



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.



OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
TLLR540., RED							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 2\text{ mA}$	TLLR5400	I_V	0.63	1.2	-	mcd
		TLLR5401	I_V	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		λ_d	612	-	625	nm
Peak wavelength	$I_F = 2\text{ mA}$		λ_p	-	635	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		ϕ	-	± 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⁽¹⁾ In one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
TLLY540., YELLOW							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 2\text{ mA}$	TLLY5400	I_V	0.63	1.2	-	mcd
		TLLY5401	I_V	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		λ_d	581	-	594	nm
Peak wavelength	$I_F = 2\text{ mA}$		λ_p	-	585	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		ϕ	-	± 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⁽¹⁾ In one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
TLLG540., GREEN							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 2\text{ mA}$	TLLG5400	I_V	0.63	1.2	-	mcd
		TLLG5401	I_V	1	2	-	mcd
Dominant wavelength	$I_F = 2\text{ mA}$		λ_d	562	-	575	nm
Peak wavelength	$I_F = 2\text{ mA}$		λ_p	-	565	-	nm
Angle of half intensity	$I_F = 2\text{ mA}$		ϕ	-	± 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⁽¹⁾ In one packing unit $I_{Vmin}/I_{Vmax} \leq 0.5$



TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

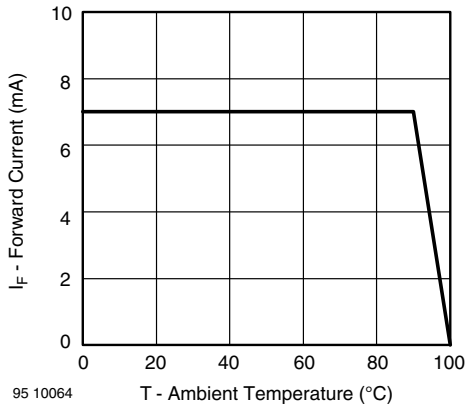


Fig. 1 - Forward Current vs. Ambient Temperature



Fig. 4 - Relative Luminous Intensity vs. Ambient Temperature

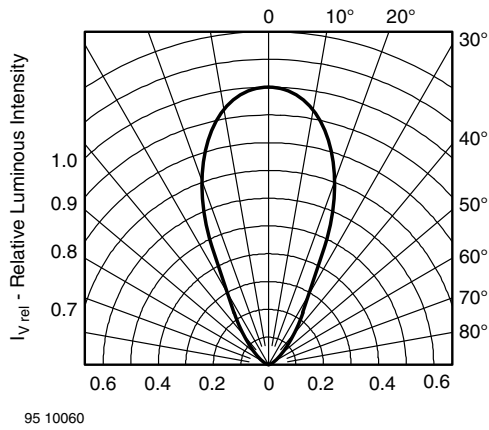


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement



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

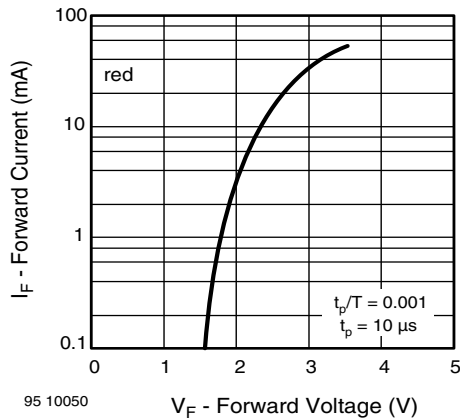


Fig. 3 - Forward Current vs. Forward Voltage



Fig. 6 - Relative Luminous Intensity vs. Forward Current



Fig. 7 - Relative Intensity vs. Wavelength



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

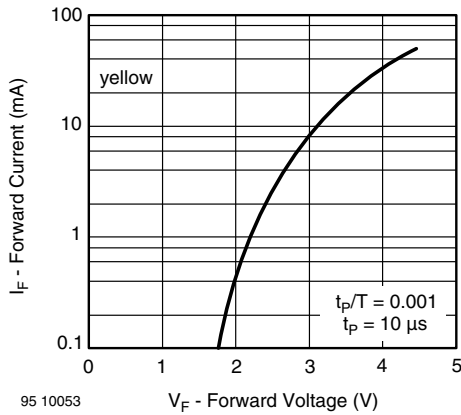


Fig. 8 - Forward Current vs. Forward Voltage



Fig. 11 - Relative Luminous Intensity vs. Forward Current

