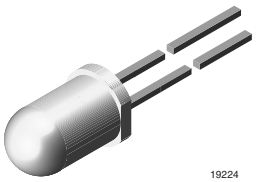
# Universal LED in Ø 5 mm Tinted Diffused Package




## FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard T-1¾ package
- TLUR640. without stand-offs
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT

## PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm
- Product series: standard
- Angle of half intensity: ± 30°

## APPLICATIONS

- General indicating and lighting purposes

**PARTS TABLE**

| PART | COLOR, LUMINOUS INTENSITY | TECHNOLOGY |
|---|---|---|
| TLUR6400 | Red, $I_V$ > 4 mcd | GaAsP on GaAs |
| TLUR6401 | Red, $I_V$ = (4 to 32) mcd | GaAsP on GaAs |

**ABSOLUTE MAXIMUM RATINGS [1] TLUR640.**

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---|---|---|---|---|
| Reverse voltage | | $V_R$ | 6 | V |
| DC Forward current | | $I_F$ | 20 | mA |
| Surge forward current | $t_p \leq 10$ µs | $I_{FSM}$ | 1 | A |
| Power dissipation | $T_{amb} \leq 65$ °C | $P_V$ | 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] $T_{amb}$ = 25 °C, unless otherwise specified

**OPTICAL AND ELECTRICAL CHARACTERISTICS [1] TLUR640., RED**

| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| Luminous intensity [2] | $I_F$ = 10 mA | TLUR6400 | $I_V$ | 4 | 15 | | mcd |
| | | TLUR6401 | $I_V$ | 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 | | φ | | ± 30 | | deg |
| Forward voltage | $I_F$ = 20 mA | | $V_F$ | | 2 | 3 | V |
| Reverse voltage | $I_R$ = 10 µA | | $V_R$ | 6 | 15 | | V |
| Junction capacitance | $V_R$ = 0, f = 1 MHz | | $C_j$ | | 50 | | pF |

Note:
[1] $T_{amb}$ = 25 °C, unless otherwise specified
[2] In one packing unit $I_{Vmin.}/I_{Vmax.} \leq 0.5$

