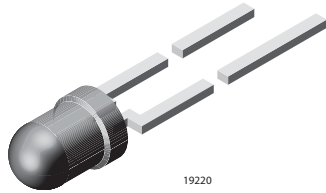


## Universal LED in Ø 3 mm Tinted Diffused Package



### PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 3 mm
- Product series: standard
- Angle of half intensity:  $\pm 30^\circ$

### FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard Ø 3 mm (T-1) package
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- ESD-withstand voltage: up to 2 kV according to JESD22-A114-B



### APPLICATIONS

- General indicating and lighting purposes

### PARTS TABLE

PART	COLOR, LUMINOUS INTENSITY	TECHNOLOGY
TLUR44K1L2	Red, $I_V$ (7.1 to 18) mcd	GaAsP on GaP

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified) TLUR44K1L2

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage <sup>1)</sup>		$V_R$	6	V
DC forward current		$I_F$	20	mA
Surge forward current	$t_p \leq 10 \mu\text{s}$	$I_{FSM}$	0.5	A
Power dissipation		$P_V$	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

Note:

<sup>1)</sup> Driving the LED in reverse direction is suitable for a short term application

### OPTICAL AND ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified) TLUR44K1L2, RED

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity	$I_F = 10 \text{ mA}$	TLUR44K1L2	$I_V$	7.1		18	mcd
Dominant wavelength	$I_F = 10 \text{ mA}$		$\lambda_d$	624	630	636	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	$I_F = 10 \text{ mA}$		$V_F$		1.9	2.6	V
Reverse voltage	$I_R = 10 \mu\text{A}$		$V_R$	6	15		V
Junction capacitance	$V_R = 0$ , $f = 1 \text{ MHz}$		$C_j$		50		pF

\*\* Please see document "Vishay Material Category Policy": [www.vishay.com/doc?99902](http://www.vishay.com/doc?99902)

LUMINOUS INTENSITY CLASSIFICATION		
GROUP	LIGHT INTENSITY (mcd)	
STANDARD	MIN.	MAX.
K1	7.10	9.00
K2	9.00	11.20
L1	11.20	14.00
L2	14.00	18.00

**Note:**

Luminous intensity is tested at a current pulse duration of 25 ms and an accuracy of  $\pm 11\%$ .

The above type numbers represent the order groups which include only a few brightness groups. Only one group will be shipped on each reel (there will be no mixing of two groups on each reel).

In order to ensure availability, single brightness groups will not be orderable.

In a similar manner for colors where wavelength groups are measured and binned, single wavelength groups will be shipped on any one reel.

In order to ensure availability, single wavelength groups will not be orderable.

