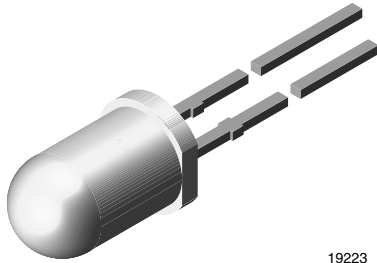


## Universal LED in Ø 5 mm Tinted Diffused Package



19223

### FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard T-1¾ package
- TLUR540. with stand-offs
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### PRODUCT GROUP AND PACKAGE DATA

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

### APPLICATIONS

- General indicating and lighting purposes

### 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.		
TLUR5400	Red	4	15	-	10	-	630	-	10	-	2	3	20	GaAsP on GaAs
TLUR5401	Red	4	15	32	10	-	630	-	10	-	2	3	20	GaAsP on GaAs

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^\circ\text{C}$ unless otherwise specified) TLUR540.

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		$V_R$	6	V
DC forward current		$I_F$	20	mA
Surge forward current	$t_p \leq 10 \mu\text{s}$	$I_{FSM}$	1	A
Power dissipation	$T_{amb} \leq 65^\circ\text{C}$	$P_V$	60	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	$t \leq 5 \text{ s}$ , 2 mm from body	$T_{sd}$	260	$^\circ\text{C}$
Thermal resistance junction to ambient		$R_{thJA}$	500	K/W

**OPTICAL AND ELECTRICAL CHARACTERISTICS** ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)  
**TLUR540., RED**

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ( $I_V$ )	$I_F = 10\text{ mA}$	TLUR5400	$I_V$	4	15		mcd
		TLUR5401	$I_V$	4	15	32	mcd
Dominant wavelength	$I_F = 10\text{ mA}$		$\lambda_d$	-	630	-	nm
Peak wavelength	$I_F = 10\text{ mA}$		$\lambda_p$	-	640	-	nm
Angle of half intensity	$I_F = 10\text{ mA}$		$\phi$	-	$\pm 30$	-	$^{\circ}$
Forward voltage	$I_F = 20\text{ mA}$		$V_F$	-	2	3	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		$V_R$	6	15	-	V
Junction capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$		$C_j$	-	50	-	pF

**Note**

(1) In one packing unit  $I_{Vmin.}/I_{Vmax.} \leq 0.5$

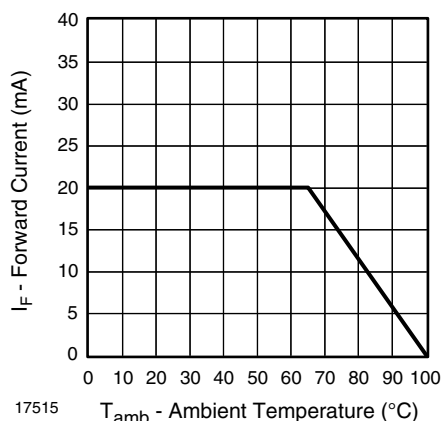
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Forward Current vs. Ambient Temperature