## TYPICAL CHARACTERISTICS

$T_{amb}$ = 25 °C, unless otherwise specified

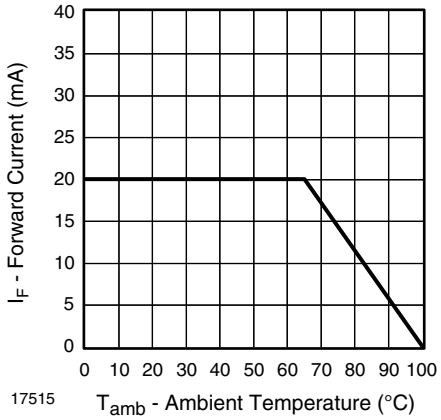



Figure 1. Forward Current vs. Ambient Temperature

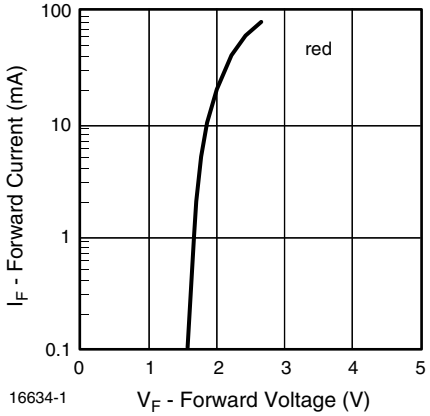



Figure 4. Forward Current vs. Forward Voltage

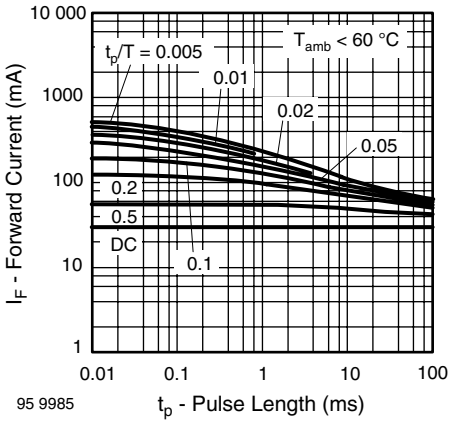



Figure 2. Pulse Forward Current vs. Pulse Duration

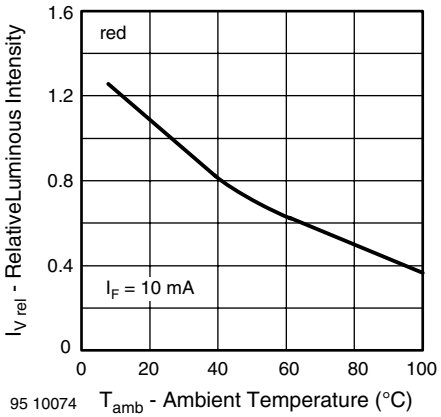



Figure 5. Rel. Luminous Intensity vs. Ambient Temperature

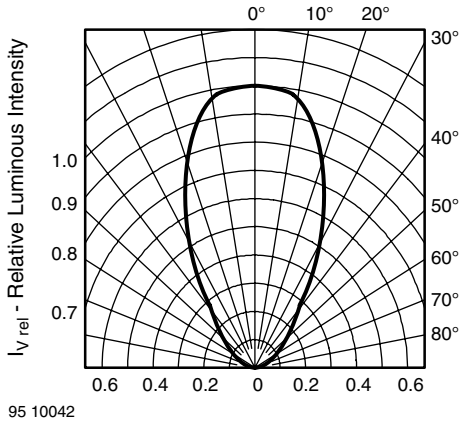



Figure 3. Rel. Luminous Intensity vs. Angular Displacement

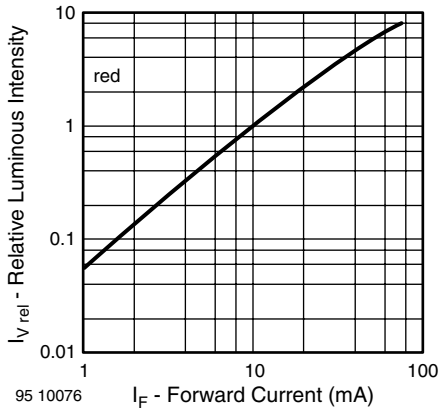



Figure 6. Relative Luminous Intensity vs. Forward Current

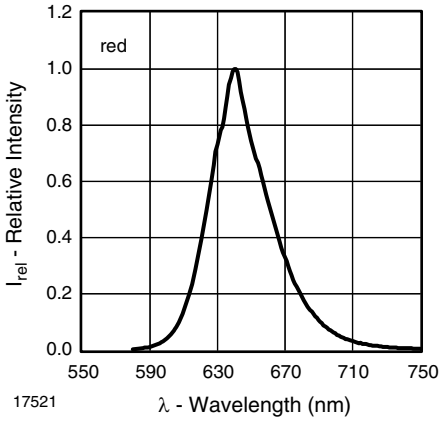
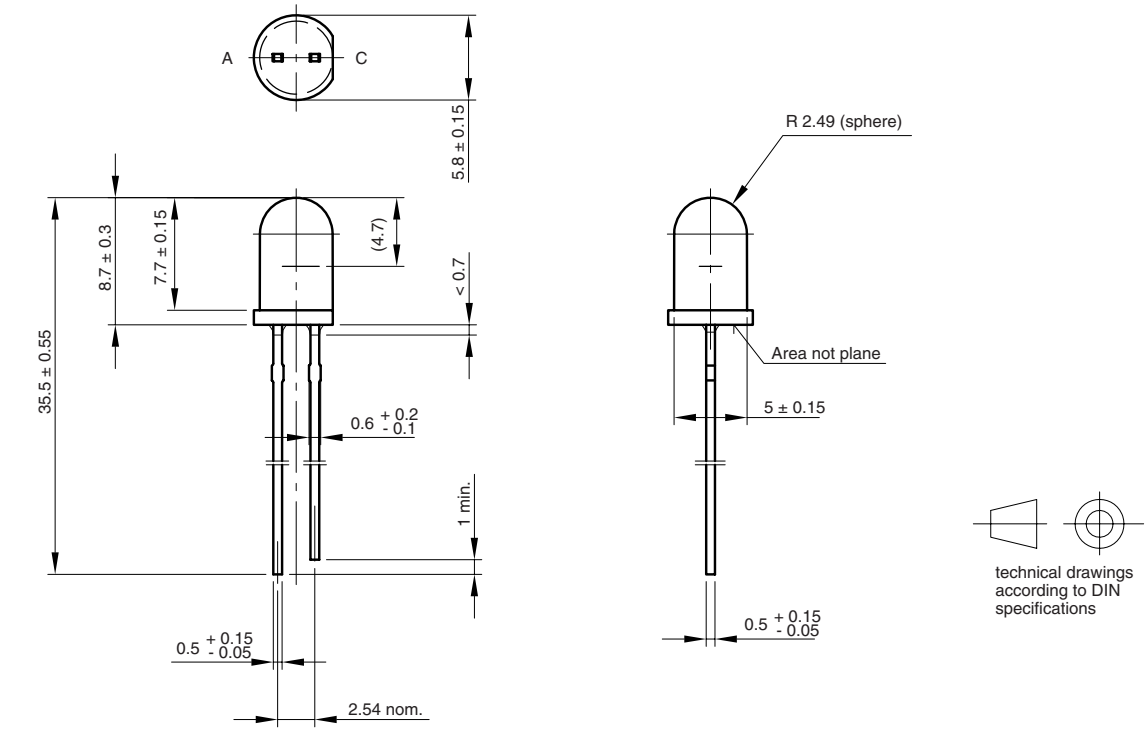



Figure 7. Relative Intensity vs. Wavelength

## **PACKAGE DIMENSIONS** in millimeters

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