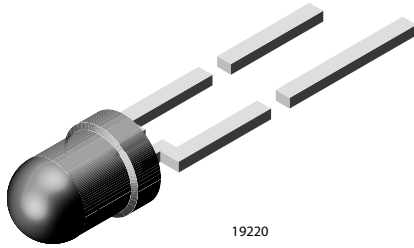




# Universal LED in Ø 3 mm Tinted Diffused Package



## FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard Ø 3 mm (T-1) package
- ESD-withstand voltage: up to 2 kV according to JESD22-A114-B
- 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: 3 mm
- Product series: standard
- Angle of half intensity: ± 30°

## APPLICATIONS

- General indicating and lighting purposes

PARTS TABLE														
PART	COLOR	LUMINOUS INTENSITY (mcd)			at I <sub>F</sub> (mA)	WAVELENGTH (nm)			at I <sub>F</sub> (mA)	FORWARD VOLTAGE (V)			at I <sub>F</sub> (mA)	TECHNOLOGY
		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		MIN.	TYP.	MAX.		
TLUR44K1L2	Red	7.1	-	18	10	624	630	636	10	-	1.9	2.6	10	GaAsP on GaP

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
TLUR44K1L2				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage <sup>(1)</sup>		V <sub>R</sub>	6	V
DC forward current		I <sub>F</sub>	20	mA
Surge forward current	t <sub>p</sub> ≤ 10 μs	I <sub>FSM</sub>	0.5	A
Power dissipation		P <sub>V</sub>	60	mW
Junction temperature		T <sub>j</sub>	100	°C
Operating temperature range		T <sub>amb</sub>	-40 to +100	°C
Storage temperature range		T <sub>stg</sub>	-55 to +100	°C
Soldering temperature	t ≤ 5 s, 2 mm from body	T <sub>sd</sub>	260	°C
Thermal resistance junction/ambient		R <sub>thJA</sub>	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 <sub>amb</sub> = 25 °C, unless otherwise specified)							
TLUR44K1L2, RED							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity	I <sub>F</sub> = 10 mA	TLUR44K1L2	I <sub>v</sub>	7.1	-	18	mcd
Dominant wavelength	I <sub>F</sub> = 10 mA		λ <sub>d</sub>	624	630	636	nm
Peak wavelength	I <sub>F</sub> = 10 mA		λ <sub>p</sub>	-	640	-	nm
Angle of half intensity	I <sub>F</sub> = 10 mA		φ	-	± 30	-	deg
Forward voltage	I <sub>F</sub> = 10 mA		V <sub>F</sub>	-	1.9	2.6	V
Reverse voltage	I <sub>R</sub> = 10 μA		V <sub>R</sub>	6	15	-	V
Junction capacitance	V <sub>R</sub> = 0 V, f = 1 MHz		C <sub>j</sub>	-	50	-	pF

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)

