



Low Current LED in Ø 5 mm Tinted Diffused Package



19223

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
• Package: 5 mm
• Product series: low current
• Angle of half intensity: ± 25°

FEATURES

- Low power consumption
• High brightness
• CMOS/MOS compatible
• Specified at If = 2 mA
• Luminous intensity categorized
• Yellow and green color categorized
• Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT HALOGEN FREE GREEN (5-2008)

APPLICATIONS

- Low power DC circuits

Table with 14 columns: PART, COLOR, LUMINOUS INTENSITY (mcd) [MIN., TYP., MAX.], at If (mA), WAVELENGTH (nm) [MIN., TYP., MAX.], at If (mA), FORWARD VOLTAGE (V) [MIN., TYP., MAX.], at If (mA), TECHNOLOGY. Rows include TLLR5400, TLLR5401, TLLY5400, TLLY5401, TLLG5400, TLLG5400-AS12, and TLLG5401.

Table with 5 columns: PARAMETER, TEST CONDITION, SYMBOL, VALUE, UNIT. Title: ABSOLUTE MAXIMUM RATINGS (Tamb = 25 °C, unless otherwise specified) TLLR540., TLLY540., TLLG540. Rows include Reverse voltage, DC forward current, Surge forward current, Power dissipation, Junction temperature, Operating temperature range, Storage temperature range, Soldering temperature, Thermal resistance junction/ambient.



<b>OPTICAL AND ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
<b>TLLR540., RED</b>							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity <sup>(1)</sup>	$I_F = 2\text{ mA}$	TLLR5400	$I_V$	0.63	1.2	-	mcd
		TLLR5401	$I_V$	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		$\lambda_d$	612	-	625	nm
Peak wavelength	$I_F = 2\text{ mA}$		$\lambda_p$	-	635	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		$\phi$	-	$\pm 25$	-	deg
Forward voltage	$I_F = 2\text{ mA}$		$V_F$	-	1.9	2.4	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		$V_R$	6	20	-	V
Junction capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$		$C_j$	-	50	-	pF

**Note**<sup>(1)</sup> In one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$ 

<b>OPTICAL AND ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
<b>TLLY540., YELLOW</b>							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity <sup>(1)</sup>	$I_F = 2\text{ mA}$	TLLY5400	$I_V$	0.63	1.2	-	mcd
		TLLY5401	$I_V$	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		$\lambda_d$	581	-	594	nm
Peak wavelength	$I_F = 2\text{ mA}$		$\lambda_p$	-	585	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		$\phi$	-	$\pm 25$	-	deg
Forward voltage	$I_F = 2\text{ mA}$		$V_F$	-	2.4	2.9	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		$V_R$	6	20	-	V
Junction capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$		$C_j$	-	50	-	pF

**Note**<sup>(1)</sup> In one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$ 

<b>OPTICAL AND ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
<b>TLLG540., GREEN</b>							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity <sup>(1)</sup>	$I_F = 2\text{ mA}$	TLLG5400	$I_V$	0.63	1.2	-	mcd
		TLLG5401	$I_V$	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		$\lambda_d$	562	-	575	nm
Peak wavelength	$I_F = 2\text{ mA}$		$\lambda_p$	-	565	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		$\phi$	-	$\pm 25$	-	deg
Forward voltage	$I_F = 2\text{ mA}$		$V_F$	-	1.9	2.4	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		$V_R$	6	20	-	V
Junction capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$		$C_j$	-	50	-	pF

