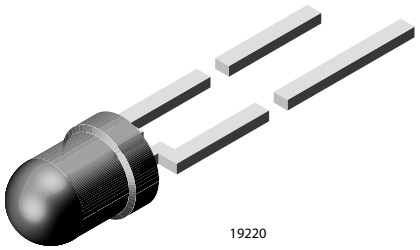
Universal LED in Ø 3 mm Tinted Diffused Package



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

Pb-free

e3

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_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.		
TLUR44K1L2	Red	7.1	-	18	10	624	630	636	10	-	1.9	2.6	10	GaAsP on GaP

ABSOLUTE MAXIMUM RATINGS (Tamb = 25 °C, unless otherwise specified)
TLUR44K1L2

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage[1]		V_R	6	V
DC forward current		I_F	20	mA
Surge forward current	$t_p \leq 10$ µs	I_{FSM}	0.5	A
Power dissipation		P_V	60	mW
Junction temperature		T_j	100	°C
Operating temperature range		T_{amb}	-40 to +100	°C
Storage temperature range		T_{stg}	-55 to +100	°C
Soldering temperature	t ≤ 5 s, 2 mm from body	T_{sd}	260	°C
Thermal resistance junction/ambient		R_{thJA}	500	K/W

Note

(1) Driving the LED in reverse direction is suitable for a short term application

OPTICAL AND ELECTRICAL CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified)
TLUR44K1L2, RED

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity	I_F = 10 mA	TLUR44K1L2	I_V	7.1	-	18	mcd
Dominant wavelength	I_F = 10 mA		λ_d	624	630	636	nm
Peak wavelength	I_F = 10 mA		λ_p	-	640	-	nm
Angle of half intensity	I_F = 10 mA		φ	-	± 30	-	deg
Forward voltage	I_F = 10 mA		V_F	-	1.9	2.6	V
Reverse voltage	I_R = 10 µA		V_R	6	15	-	V
Junction capacitance	V_R = 0 V, f = 1 MHz		C_j	-	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 ± 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 °C, unless otherwise specified)