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

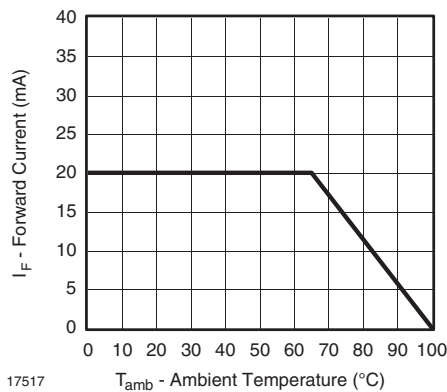


Figure 1. Forward Current vs. Ambient Temperature

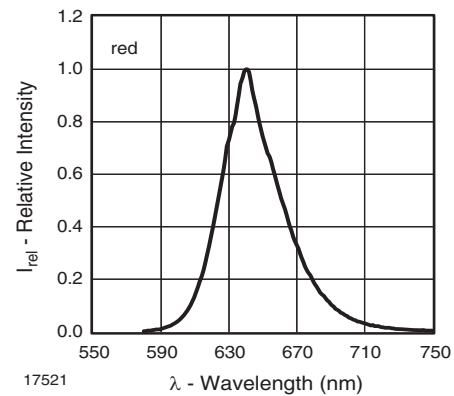


Figure 3. Relative Intensity vs. Wavelength

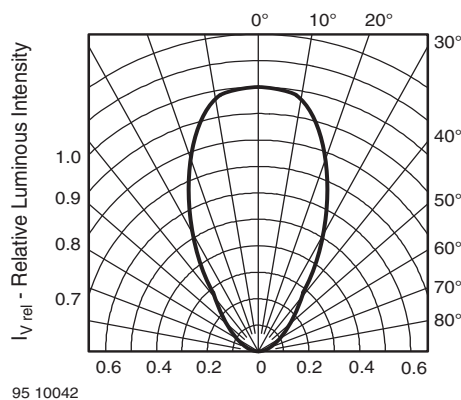


Figure 2. Rel. Luminous Intensity vs. Angular Displacement

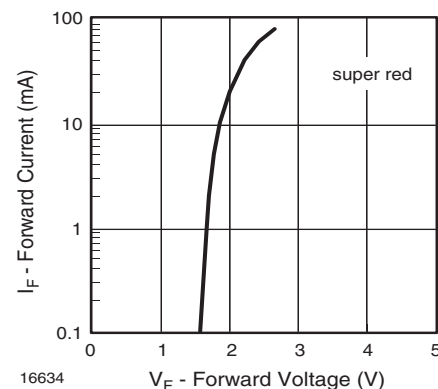


Figure 4. Forward Current vs. Forward Voltage

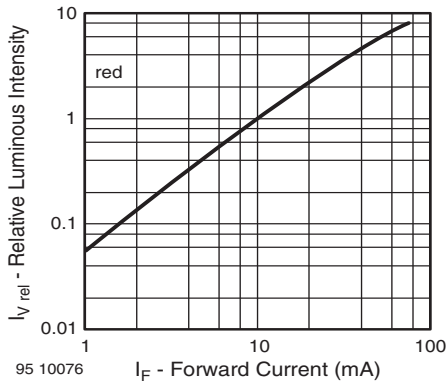


Figure 5. Relative Luminous Intensity vs. Forward Current

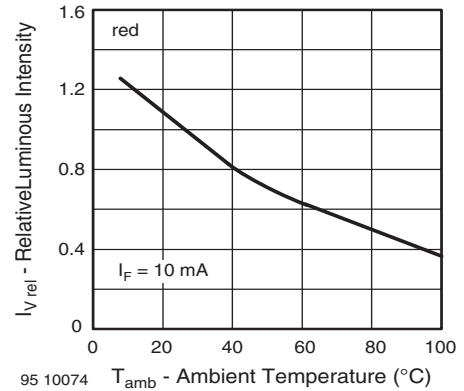
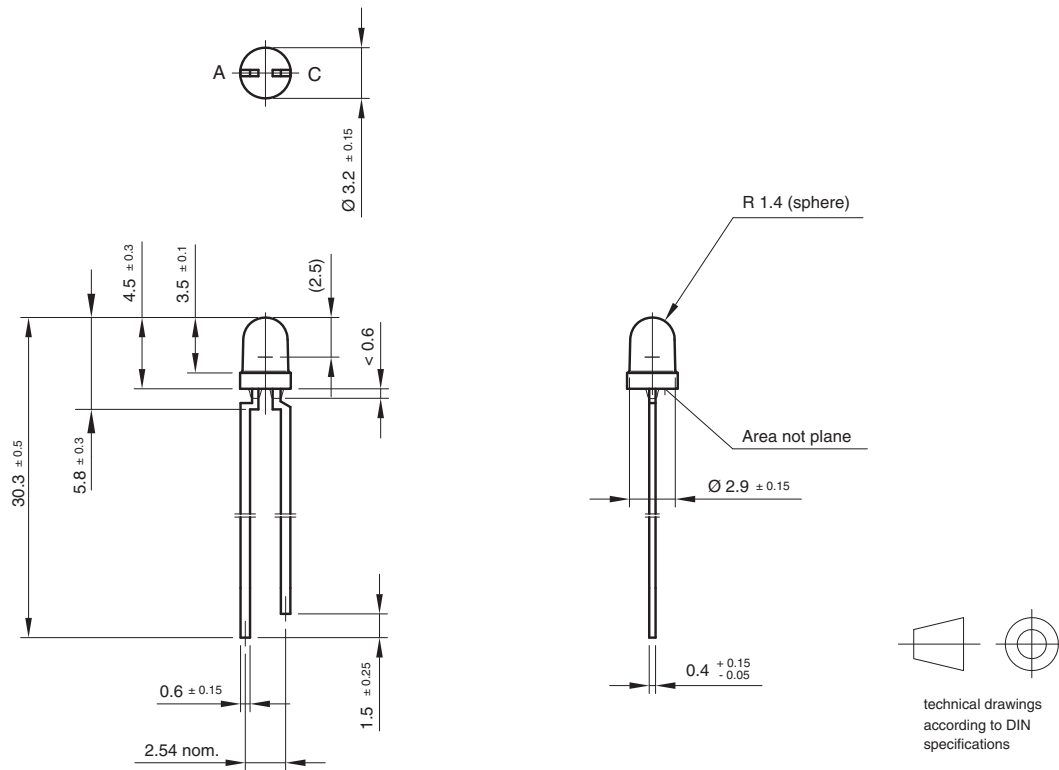


Figure 6. Rel. Luminous Intensity vs. Ambient Temperature

### PACKAGE DIMENSIONS in millimeters



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