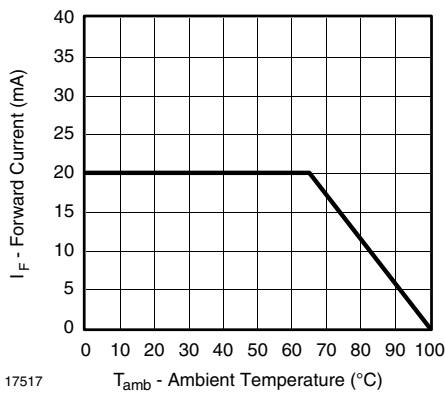


Fig. 1 - Forward Current vs. Ambient Temperature

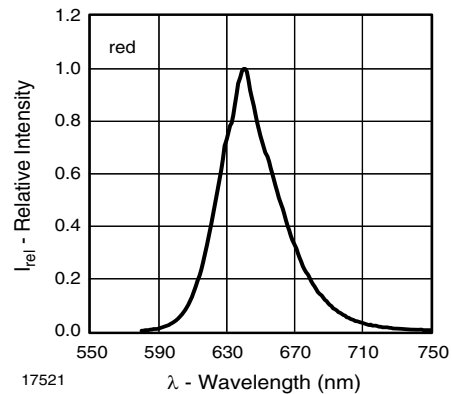


Fig. 3 - Relative Intensity vs. Wavelength

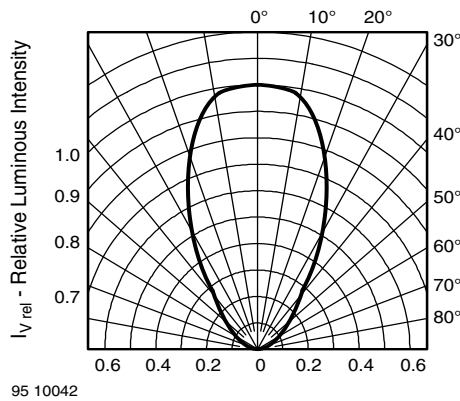


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement

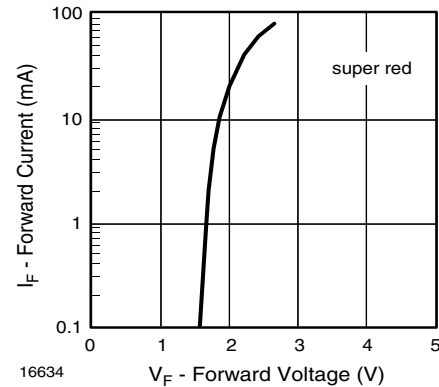


Fig. 4 - Forward Current vs. Forward Voltage

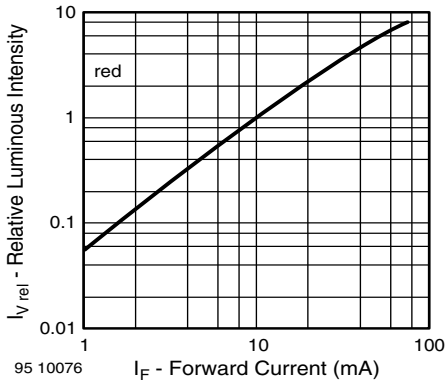


Fig. 5 - Relative Luminous Intensity vs. Forward Current

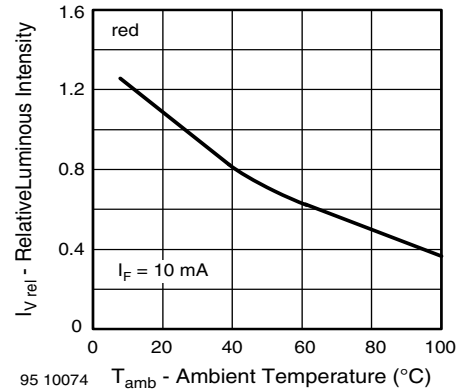
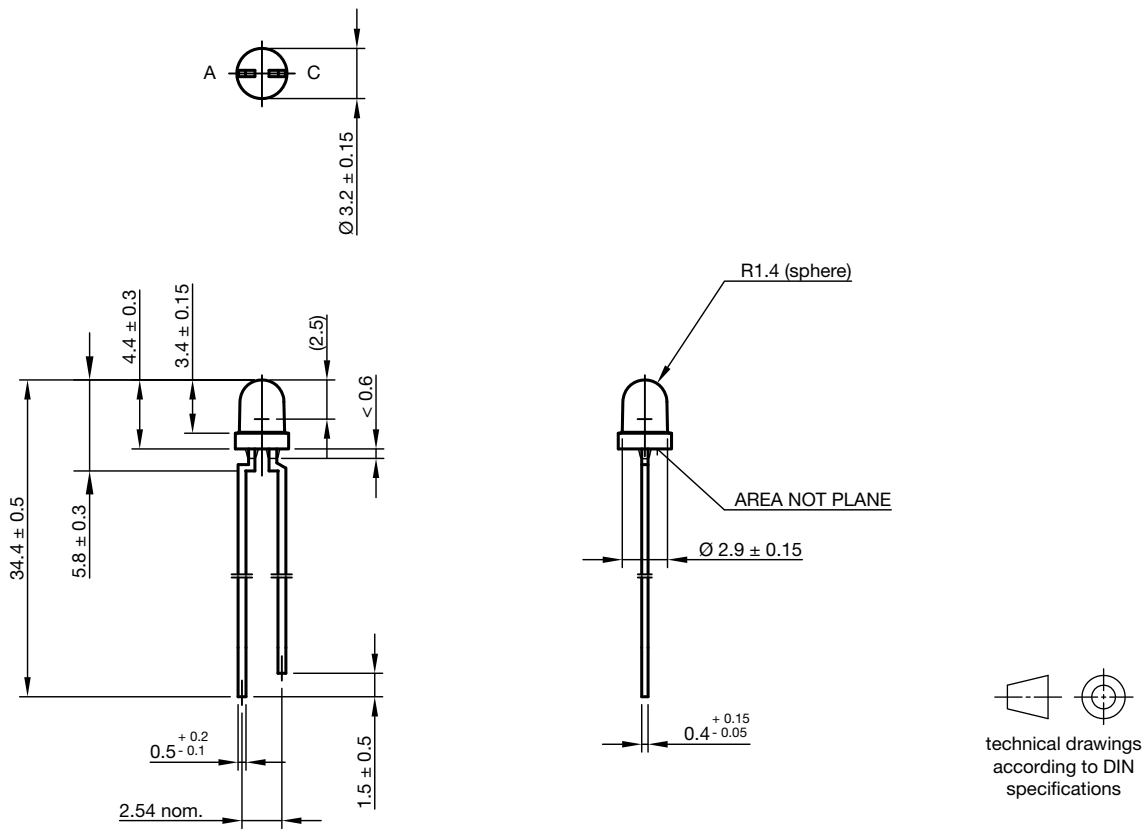


Fig. 6 - Relative Luminous Intensity vs. Ambient Temperature

**PACKAGE DIMENSIONS** in millimeters



technical drawings according to DIN specifications

Drawing-No.: 6.544-5255.01-4  
Issue: 9; 28.07.14



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