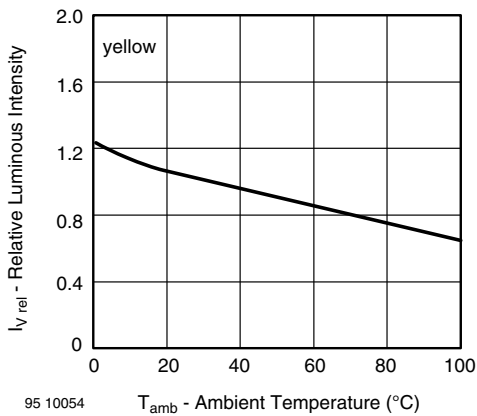


Fig. 9 - Relative Luminous Intensity vs. Ambient Temperature

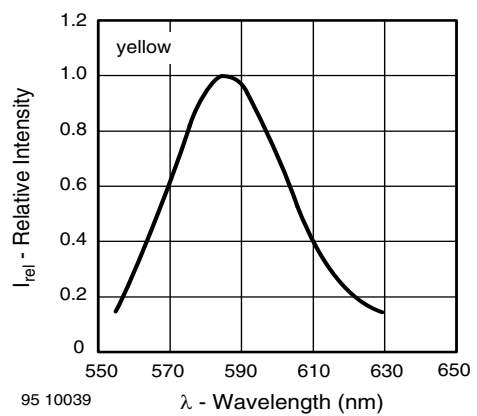


Fig. 12 - Relative Intensity vs. Wavelength



Fig. 13 - Forward Current vs. Forward Voltage

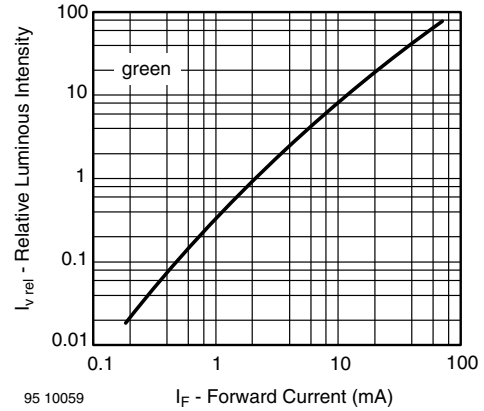


Fig. 16 - Relative Luminous Intensity vs. Forward Current



Fig. 14 - Relative Luminous Intensity vs. Ambient Temperature

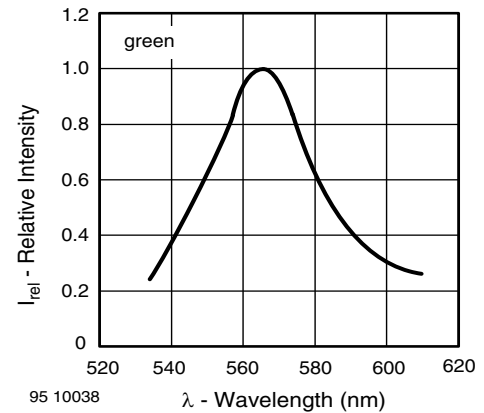


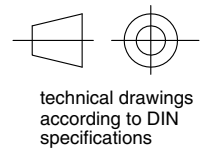
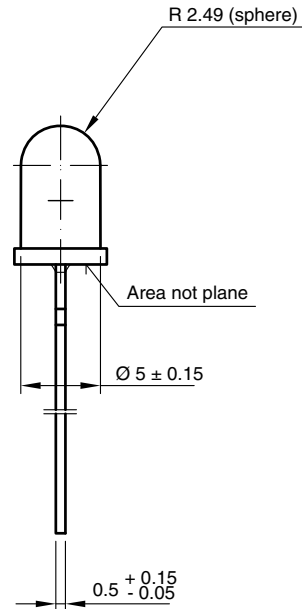
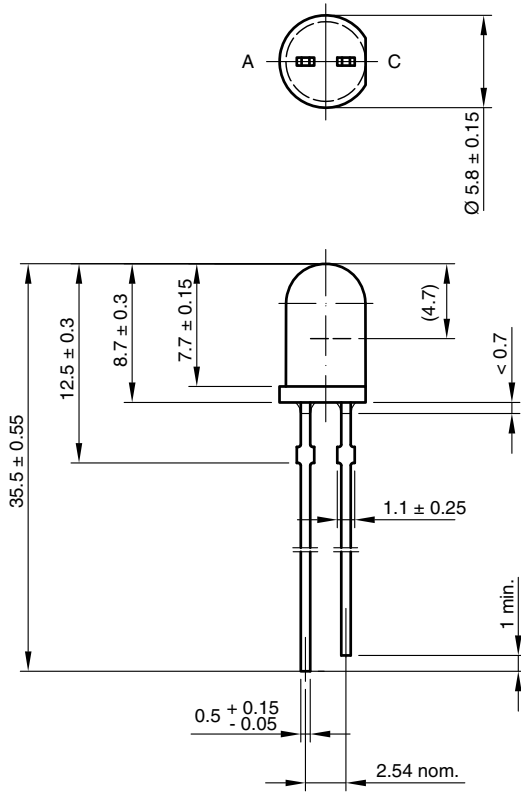
Fig. 17 - Relative Intensity vs. Wavelength



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

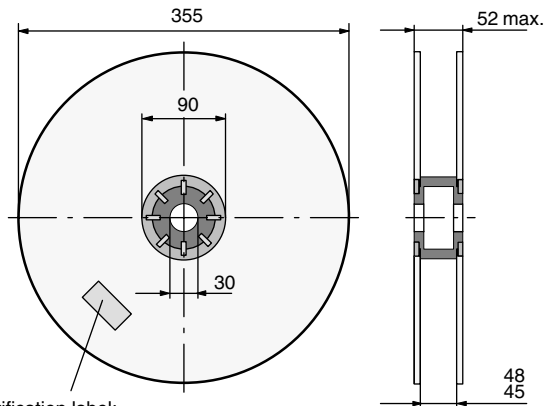


PACKAGE DIMENSIONS in millimeters



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

REEL

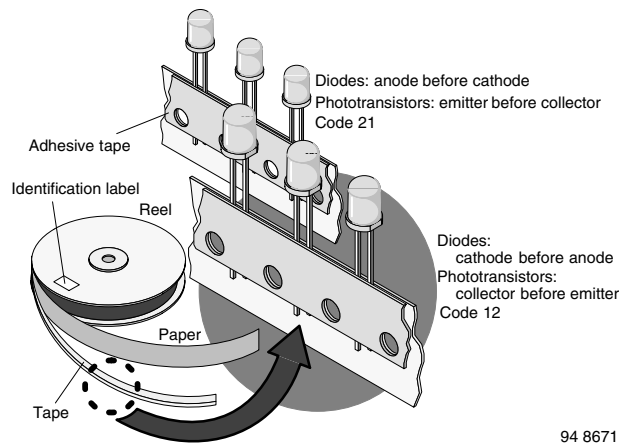


Identification label:
Vishay/type/group/tape code/production code/quantity

948641

Fig. 18 - Reel Dimensions

TAPE



94 8671

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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