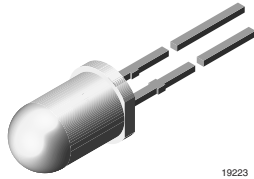


## Universal LED in Ø 5 mm Tinted Diffused Package



### PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 5 mm
- Product series: standard
- Angle of half intensity:  $\pm 30^\circ$

### FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- Standard T-1 $\frac{3}{4}$  package
- TLUR540. with stand-offs
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### APPLICATIONS

- General indicating and lighting purposes

### PARTS TABLE

PART	COLOR, LUMINOUS INTENSITY	TECHNOLOGY
TLUR5400	Red, $I_V > 4$ mcd	GaAsP on GaAs
TLUR5400-AS12Z	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> TLUR540.

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> TLUR540., 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  $I_{Vmin.}/I_{Vmax.} \leq 0.5$

**TYPICAL CHARACTERISTICS**

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

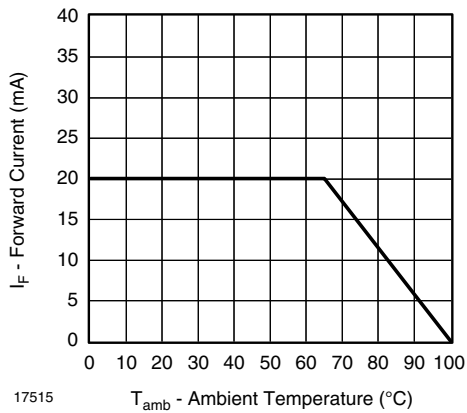


Figure 1. Forward Current vs. Ambient Temperature

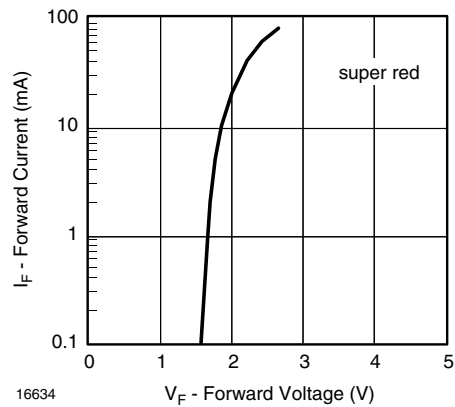


Figure 4. Forward Current vs. Forward Voltage

