

Radiation	Type	Technology	Case
cold white	5 W	InGaN/Al <sub>2</sub> O <sub>3</sub>	Plastic lens, metal case

	<p><b>Description</b></p> <p>High-power white LED in an anodised aluminium case with thread socket, for easy handling and heat sink mounting</p>
	<p><b>Outline:</b></p> <p>H = 12.2 mm (± 0.5)</p> <p>D = 18.0 mm (± 0.5)</p> <p>Thread M10 x 1.5</p> <p>Pin 1 – cathode (black)</p> <p>Pin 2 – anode (red)</p>
<p><b>Applications</b></p> <p>Industrial lighting, outdoor/indoor lighting</p>	

**Absolute Maximum Ratings**

at T<sub>amb</sub> = 25°C, on heat sink (S ≥ 200 cm<sup>2</sup>), unless otherwise specified

Parameter	Remarks	Symbol	Value	Unit
DC forward current	on heat sink	I <sub>F</sub>	1.5	A
Power dissipation	on heat sink	P	5.6	W
Surge current	on heat sink t ≤ 10µs; DC = 0.005	I <sub>FM</sub>	2.0	A
Reverse current		I <sub>R</sub>	200	mA
Operating temperature range	on heat sink	T <sub>amb</sub>	-25 to +85	°C
Storage temperature range		T <sub>stg</sub>	-25 to +85	°C
Junction temperature		T <sub>j</sub>	120	°C
International Protection		IP	66	

**Optical and Electrical Characteristics**

at T<sub>amb</sub> = 25°C, on heat sink (S ≥ 200 cm<sup>2</sup>), t<sub>Measuring</sub> < 1 s, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage <sup>1</sup>	I <sub>F</sub> = 700 mA	V <sub>F</sub>	2.75	3.15	3.5	V
Forward voltage <sup>1</sup>	I <sub>F</sub> = 1500 mA	V <sub>F</sub>		3.35	3.7	V
Reverse voltage	I <sub>F</sub> = 700 mA	V <sub>R</sub>			1.2	V
Luminous power <sup>1</sup>	I <sub>F</sub> = 700 mA	Φ <sub>v</sub>		200		lm
Luminous power <sup>1</sup>	I <sub>F</sub> = 1500 mA	Φ <sub>v</sub>		400		lm
Luminous intensity <sup>1</sup>	I <sub>F</sub> = 700 mA	I <sub>v</sub>	500	750		cd
Luminous intensity <sup>1</sup>	I <sub>F</sub> = 1500 mA	I <sub>v</sub>		1350		cd

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer.

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### Optical and Electrical Characteristics

at  $T_{amb} = 25^{\circ}\text{C}$ , on heat sink ( $S \geq 200 \text{ cm}^2$ ),  $t_{Meas} < 1 \text{ s}$ , unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Color temperature	$I_F = 700 \text{ mA}$	CCT	5000	6000	6500	K
Color rendering index	$I_F = 700 \text{ mA}$	CRI $R_a$		70		
Viewing angle	$I_F = 700 \text{ mA}$	$2\phi$		27		deg
Range of illumination <sup>2</sup>	$I_F = 1500 \text{ mA}$	$R_{lv}$		62		m
Thermal resistance junction-case		$R_{thJC}$		6		K/W

<sup>1</sup> only recommended on optimal heat sink

<sup>2</sup> 0,25 lx level corresponding to ANSI/NEMA FL1 Standard

Note: All measurements carried out with JENOPTIK Polymer Systems equipment, on aluminium heat sink,  $S = 200 \text{ cm}^2$ , passive cooling. Measurement results and curve characteristics obtained with other heat sinks may differ.

