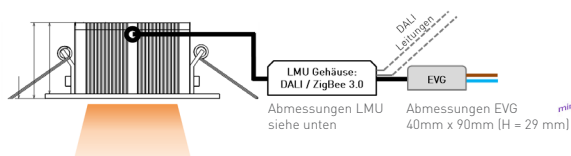
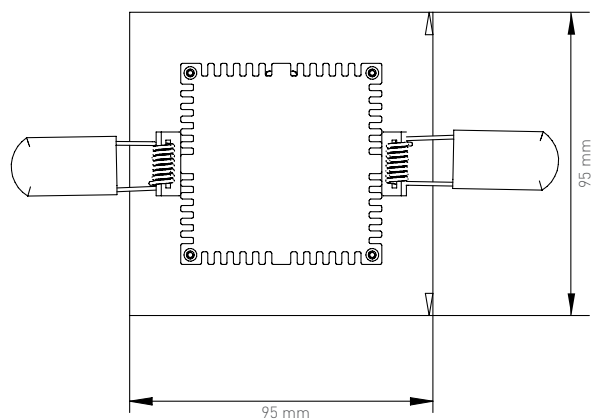
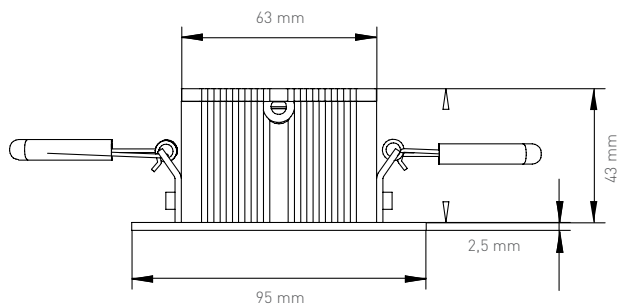
- All values apply at $t_a=25^{\circ}\text{C}$, $t_c=40^{\circ}\text{C}$ and 3000K in steady state
- Tolerance ranges: illumination data +/-10% | electrical data +/-15% | supply voltage 48V DC +/- 5%
- Illuminance specifications in accordance with CIE1931
- According to colour temperature and temperature of the PI-LED system, the Mac Adam tolerance takes on values < 4

PI-LED® SPOT FLAT

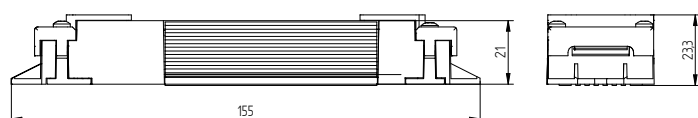
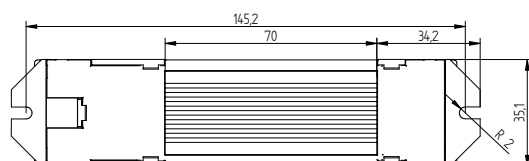
TECHNICAL DRAWINGS AND DATA