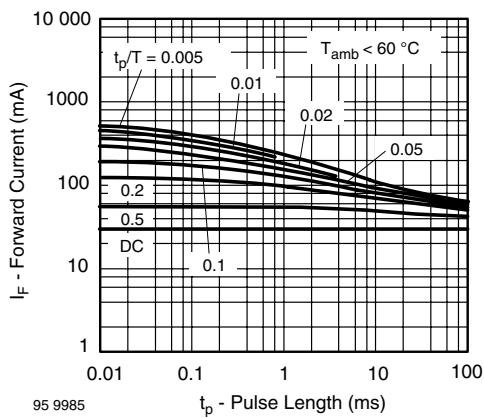


Figure 2. Pulse Forward Current vs. Pulse Duration

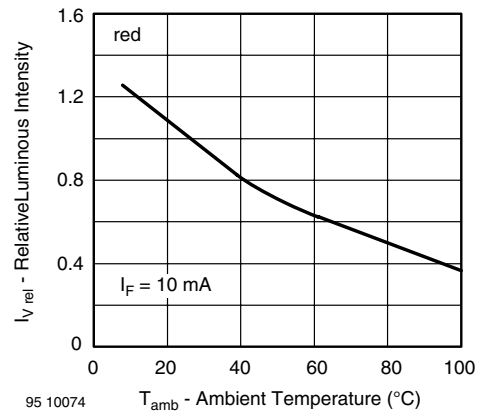


Figure 5. Rel. Luminous Intensity vs. Ambient Temperature

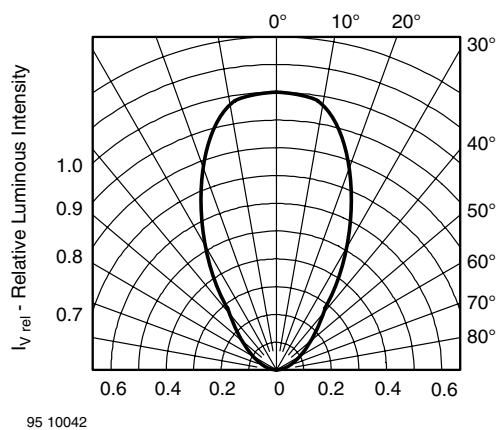


Figure 3. Rel. Luminous Intensity vs. Angular Displacement

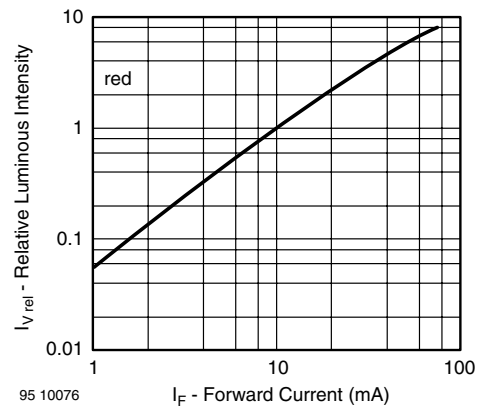


Figure 6. Relative Luminous Intensity vs. Forward Current

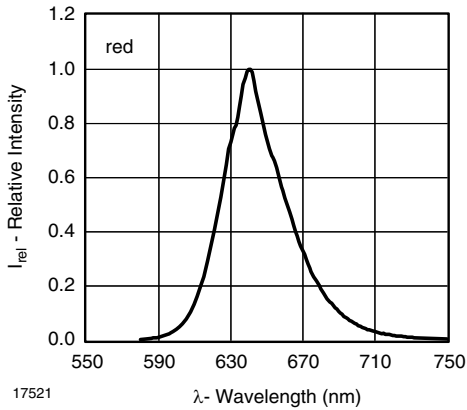
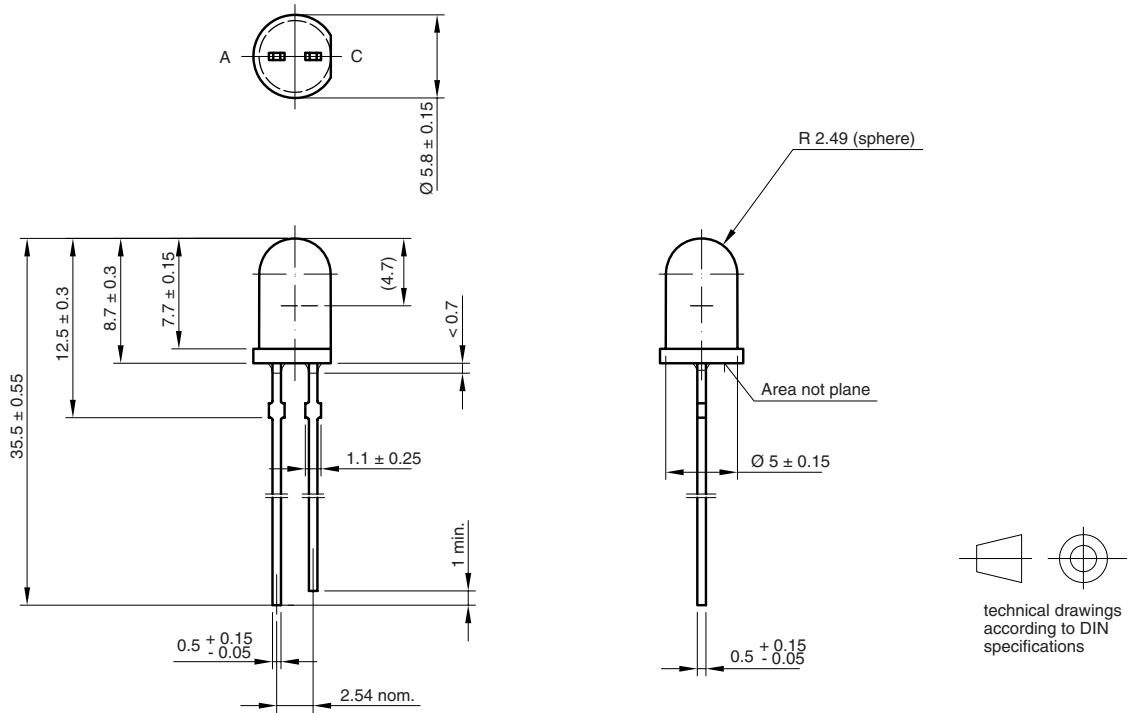


Figure 7. Relative Intensity vs. Wavelength

**PACKAGE DIMENSIONS** in millimeters



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Issue: 6; 19.05.09  
95 10916

**AMMOPACK**

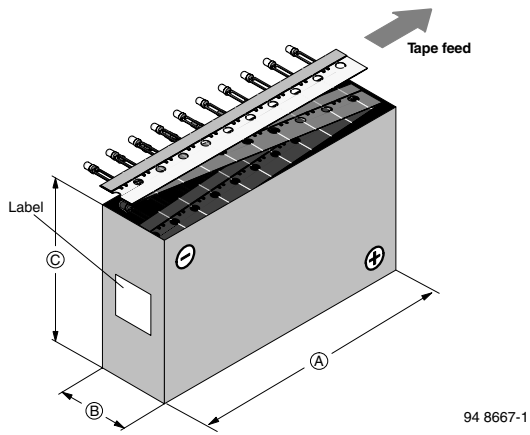
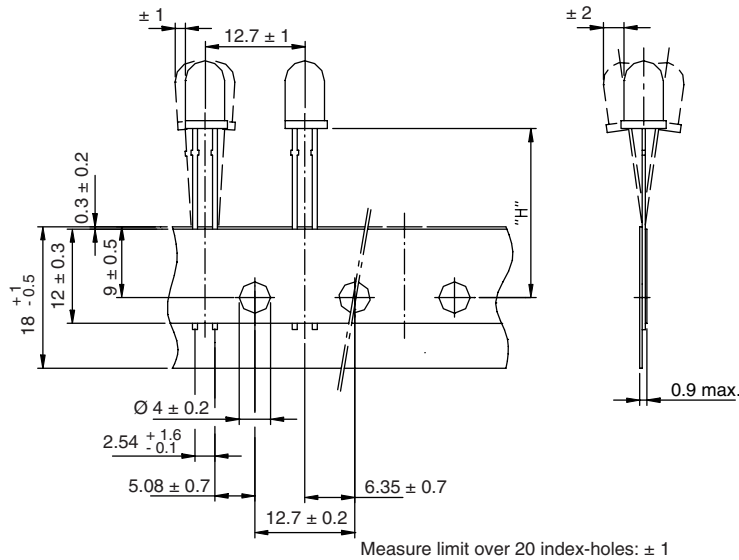


Figure 8. Tape Direction

Note:  
AS12Z and AS21Z still valid for already existing types BUT NOT FOR NEW DESIGN

**TAPE DIMENSIONS**



Quantity per:	Reel (Mat.-no. 1764)
	1000

94 8172

Option	Dim. "H" ± 0.5 mm
AS	17.3



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