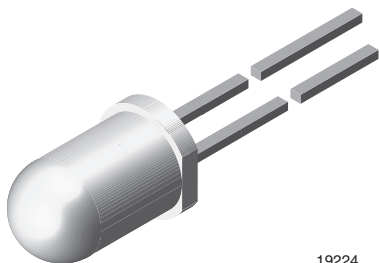


# Universal LED in Ø 5 mm Tinted Diffused Package



19224

## FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard T-1 1/4 package
- TLUR640. without 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.		
TLUR6400	Red	4	15	-	10	-	630	-	10	-	2	3	20	GaAsP on GaAs
TLUR6401	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)

### TLUR6401

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/ambient		$R_{thJA}$	500	K/W

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

### TLUR640., RED

PARAMETER	TEST CONDITION	PART	MIN.	TYP.	MAX.	UNIT	MIN.
Luminous intensity <sup>(1)</sup>	$I_F = 10 \text{ mA}$	TLUR6400	$I_V$	4	15	-	mcd
		TLUR6401	$I_V$	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	$I_F = 10 \text{ mA}$		$\phi$	-	$\pm 30$	-	deg
Forward voltage	$I_F = 20 \text{ mA}$		$V_F$	-	2	3	V
Reverse voltage	$I_R = 10 \mu\text{A}$		$V_R$	6	15	-	V
Junction capacitance	$V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$		$C_j$	-	50	-	pF

### Note

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

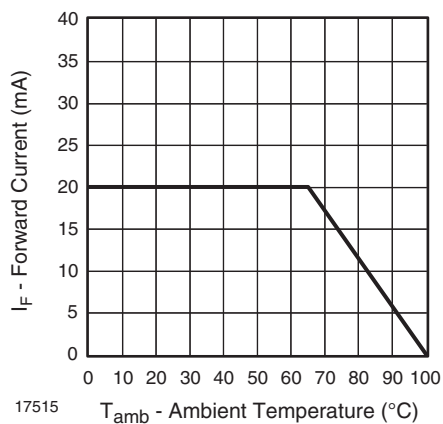
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


