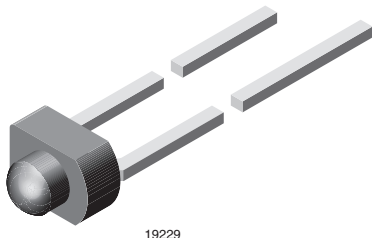




Universal LED, Ø 1.8 mm Tinted Diffused Miniplast Package



FEATURES

- For DC and pulse operation
- Luminous intensity categorized
- End-to-end stackable in centre-to-centre spacing of 0.1" (2.54 mm)
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

PRODUCT GROUP AND PACKAGE DATA

- Product group: LED
- Package: 1.8 mm (miniplast)
- Product series: standard
- Angle of half intensity: $\pm 20^\circ$

APPLICATIONS

- General indicating and lighting purposes

PARTS TABLE

PART	COLOR	LUMINOUS INTENSITY (mcd)			at I_F (mA)	WAVELENGTH (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 ($T_{amb} = 25^\circ\text{C}$, 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	$t_p \leq 10 \mu\text{s}$	I_{FSM}	0.5	A
Power dissipation	$T_{amb} \leq 55^\circ\text{C}$	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	$t \leq 3 \text{ s, } 2 \text{ mm from body}$	T_{sd}	260	$^\circ\text{C}$
	$t \leq 5 \text{ s, } 4 \text{ mm from body}$	T_{sd}	260	$^\circ\text{C}$
Thermal resistance junction/ambient		R_{thJA}	450	K/W

OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)
TLUR2400, TLUR2401, RED

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Luminous intensity ⁽¹⁾	$I_F = 10\text{ mA}$	TLUR2400	I_V	4	15		mcd
		TLUR2401	I_V	4		32	mcd
Dominant wavelength	$I_F = 10\text{ mA}$		λ_d		630		nm
Peak wavelength	$I_F = 10\text{ mA}$		λ_p		640		nm
Angle of half intensity	$I_F = 10\text{ mA}$		ϕ		± 20		deg
Forward voltage	$I_F = 20\text{ mA}$		V_F		2	3	V
Reverse voltage	$I_R = 10\text{ }\mu\text{A}$		V_R	6	15		V
Junction capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$		C_j		50		pF

Note

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

LUMINOUS INTENSITY CLASSIFICATION

GROUP	LIGHT INTENSITY (mcd)	
	MIN.	MAX.
P	4	8
Q	6.3	12.5
R	10	20
S	16	32
T	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.

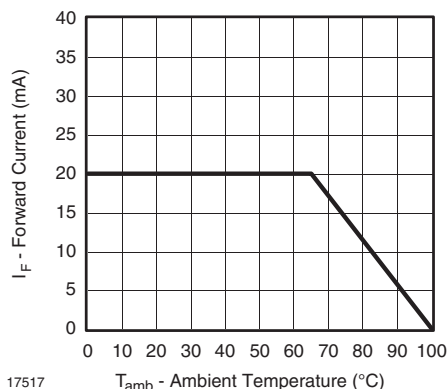
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Ambient Temperature