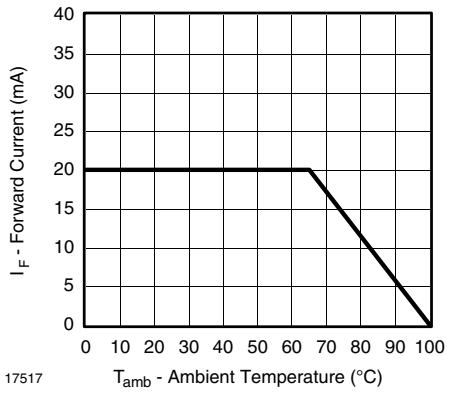


Fig. 1 - Forward Current vs. Ambient Temperature

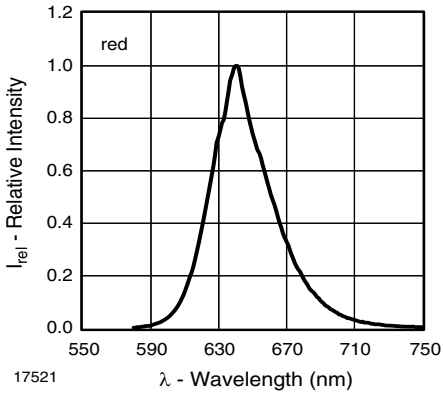


Fig. 3 - Relative Intensity vs. Wavelength

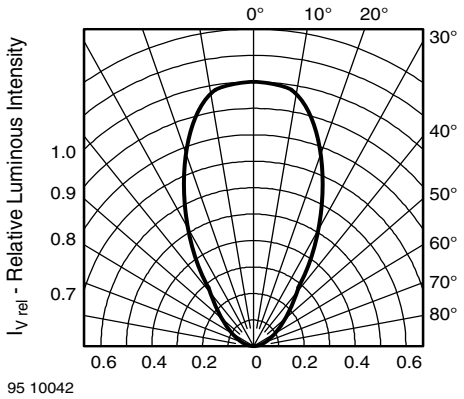


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement

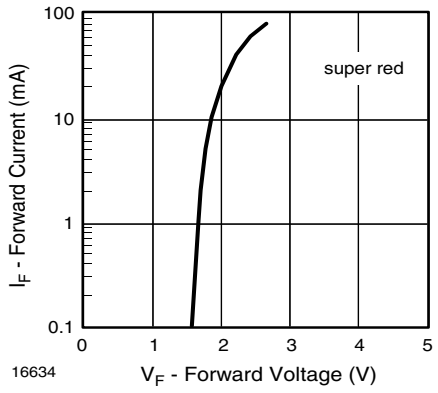


Fig. 4 - Forward Current vs. Forward Voltage

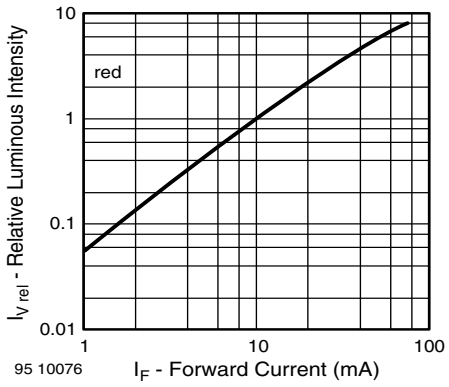


Fig. 5 - Relative Luminous Intensity vs. Forward Current

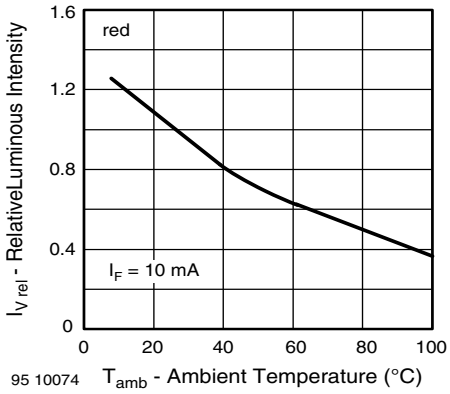
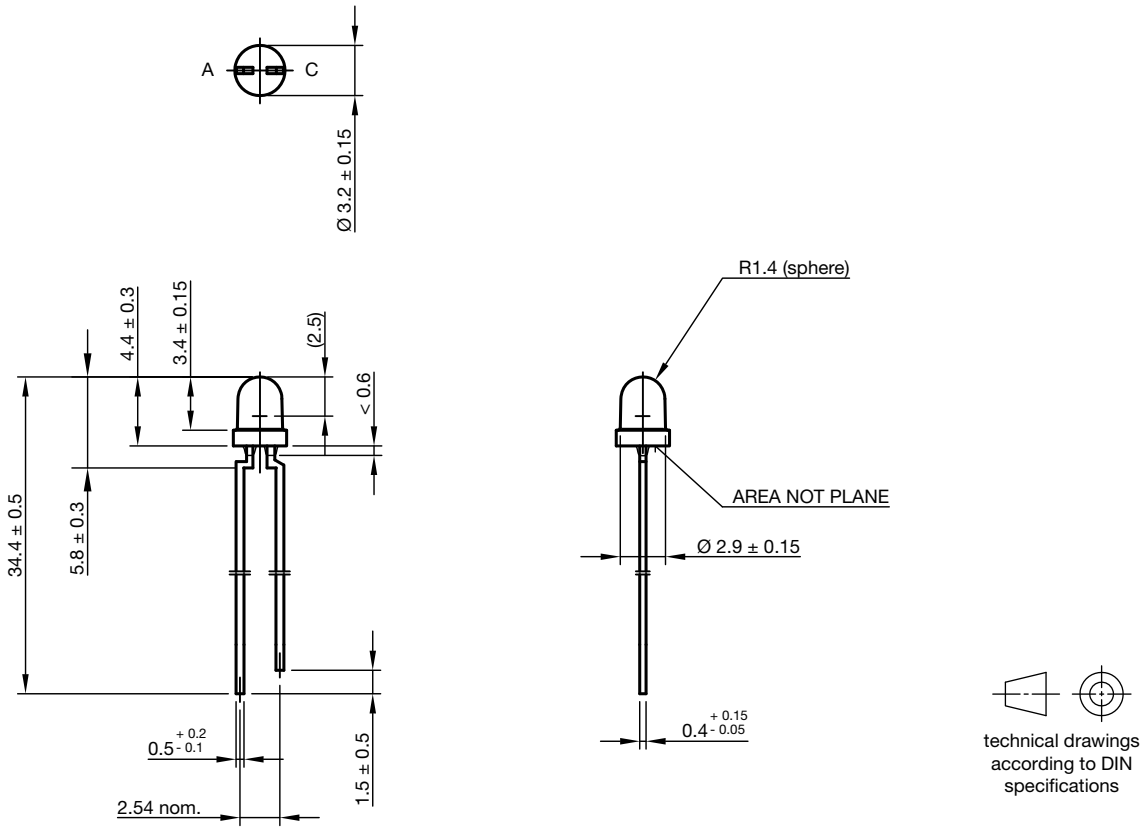


Fig. 6 - Relative Luminous Intensity vs. Ambient Temperature

PACKAGE DIMENSIONS in millimeters



Drawing-No.: 6.544-5255.01-4
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