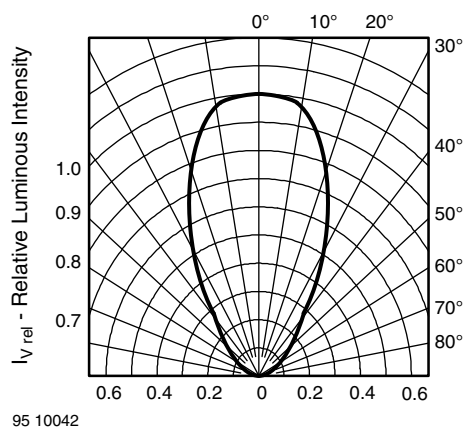


Fig. 3 - Relative Luminous Intensity vs. Angular Displacement

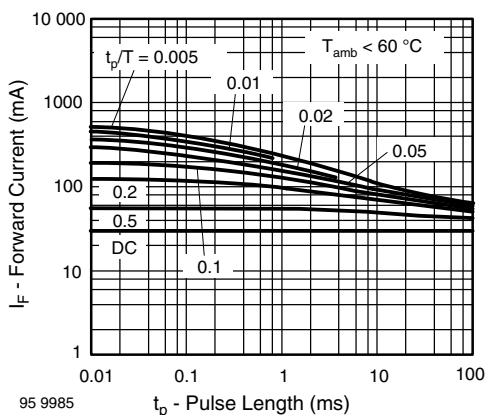


Fig. 2 - Pulse Forward Current vs. Pulse Duration

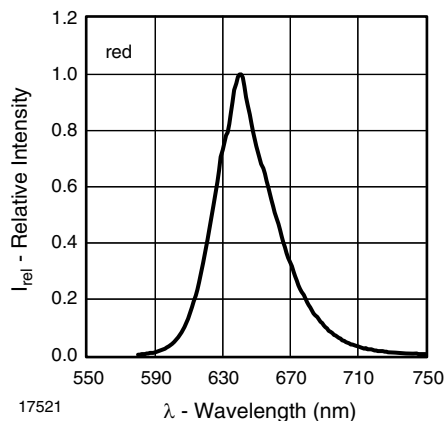


Fig. 4 - Relative Intensity vs. Wavelength

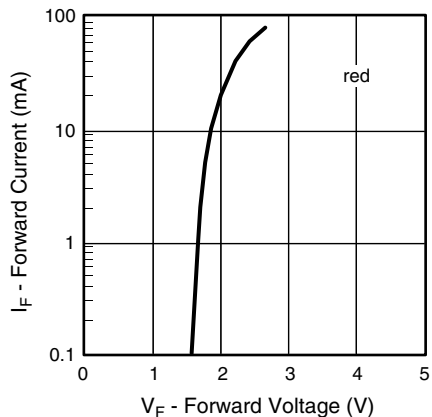


Fig. 5 - Forward Current vs. Forward Voltage

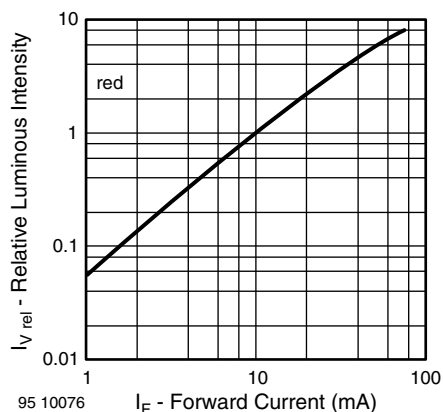


Fig. 6 - Relative Luminous Intensity vs. Forward Current

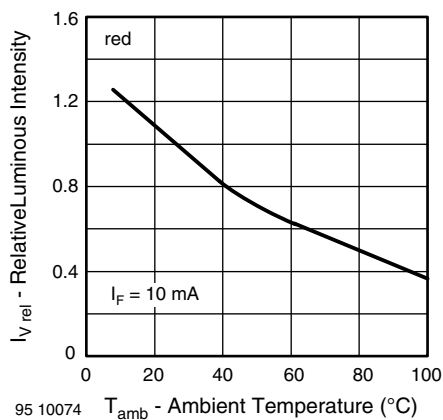
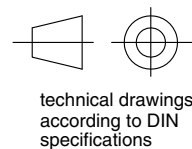
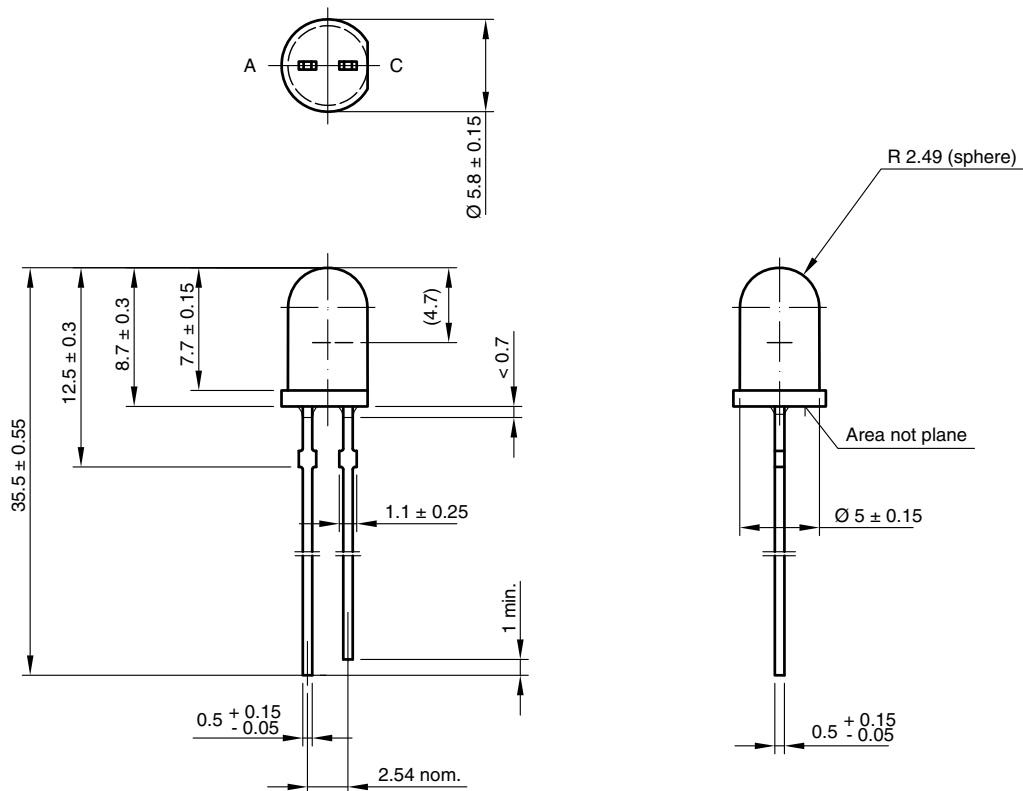


Fig. 7 - Relative Luminous Intensity vs. Ambient Temperature



**PACKAGE DIMENSIONS** in millimeters



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

**PACKING INFORMATION**

PART	BULK	TAPE AND REEL	AMMOPACK
TLUR540x	4000	-	-



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