Fig. 1 - Forward Current vs. Ambient Temperature

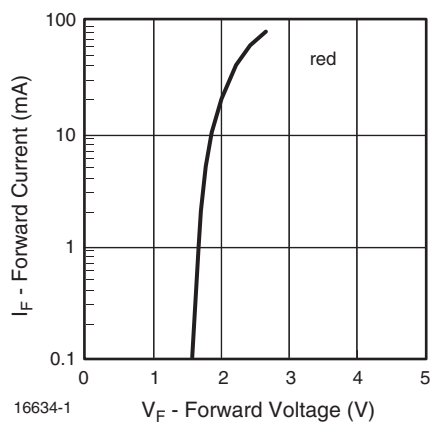


Fig. 4 - Forward Current vs. Forward Voltage

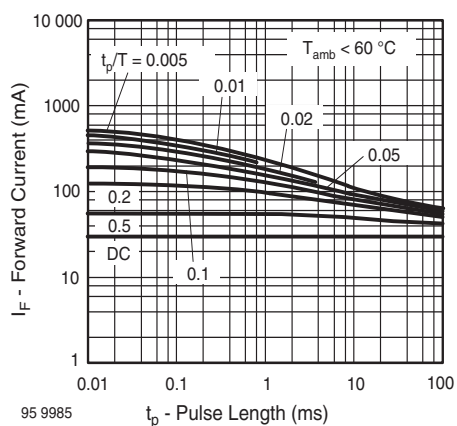


Fig. 2 - Pulse Forward Current vs. Pulse Duration

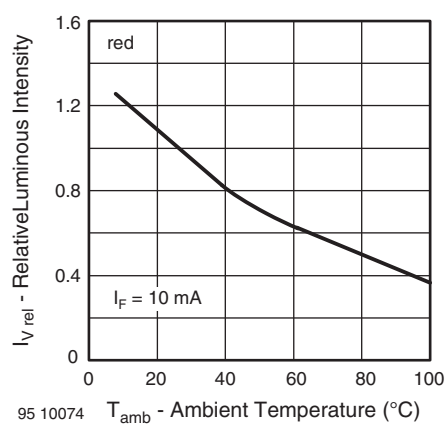


Fig. 5 - Relative Luminous Intensity vs. Ambient Temperature

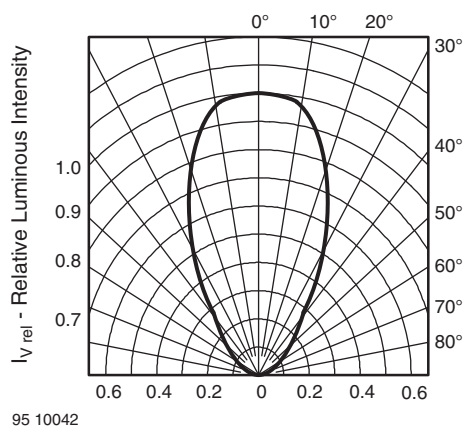


Fig. 3 - Relative Luminous Intensity vs. Angular Displacement

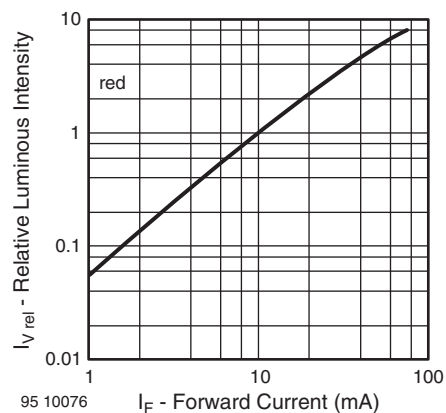


Fig. 6 - Relative Luminous Intensity vs. Forward Current

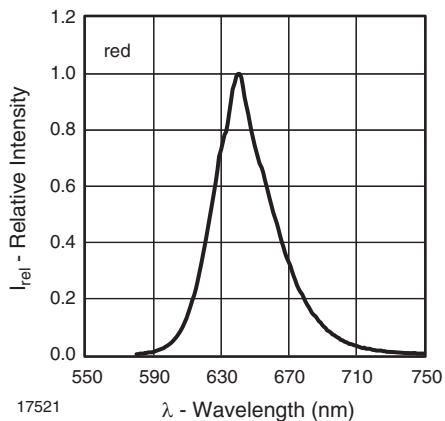
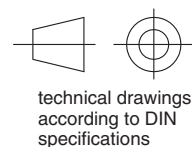
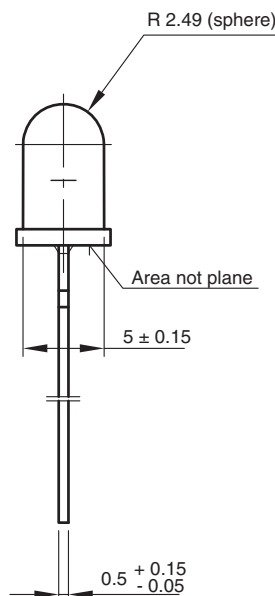
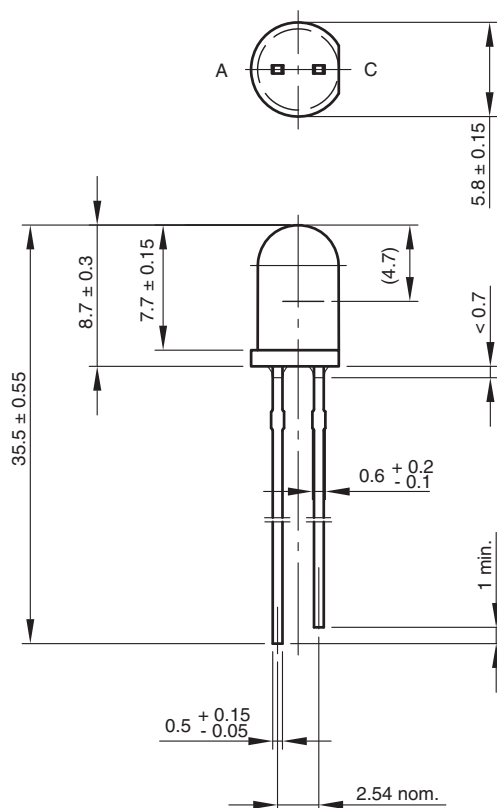


Fig. 7 - Relative Intensity vs. Wavelength

**PACKAGE DIMENSIONS** in millimeters


6.544-5259.02-4  
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95 10917



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