**Note**<sup>(1)</sup> In one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$



TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

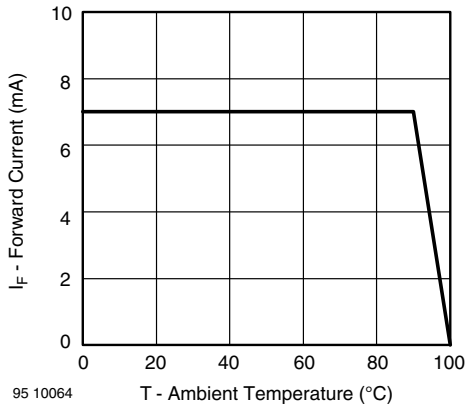


Fig. 1 - Forward Current vs. Ambient Temperature



Fig. 4 - Relative Luminous Intensity vs. Ambient Temperature

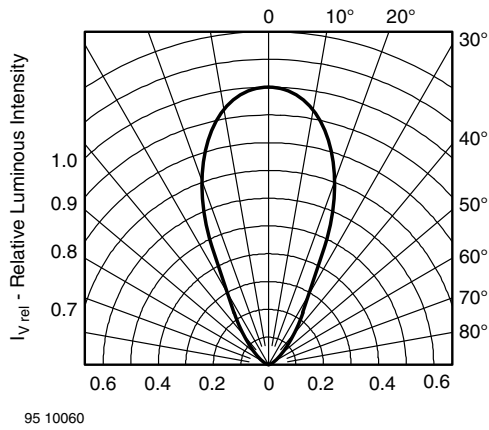


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement



Fig. 5 - Relative Luminous Intensity vs. Forward Current/Duty Cycle

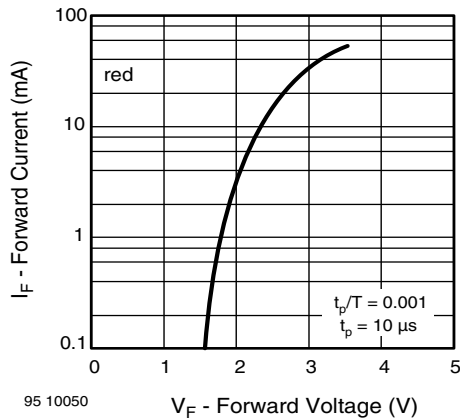


Fig. 3 - Forward Current vs. Forward Voltage



Fig. 6 - Relative Luminous Intensity vs. Forward Current



Fig. 7 - Relative Intensity vs. Wavelength



Fig. 10 - Relative Luminous Intensity vs. Forward Current/Duty Cycle

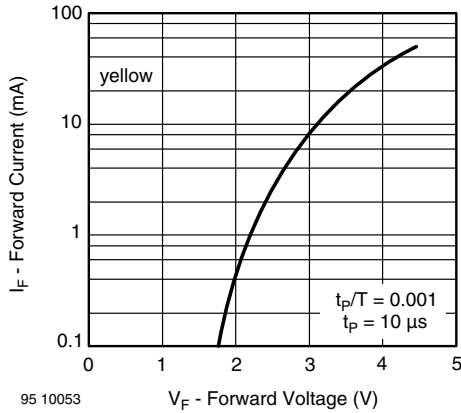


Fig. 8 - Forward Current vs. Forward Voltage

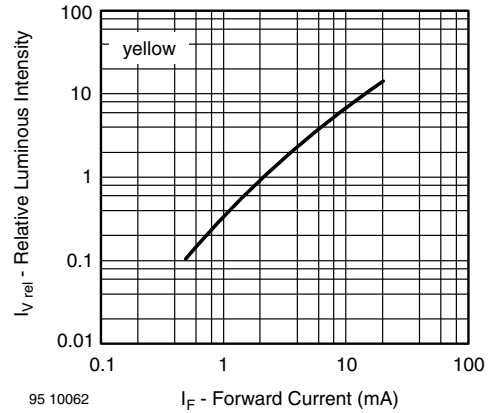


Fig. 11 - Relative Luminous Intensity vs. Forward Current

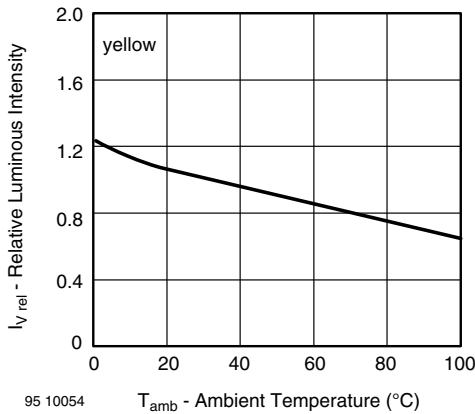


Fig. 9 - Relative Luminous Intensity vs. Ambient Temperature

