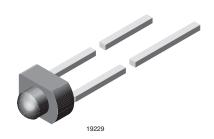


Universal LED, Ø 1.8 mm Tinted Diffused Miniplast Package



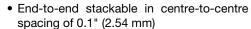
PRODUCT GROUP AND PACKAGE DATA

• Product group: LED

Package: 1.8 mm (miniplast)
Product series: standard
Angle of half intensity: ± 20°

FEATURES

- For DC and pulse operation
- · Luminous intensity categorized



Material categorization:
 For definitions of compliance please see www.vishay.com/doc?99912

Pb-free



ROHS COMPLIANT HALOGEN FREE

FREE GREEN (5-2008)

APPLICATIONS

· General indicating and lighting purposes

| PARTS TABLE | | | | | | | | | | | | | | |
|---------------|-------|--------------------------------|------|------------------------|----|---------------------------|---------------------------|------|---------------------------|------------|------|------|----|--------------|
| PART | COLOR | LUMINOUS INTENSITY (mcd) | | at I _F (nm) | | at I _F (mA) | FORWARD VOLTAGE (V) | | at I _F (mA) | TECHNOLOGY | | | | |
| | | MIN. | TYP. | MAX. | | MIN. | TYP. | MAX. | | MIN. | TYP. | MAX. | | |
| TLUR2400 | Red | 4 | 15 | - | 10 | - | 630 | - | 10 | - | 2 | 3 | 20 | GaAsP on GaP |
| TLUR2400-AS12 | Red | 4 | 15 | - | 10 | - | 630 | - | 10 | - | 2 | 3 | 20 | GaAsP on GaP |
| TLUR2401 | Red | 4 | - | 32 | 10 | - | 630 | - | 10 | - | 2 | 3 | 20 | GaAsP on GaP |
| TLUR2401-AS12 | Red | 4 | - | 32 | 10 | - | 630 | - | 10 | - | 2 | 3 | 20 | GaAsP on GaP |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) TLUR2400, TLUR2401 | | | | | | |
|--|-----------------------------|-------------------|---------------|------|--|--|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT | | |
| Reverse voltage | | V_{R} | 6 | V | | |
| DC forward current | | I _F | 20 | mA | | |
| Surge forward current | t _p ≤ 10 μs | I _{FSM} | 0.5 | Α | | |
| Power dissipation | T _{amb} ≤ 55 °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 | | |
| Coldovina tompounture | $t \le 3$ s, 2 mm from body | T _{sd} | 260 | °C | | |
| Soldering temperature | $t \le 5$ s, 4 mm from body | T _{sd} | 260 | °C | | |
| Thermal resistance junction/ambient | | R _{thJA} | 450 | K/W | | |



| OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25 ^{\circ}$ C, unless otherwise specified) TLUR2400, TLUR2401, RED | | | | | | | |
|--|---------------------------------|----------|----------------|------|------|------|------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Luminaus intensitus(1) | 1 10 4 | TLUR2400 | Ι _V | 4 | 15 | | mcd |
| Luminous intensity (1) | I _F = 10 mA | TLUR2401 | I _V | 4 | | 32 | mcd |
| Dominant wavelength | I _F = 10 mA | | λ_{d} | | 630 | | nm |
| Peak wavelength | I _F = 10 mA | | λ_{p} | | 640 | | nm |
| Angle of half intensity | I _F = 10 mA | | φ | | ± 20 | | 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 V, f = 1 MHz | | Cj | | 50 | | pF |

Note

 $^{^{(1)}}$ In one packing unit $I_{Vmin.}/I_{Vmax.} \leq 0.5$

| LUMINOUS INTENSITY CLASSIFICATION | | | | | |
|-----------------------------------|-----------------------|------|--|--|--|
| GROUP | LIGHT INTENSITY (mcd) | | | | |
| STANDARD | MIN. | MAX. | | | |
| Р | 4 | 8 | | | |
| Q | 6.3 | 12.5 | | | |
| R | 10 | 20 | | | |
| S | 16 | 32 | | | |
| Т | 25 | 50 | | | |

Note

Luminous intensity is tested at a current pulse duration of 25 ms.
The above type numbers represent the order groups which
include only a few brightness groups. Only one group will be
shipped on each bag (there will be no mixing of two groups on
each bag).

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 bag.

In order to ensure availability, single wavelength groups will not be orderable.

TYPCIAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

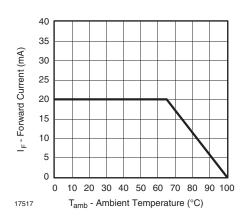


Fig. 1 - Forward Current vs. Ambient Temperature

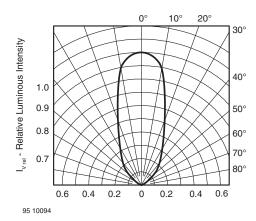


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement

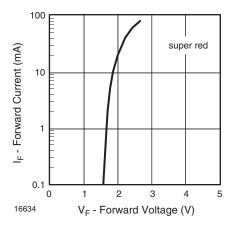


Fig. 3 - Forward Current vs. Forward Voltage

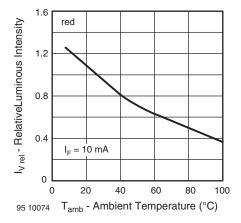


Fig. 4 - Relative Luminous Intensity vs. Ambient Temperature

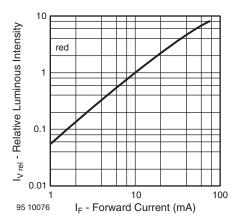


Fig. 5 - Relative Luminous Intensity vs. Forward Current

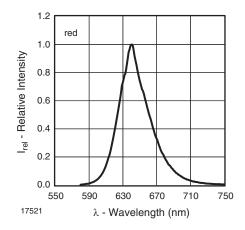
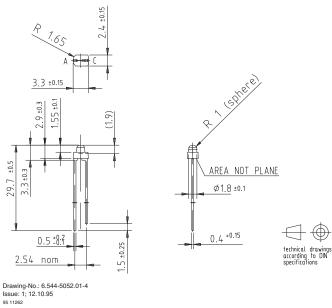


Fig. 6 - Relative Intensity vs. Wavelength

PACKAGE DIMENSIONS in millimeters



Rev. 1.5, 22-Apr-13 3 Document Number: 83288



REEL DIMENSIONS in millimeters

355 52 max. Identification label: Vishay/type/group/tape code/production code/quantity 948641

Fig. 7 - Reel

TAPE

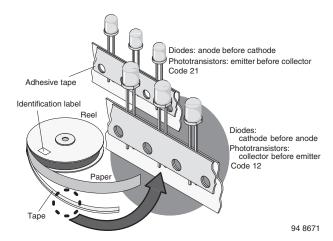
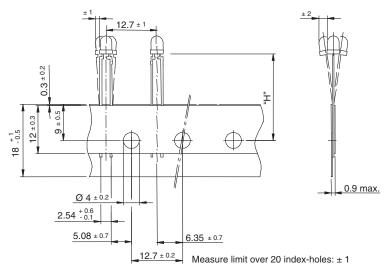


Fig. 8 - LED in Tape

TAPE DIMENSIONS in millimeters



| | Reel |
|---------------|----------------|
| Quantity per: | (Mat No. 1764) |
| | 2000 |

94 8171

| Option | Dim. "H" ± 0.5 mm | | | | |
|--------|-------------------|--|--|--|--|
| AS | 17.3 | | | | |



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Vishay

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