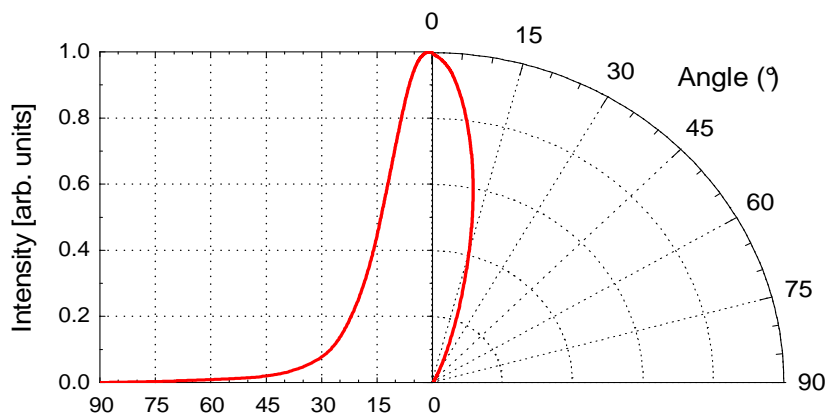
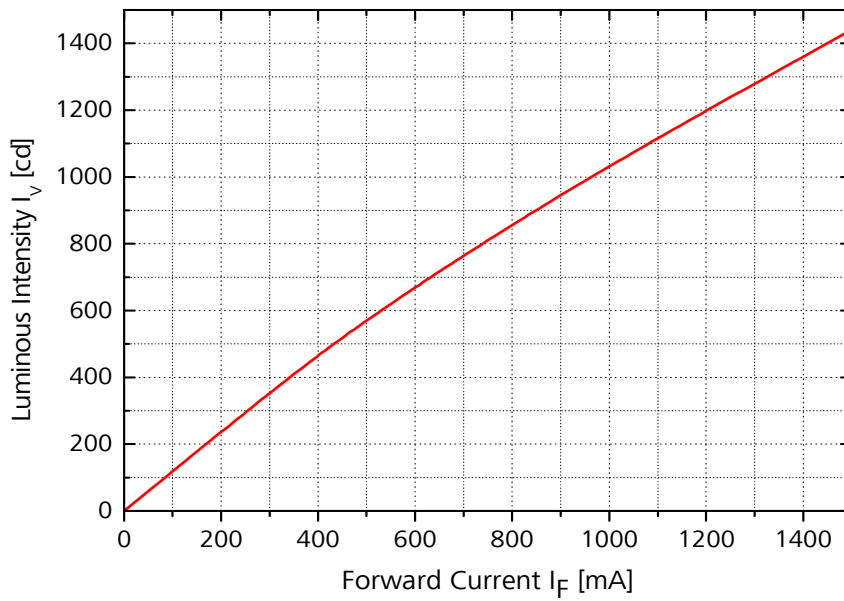
### Safety Advise\*

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 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.

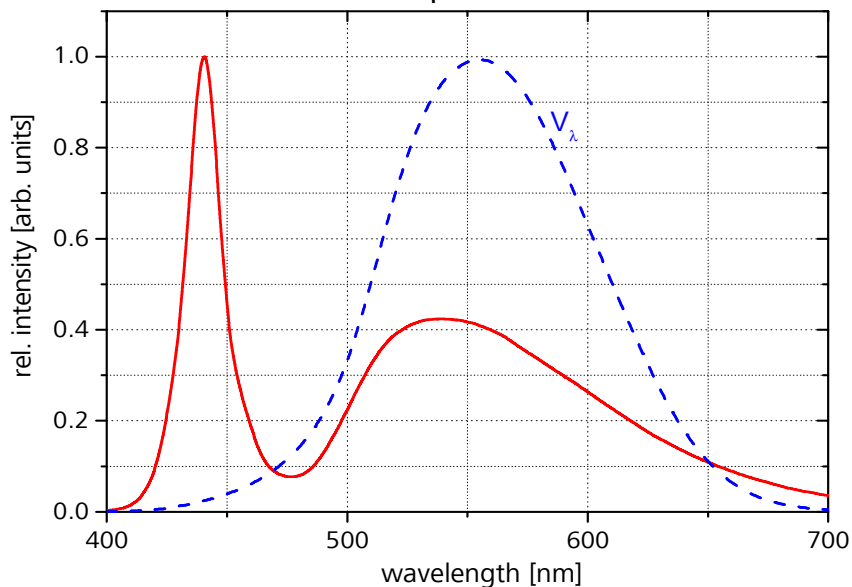
**Luminous Intensity vs. Forward Current**



**Radiation Characteristics**

**Spectral power distribution (typical)**

@  $I_F = 700$  mA



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