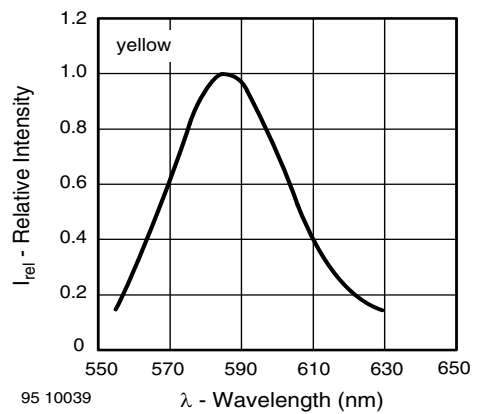


Fig. 12 - Relative Intensity vs. Wavelength



Fig. 13 - Forward Current vs. Forward Voltage

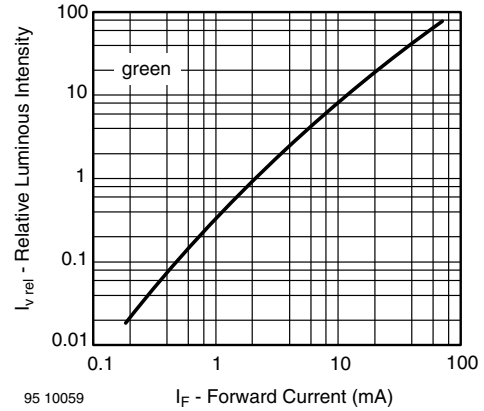


Fig. 16 - Relative Luminous Intensity vs. Forward Current



Fig. 14 - Relative Luminous Intensity vs. Ambient Temperature

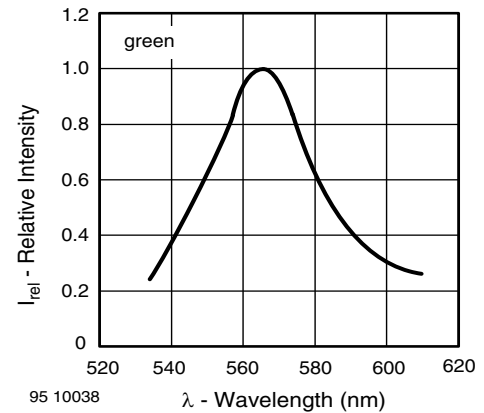


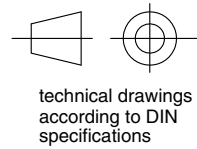
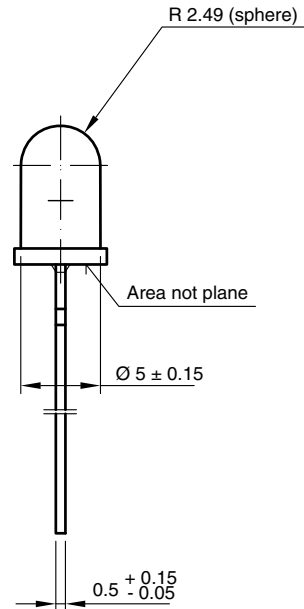
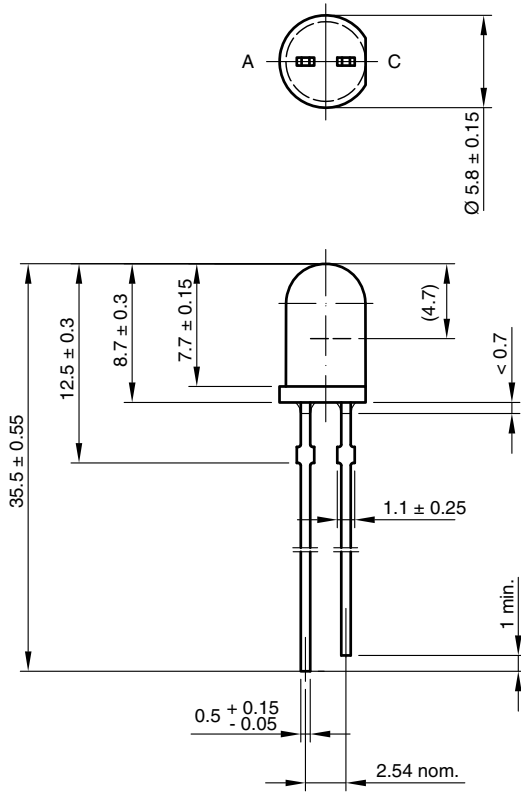
Fig. 17 - Relative Intensity vs. Wavelength



Fig. 15 - Relative Luminous Intensity vs. Forward Current/Duty Cycle



PACKAGE DIMENSIONS in millimeters



6.544-5258.02-4  
 Issue: 7; 23.07.10  
 95 10916

REEL

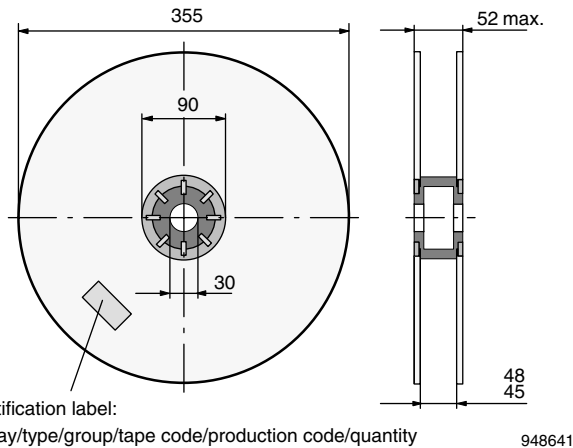


Fig. 18 - Reel Dimensions

TAPE

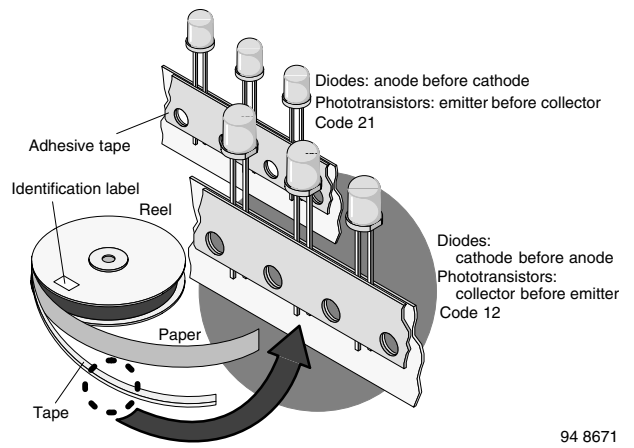


Fig. 19 - LED in Tape

AS12 = cathode leaves tape first



**TAPE DIMENSIONS** in millimeters



Measure limit over 20 index-holes: ± 1

Quantity per:	Reel (Mat.-no. 1764)
	1000

94 8172

Option	Dim. "H" ± 0.5 mm
AS	17.3



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