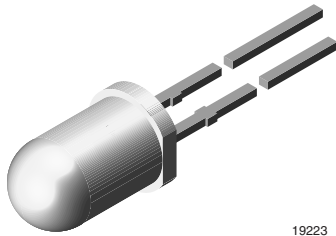


## High Intensity LED, Ø 5 mm Tinted Diffused Package



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

- AllnGaP 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
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### APPLICATIONS

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

### PARTS TABLE

PART	COLOR, LUMINOUS INTENSITY	TECHNOLOGY
TLHF5400	Soft orange, $I_V > 16$ mcd	AllnGaP on GaAs

### ABSOLUTE MAXIMUM RATINGS <sup>1)</sup>, TLHF5400

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		$V_R$	5	V
DC Forward current	$T_{amb} \leq 65^\circ\text{C}$	$I_F$	30	mA
Surge forward current	$t_p \leq 10 \mu\text{s}$	$I_{FSM}$	0.1	A
Power dissipation	$T_{amb} \leq 65^\circ\text{C}$	$P_V$	80	mW
Junction temperature		$T_j$	100	$^\circ\text{C}$
Operating temperature range		$T_{amb}$	- 40 to + 100	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 100	$^\circ\text{C}$
Soldering temperature	$t \leq 5$ s, 2 mm from body	$T_{sd}$	260	$^\circ\text{C}$
Thermal resistance junction/ambient		$R_{thJA}$	350	K/W

Note:

<sup>1)</sup>  $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

OPTICAL AND ELECTRICAL CHARACTERISTICS <sup>1)</sup> , TLHF5400, SOFT ORANGE						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity <sup>2)</sup>	$I_F = 10 \text{ mA}$	$I_V$	16	160		mcd
Dominant wavelength	$I_F = 10 \text{ mA}$	$\lambda_d$	598	605	611	nm
Peak wavelength	$I_F = 10 \text{ mA}$	$\lambda_p$		610		nm
Angle of half intensity	$I_F = 10 \text{ mA}$	$\varphi$		$\pm 30$		deg
Forward voltage	$I_F = 20 \text{ mA}$	$V_F$		2	2.6	V
Reverse voltage	$I_R = 10 \mu\text{A}$	$V_R$	5			V
Junction capacitance	$V_R = 0, f = 1 \text{ MHz}$	$C_j$		15		pF

Note:

<sup>1)</sup>  $T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

<sup>2)</sup> In one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$

## TYPICAL CHARACTERISTICS

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

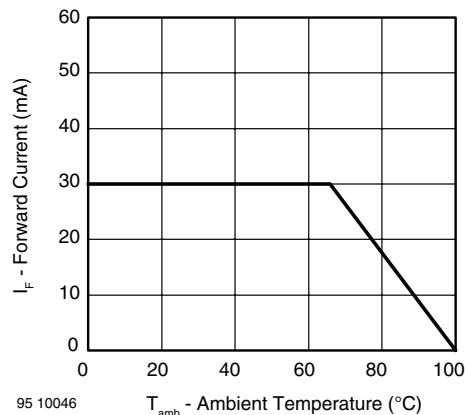


Figure 1. Forward Current vs. Ambient Temperature

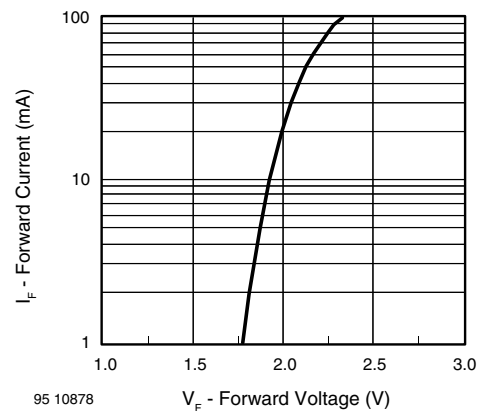


Figure 3. Forward Current vs. Forward Voltage

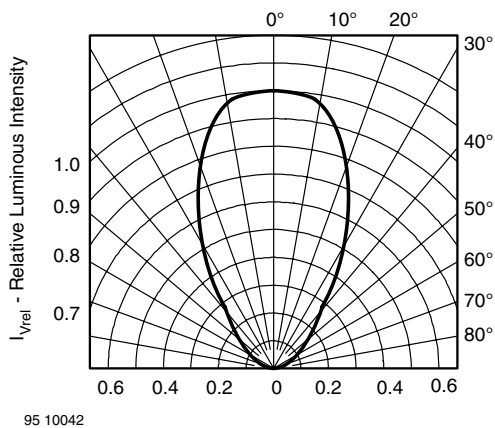


Figure 2. Rel. Luminous Intensity vs. Angular Displacement

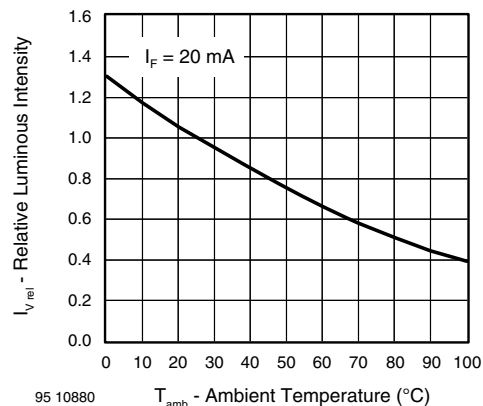


Figure 4. Rel. Luminous Intensity vs. Ambient Temperature

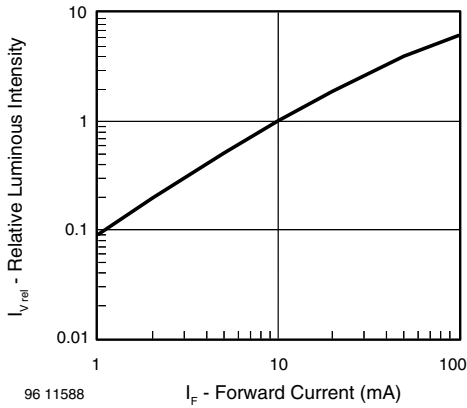


Figure 5. Rel. Luminous Intensity vs. Forward Current

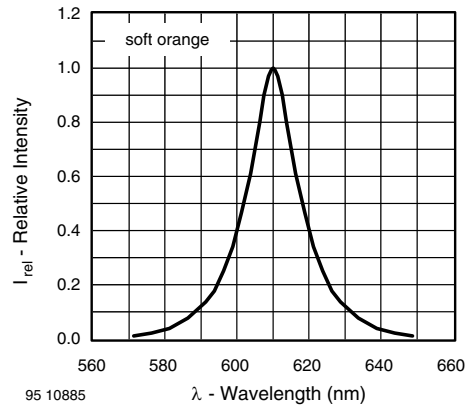
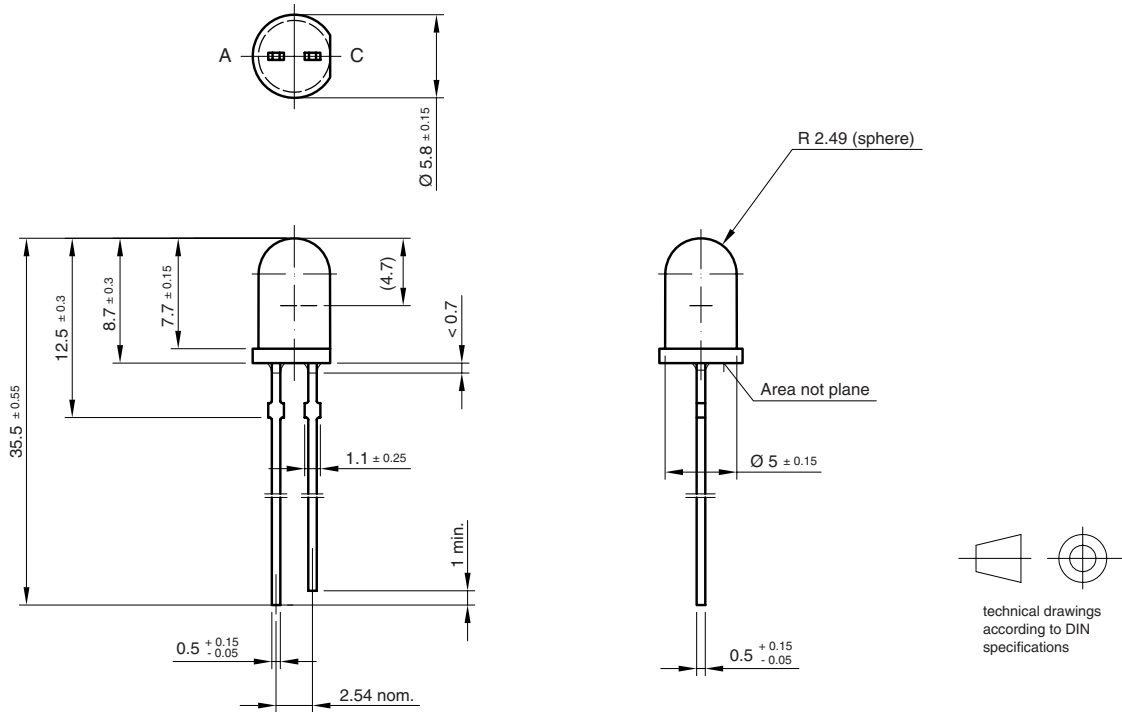


Figure 6. Relative Intensity vs. Wavelength

**PACKAGE DIMENSIONS** in millimeters



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