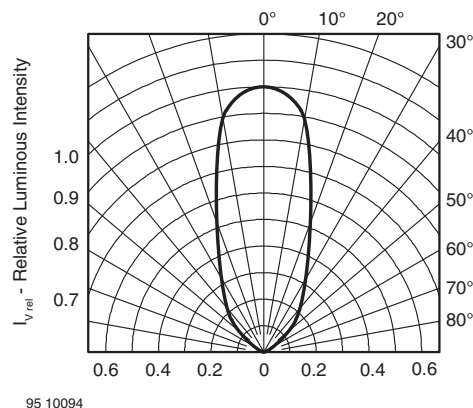


Fig. 2 - Relative Luminous Intensity vs. Angular Displacement

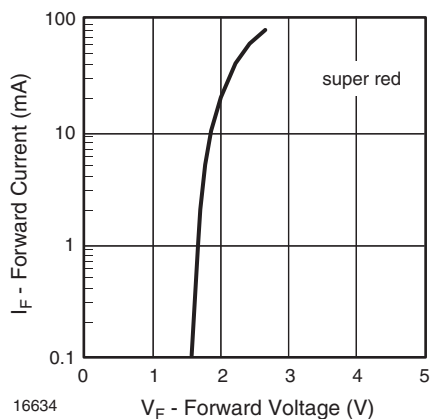


Fig. 3 - Forward Current vs. Forward Voltage

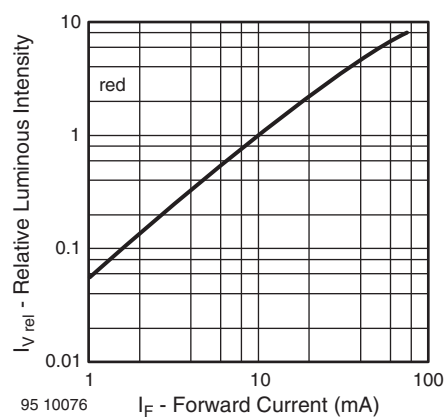


Fig. 5 - Relative Luminous Intensity vs. Forward Current

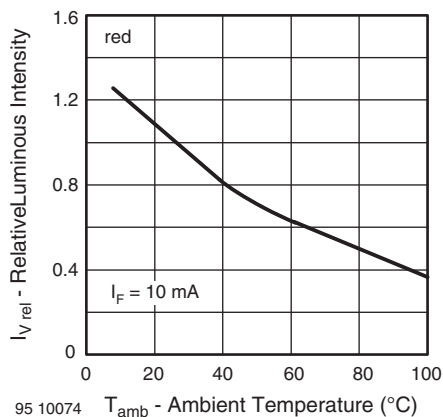


Fig. 4 - Relative Luminous Intensity vs. Ambient Temperature

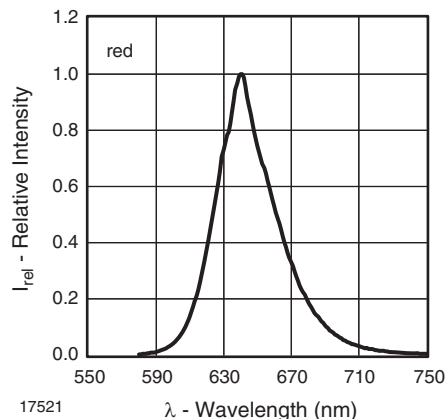
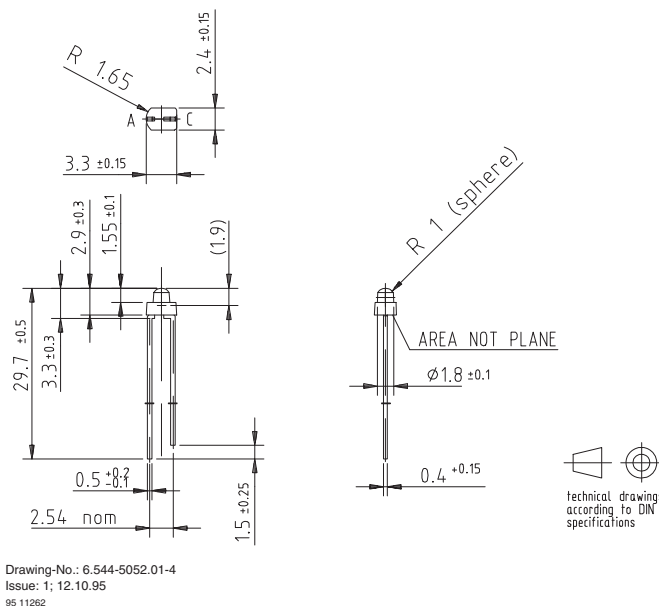


Fig. 6 - Relative Intensity vs. Wavelength

PACKAGE DIMENSIONS in millimeters



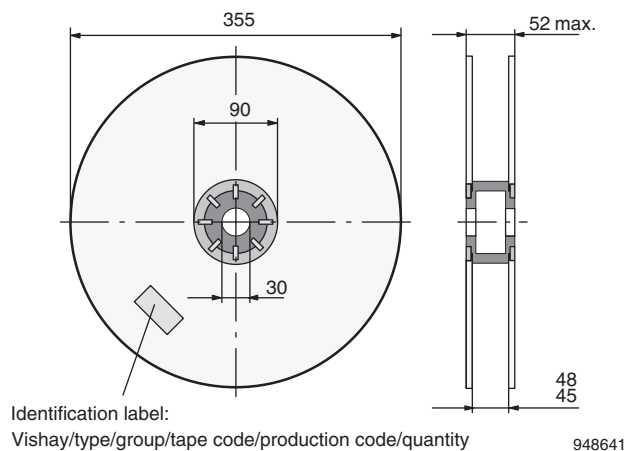
REEL DIMENSIONS in millimeters


Fig. 7 - Reel

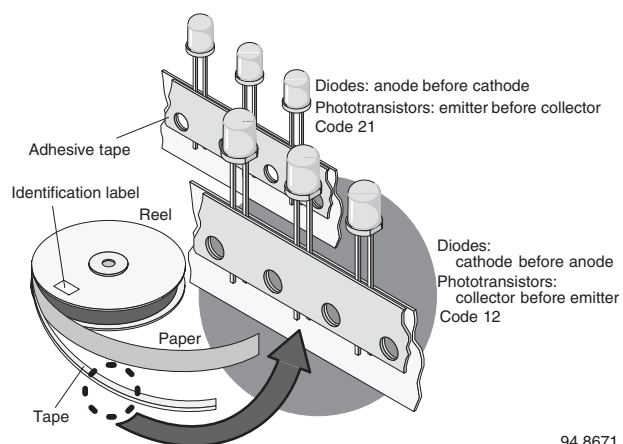
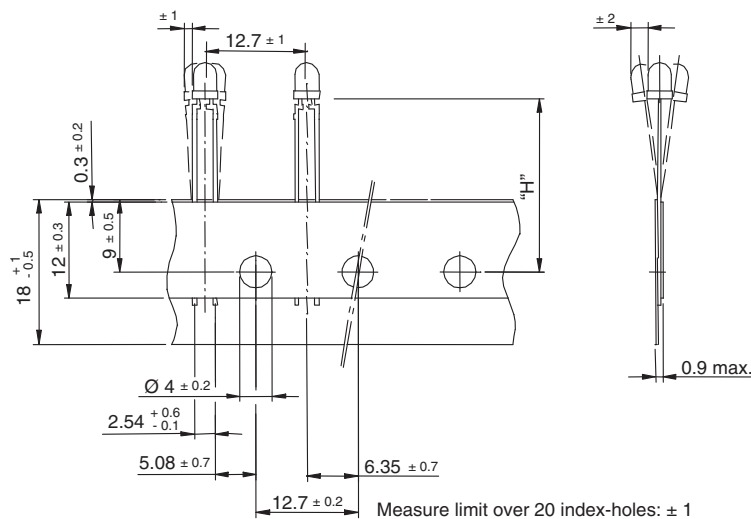
TAPE


Fig. 8 - LED in Tape

TAPE DIMENSIONS in millimeters


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

94 8171

Option	Dim. "H" ± 0.5 mm
AS	17.3



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