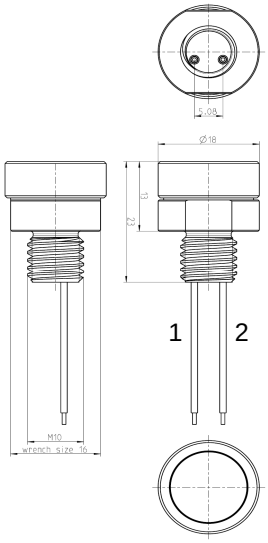
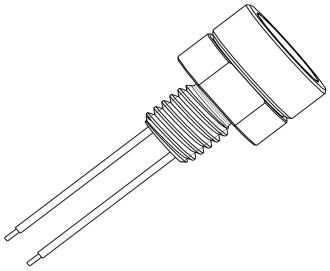
Radiation	Type	Technology	Case
cold white	3.3 W	$InGaN/Al_2O_3$	Plastic lens, metal case





H = 13 mm (± 0.5)

D = 18.0 mm (± 0.5)

Thread M10 x 1.5

Pin 1 – cathode (black)

Pin 2 – anode (red)

Description

High-power white LED in an aluminium case with thread socket, for easy handling and heat sink mounting

Applications

Industrial lighting, outdoor/indoor lighting, miniatur spot light

Absolute Maximum Ratings

at T_{amb} = 25℃, on heat sink (S ≥ 200 cm²), unless otherwise specified

Parameter	Remarks	Symbol	Value	Unit
DC forward current	on heat sink	I_F	1.0	A
Power dissipation	on heat sink	P	3.5	W
Surge current	on heat sink t ≤ 10µs; DC = 0.005	I_{FM}	2	A
Reverse current		I_R	200	mA
Operating temperature range	on heat sink	T_{amb}	-25 to +85	℃
Storage temperature range		T_{stg}	-25 to +85	℃
Junction temperature		T_j	120	℃
International Protection		IP	66	

Optical and Electrical Characteristics

at T_{amb} = 25℃, on heat sink (S ≥ 200 cm²), $t_{Measuring}$ < 1 s, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage [1]	I_F = 350 mA	V_F	2.8	2.95	3.25	V
Forward voltage [1]	I_F = 1000 mA	V_F		3.2	3.5	V
Reverse voltage	I_F = 350 mA	V_R			1.2	V
Luminous power [1]	I_F = 350 mA	Φ_v		120		lm
Luminous intensity [1]	I_F = 350 mA	I_v	700	1000		cd
Luminuos intensity [1]	I_F = 1000 mA	I_v		2300		cd

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Optical and Electrical Characteristics

at T_{amb} = 25℃, on heat sink (S ≥ 200 cm²), $t_{Measuring}$ < 1 s, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Color temperature	I_F = 350 mA	CCT	5700	6100	6500	K
Color rendering index	I_F = 350 mA	CRI R_a		70		
Viewing angle	I_F = 350 mA	2φ		12		deg
Beam distance [2]	I_F = 1000 mA	R_{Iv}		75		m
Thermal resistance junction-case		R_{thJC}		10		K/W

[1] only recommended on optimal heat sink

[2] 0,25 lx level corresponding to ANSI/NEMA FL1 Standard

Note: All measurements carried out with JENOPTIK Polymer Systems equipment, on aluminium heat sink, S = 200 cm², passive cooling. Measurement results and curve characteristics obtained with other heat sinks may differ.

Safety Advise*

The evaluation of eye safety occurs according to the standard CIE/IEC 62471:2006 ("photobiological of lamps and lamp systems"). Within the risk grouping system of this CIE standard, the LED specified in this data sheet falls at maximum into the ***Group 1- Low Risk***

At normal behaviour and use, this LED therefore does not pose a hazard.

*Note: Safety classification of an optical component mainly depends on the intended application and the way the component is being used. Furthermore, all statements made to classification are based on calculations and are only valid for this LED "as it is", and at continuous operation, assuming direct view and maximum forward current. Using pulsed current or altering the light beam with additional optics may lead to different safety classifications. Therefore these remarks should be taken as recommendation and guideline only.

