

High Intensity LED, Ø 5 mm Tinted Diffused Package



19223

DESCRIPTION

This device has been designed to meet the increasing demand for extremely bright yellow LEDs.

It is housed in a 5 mm tinted diffused plastic package. Despite of the wide viewing angle this device provides a high luminous intensity.

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm
- Product series: standard
- Angle of half intensity: $\pm 30^\circ$

FEATURES

- AllInGaP technology
- Standard T-1 $\frac{3}{4}$ package
- Small mechanical tolerances
- Suitable for DC and high peak current
- Wide viewing angle
- Very high intensity
- Luminous intensity categorized
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



APPLICATIONS

- Status lights
- Off/on indicator
- Lightpipe
- Outdoor display
- Medical instruments
- Maintenance lights
- Legend lights

PARTS TABLE

PART	COLOR	LUMINOUS INTENSITY (mcd)			at I _F (mA)	WAVELENGTH (nm)			at I _F (mA)	FORWARD VOLTAGE (V)			at I _F (mA)	TECHNOLOGY
		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		
TLHF5400	Soft orange	16	160	-	10	598	605	611	10	-	2	2.6	20	AllInGaP on GaAs

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C unless otherwise specified)

TLHF5400

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V _R	5	V
DC forward current	T _{amb} ≤ 65 °C	I _F	30	mA
Surge forward current	t _p ≤ 10 μs	I _{FSM}	0.1	A
Power dissipation	T _{amb} ≤ 65 °C	P _V	80	mW
Junction temperature		T _j	100	°C
Operating temperature range		T _{amb}	- 40 to + 100	°C
Storage temperature range		T _{stg}	- 55 to + 100	°C
Soldering temperature	t ≤ 5 s, 2 mm from body	T _{sd}	260	°C
Thermal resistance junction/ambient		R _{thJA}	350	K/W

OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

TLHF5400, SOFT ORANGE

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	I _F = 10 mA	I _v	16	160	-	mcd
Dominant wavelength	I _F = 10 mA	λ _d	598	605	611	nm
Peak wavelength	I _F = 10 mA	λ _p	-	610	-	nm
Angle of half intensity	I _F = 10 mA	φ	-	± 30	-	deg
Forward voltage	I _F = 20 mA	V _F	-	2	2.6	V
Reverse voltage	I _R = 10 μA	V _R	5	-	-	V
Junction capacitance	V _R = 0 V, f = 1 MHz	C _j	-	15	-	pF

