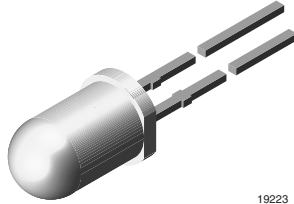


## Universal LED in $\varnothing$ 5 mm Tinted Diffused Package



19223

### FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard  $\varnothing$  5 mm (T-1 $\frac{3}{4}$ ) package
- TLUR54.. with stand-offs
- Lead (Pb)-free device

### 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	TECHNOLOGY
TLUR5400	Red, $I_V > 4$ mcd	GaAsP on GaAs
TLUR5401	Red, $I_V = (4 \text{ to } 32)$ mcd	GaAsP on GaAs

### ABSOLUTE MAXIMUM RATINGS<sup>1)</sup> TLUR54..

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	$t \leq 5$ s, 2 mm from body	$T_{sd}$	260	$^\circ\text{C}$
Thermal resistance junction/ambient		$R_{thJA}$	500	K/W

Note:

<sup>1)</sup>  $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

### OPTICAL AND ELECTRICAL CHARACTERISTICS<sup>1)</sup> TLUR54.., RED

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

Note:

<sup>1)</sup>  $T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

<sup>2)</sup> in one packing unit  $I_{Vmin}/I_{Vmax} \leq 0.5$

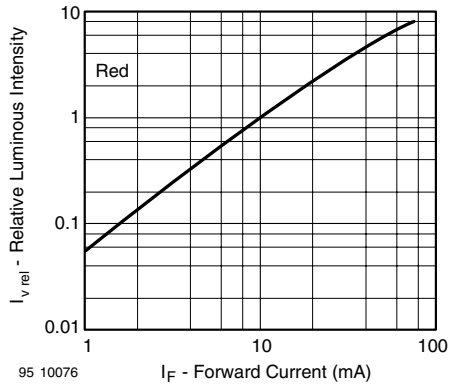


Figure 7. Relative Luminous Intensity vs. Forward Current

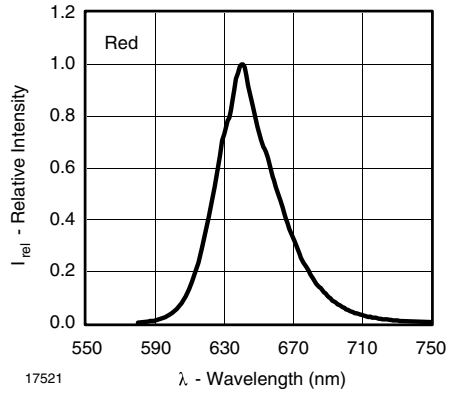
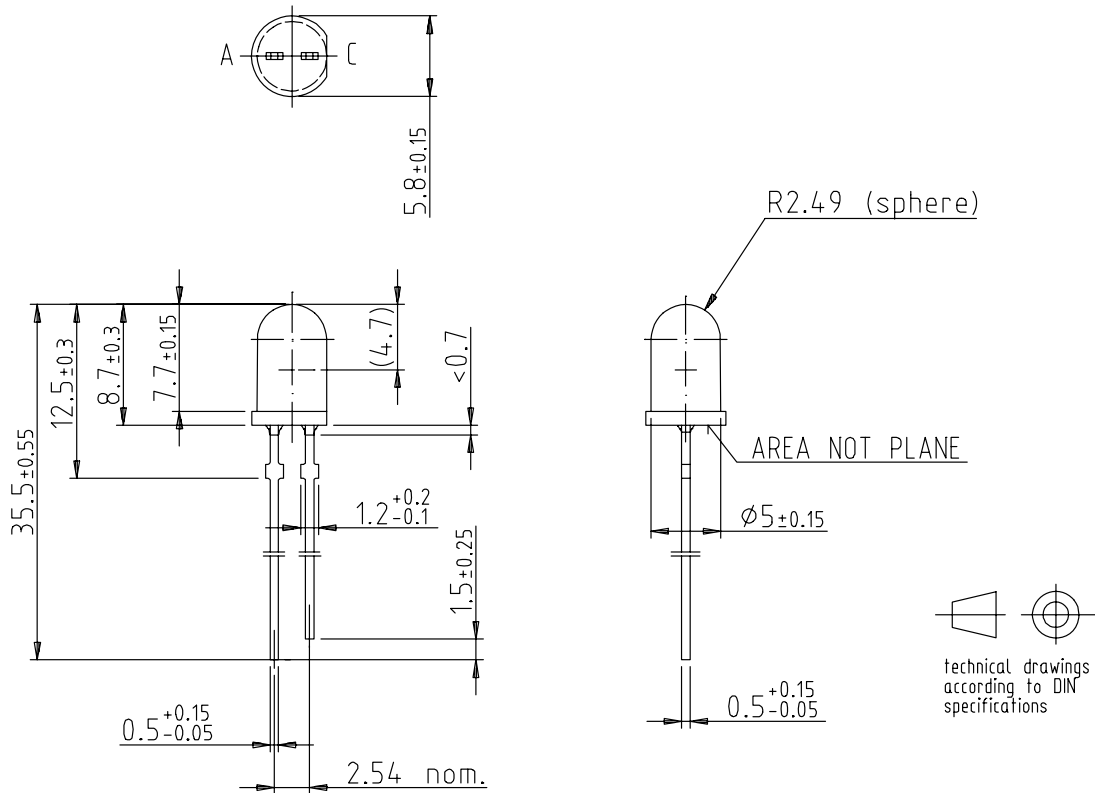


Figure 8. Relative Intensity vs. Wavelength

**PACKAGE DIMENSIONS** in millimeters



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