SPOT FLAT

Ceiling cut-out, round \varnothing 90 mm



DIMENSIONS PI-LED LMU



MELANOPIC EFFECT FACTOR

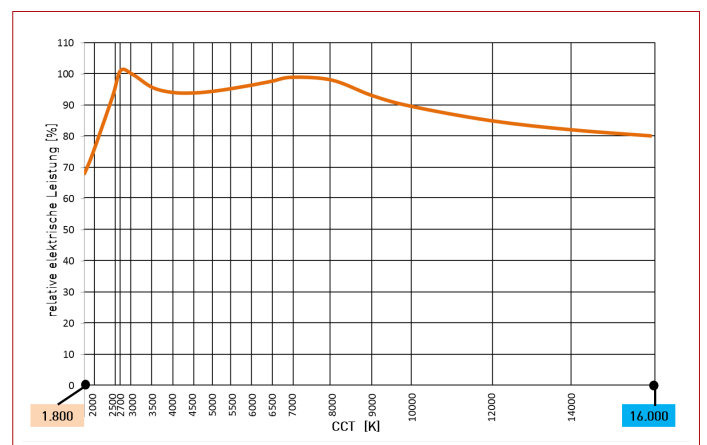
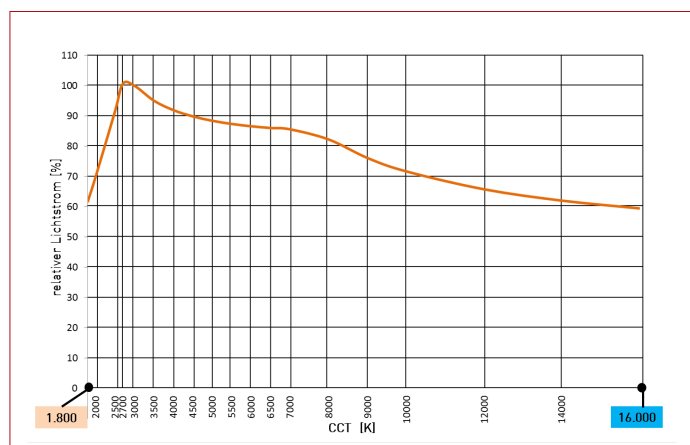
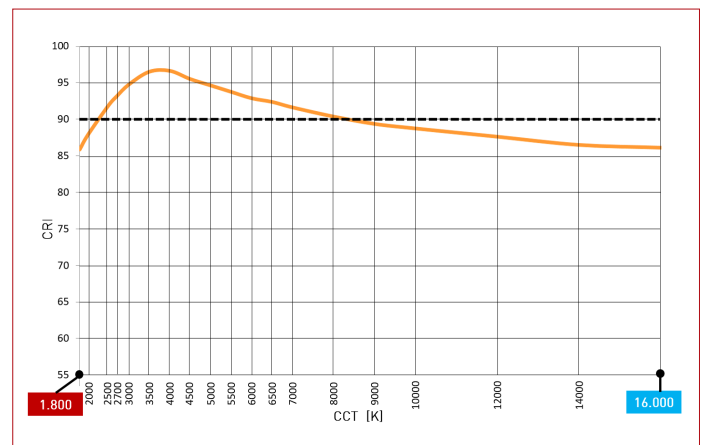
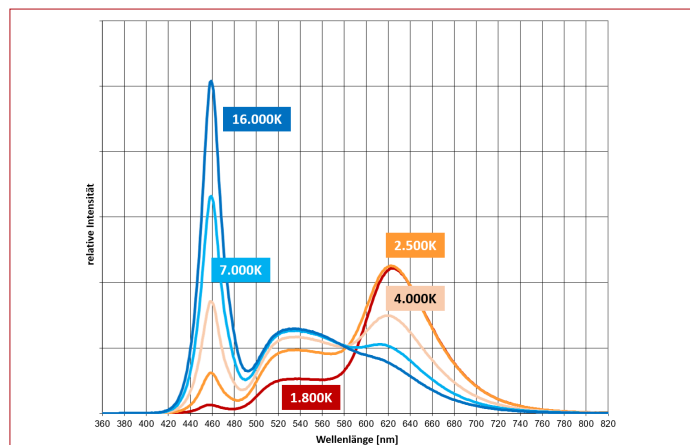
CCT [K]	VISUELL	BIOLOGISCH
	Lichtstrom [lm]	alpha [smel]
1.800	560	0,228
2.000	660	0,253
2.500	930	0,326
2.700	915	0,358
3.000	880	0,406
3.500	855	0,481
4.000	830	0,550
4.500	820	0,612
5.000	805	0,668
5.500	805	0,718
6.000	805	0,763
6.500	795	0,803
7.000	795	0,838
8.000	795	0,899
9.000	770	0,947
10.000	720	1,000
12.000	660	1,111
14.000	610	1,220
16.000	585	1,323

Besides the visual and emotional characteristics of PI-LED HCL lighting, it is above all its biological effect which - following the example of natural daylight - creates healthy light.

The factor alpha[smel] describes the melanopic effectiveness of the light source on humans and their circadian rhythms. In order to support natural human biorhythms in the best possible way, higher alpha[smel] values can minimise melatonin release during the day, while lower values can promote it in the evening. Lighting that is not only visually but also melanopically effective is made possible by PI-LED. LUMITECH recommends following DIN SPEC 5031-100 as a basis for standardised lighting design.

Further information and numeric examples can be found in the [guide for melanopic lighting design and more](#).

TYPICAL GENERAL OPTICAL PROPERTIES OF PI-LED

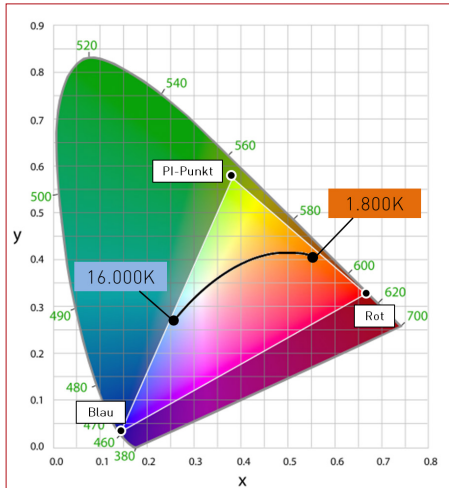


Notes:

- The actual drop in the luminous flux can vary across the delivered LED modules.
- The diagrams show typical curves and not the exact behaviour of the LED module or the PI-LED system.

PI-LED® SPOT FLAT

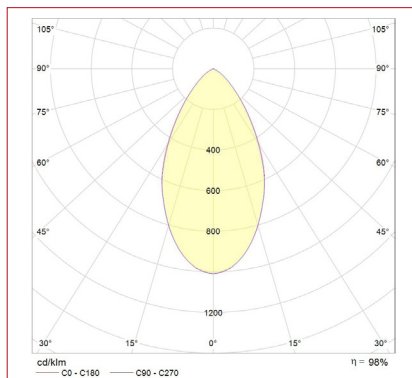
III COORDINATES AND TOLERANCES ACCORDING TO CIE 1931



Representable PI-LED colour space in the CIE 1931 system

If a colour point outside of the triangle (PI-LED colour space) is set, the closest colour point within the triangle is referenced.

III LIGHT DISTRIBUTION



III LIFETIME

L70B10 [h]

50.000

Notes:

- Value L is a statistical value, the actual drop in the luminous flux can vary across the delivered LED modules.

■ ■ REFERENCES