Note

⁽¹⁾ In one packing unit I_{Vmin}/I_{Vmax} ≤ 0.5

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

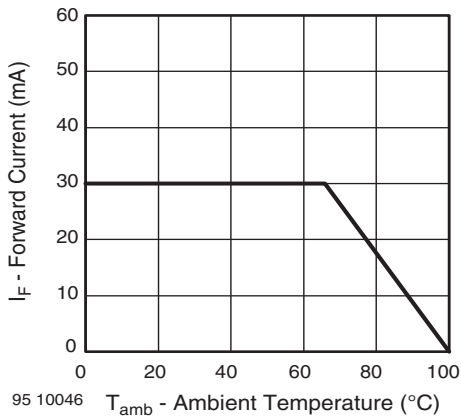


Fig. 1 - Forward Current vs. Ambient Temperature

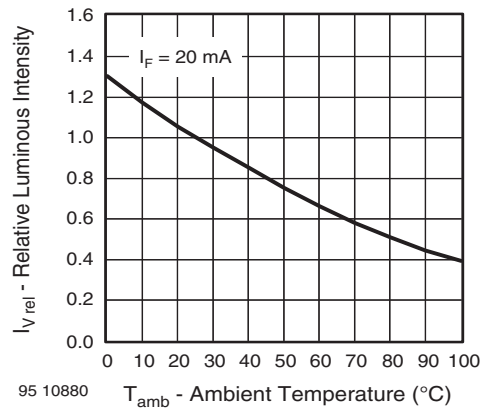


Fig. 4 - Relative Luminous Intensity vs. Ambient Temperature

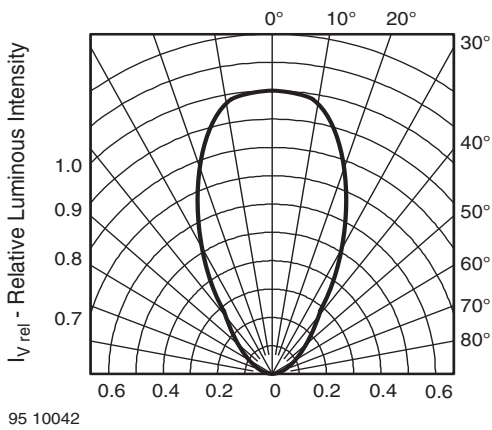


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement

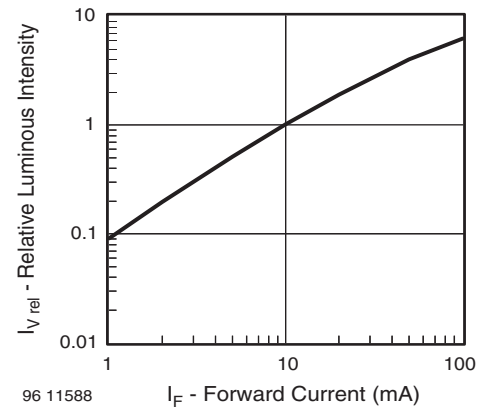


Fig. 5 - Relative Luminous Intensity vs. Forward Current

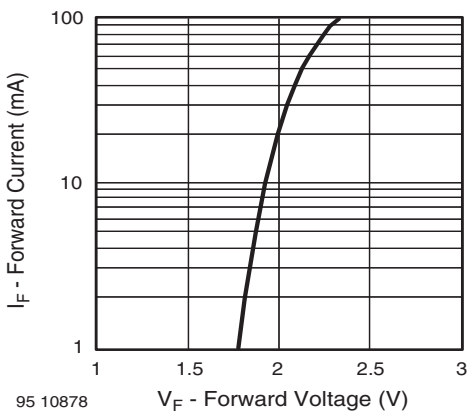


Fig. 3 - Forward Current vs. Forward Voltage

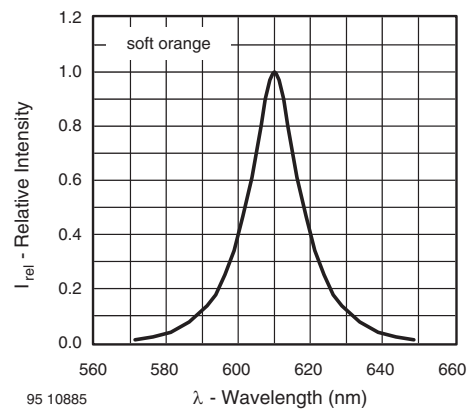
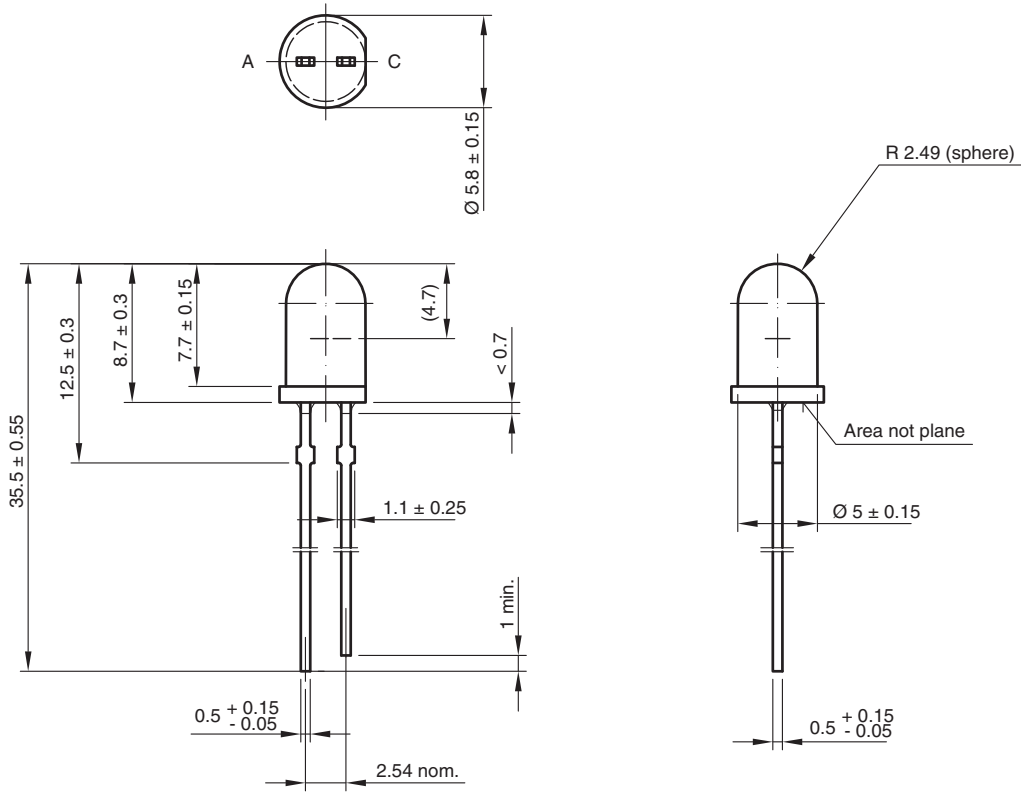


Fig. 6 - Relative Intensity vs. Wavelength



PACKAGE DIMENSIONS in millimeters



6.544-5258.02-4
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95 10916



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