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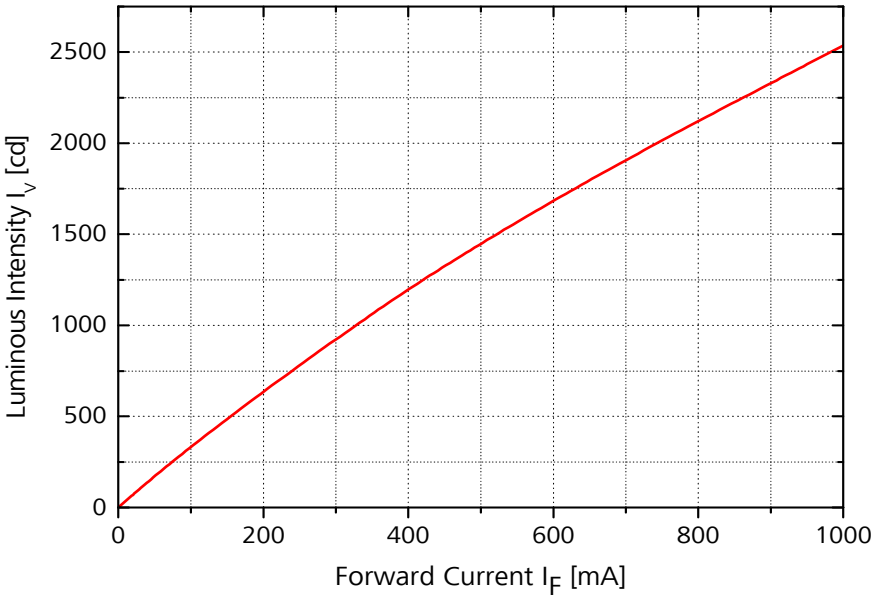
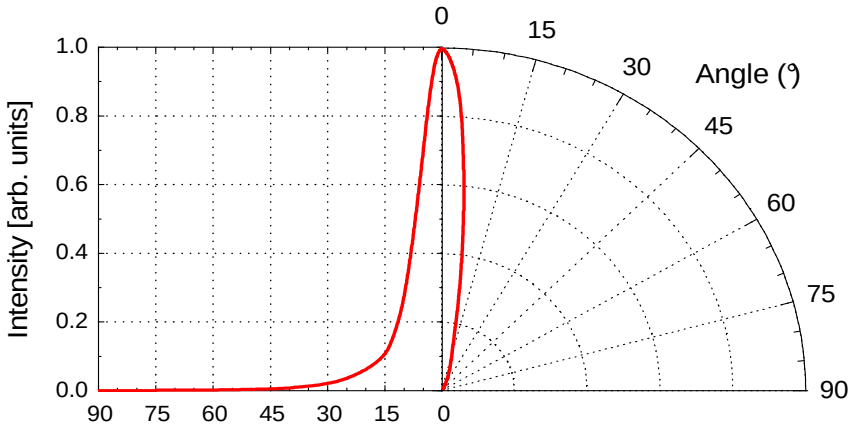
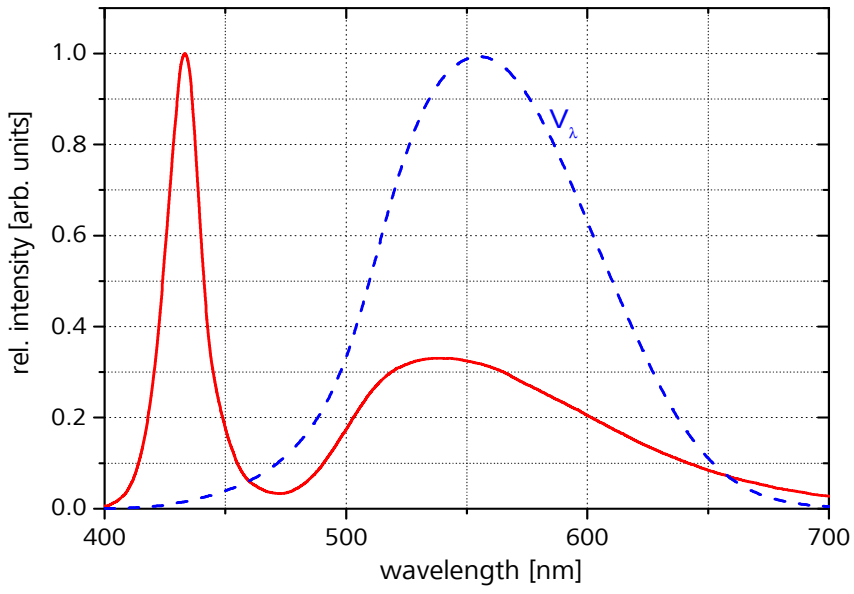
Luminous Intensity vs. Forward Current





Radiation Characteristics

Spectral power distribution (typical)
@ I_F = 350 mA



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