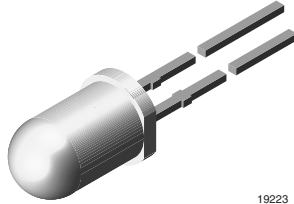


## Universal LED in $\varnothing$ 5 mm Tinted Diffused Package



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  $I_{Vmin}/I_{Vmax} \leq 0.5$

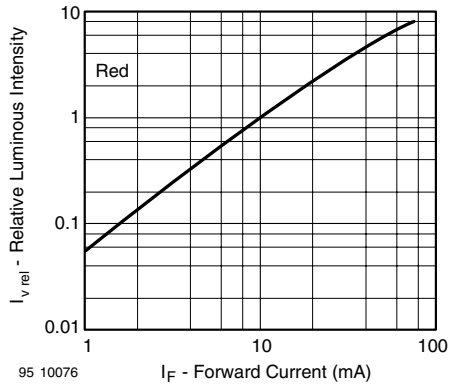


Figure 7. Relative Luminous Intensity vs. Forward Current

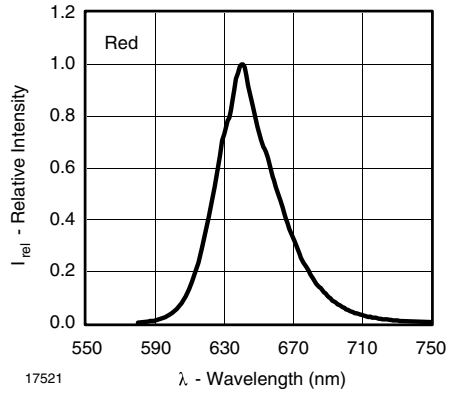
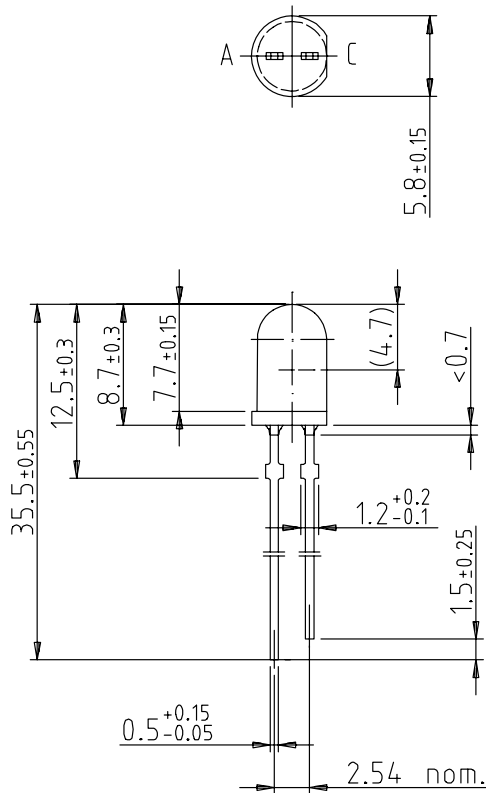


Figure 8. Relative Intensity vs. Wavelength

**PACKAGE DIMENSIONS** in millimeters



95 10916

