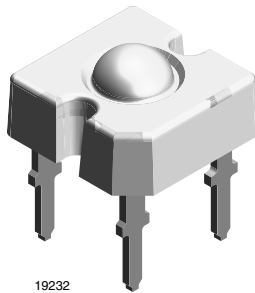


**TELUX™**


19232

**DESCRIPTION**

The TELUX™ series is a clear, non diffused LED for applications where supreme luminous flux is required. It is designed in an industry standard 7.62 mm square package utilizing highly developed (AS) AlInGaP technology.

The supreme heat dissipation of TELUX™ allows applications at high ambient temperatures.

All packing units are binned for luminous flux, forward voltage and color to achieve the most homogenous light appearance in application.

SAE and ECE color requirements for automobile application are available for color red.

ESD resistivity 2 kV (HBM) according to MIL STD 883D, method 3015.7.

**FEATURES**

- Utilizing one of the world's brightest (AS) AlInGaP technologies
- High luminous flux
- Supreme heat dissipation:  $R_{thJP}$  is 90 K/W
- High operating temperature:  
 $T_{amb} = -40\text{ °C to }+110\text{ °C}$
- Meets SAE and ECE color requirements for the automobile industry for color red
- Packed in tubes for automatic insertion
- Luminous flux, forward voltage and color categorized for each tube
- Small mechanical tolerances allow precise usage of external reflectors or lightguides
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC


**RoHS**  
COMPLIANT

**APPLICATIONS**

- Exterior lighting
- Dashboard illumination
- Tail-, stop- and turn signals of motor vehicles
- Replaces small incandescent lamps
- Traffic signals and signs

**PRODUCT GROUP AND PACKAGE DATA**

- Product group: LED
- Package: TELUX
- Product series: power
- Angle of half intensity:  $\pm 30^\circ$

<b>PARTS TABLE</b>		
<b>PART</b>	<b>COLOR, LUMINOUS INTENSITY</b>	<b>TECHNOLOGY</b>
TLWR9600	Red, $\phi_v > 2500\text{ mlm}$	AlInGaP on GaAs

<b>ABSOLUTE MAXIMUM RATINGS<sup>1)</sup> TLWR9600</b>				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage	$I_R = 100 \mu\text{A}$	$V_R$	10	V
DC Forward current	$T_{\text{amb}} \leq 85 \text{ }^\circ\text{C}$	$I_F$	70	mA
Surge forward current	$t_p \leq 10 \mu\text{s}$	$I_{\text{FSM}}$	0.1	A
Power dissipation	$T_{\text{amb}} \leq 85 \text{ }^\circ\text{C}$	$P_V$	187	mW
Junction temperature		$T_j$	125	$^\circ\text{C}$
Operating temperature range		$T_{\text{amb}}$	- 40 to + 110	$^\circ\text{C}$
Storage temperature range		$T_{\text{stg}}$	- 55 to + 110	$^\circ\text{C}$
Soldering temperature	$t \leq 5 \text{ s}$ , 1.5 mm from body preheat temperature 100 $^\circ\text{C}$ / 30 s	$T_{\text{sd}}$	260	$^\circ\text{C}$
Thermal resistance junction/ambient	with cathode heatsink of 70 mm <sup>2</sup>	$R_{\text{thJA}}$	200	K/W

Note:

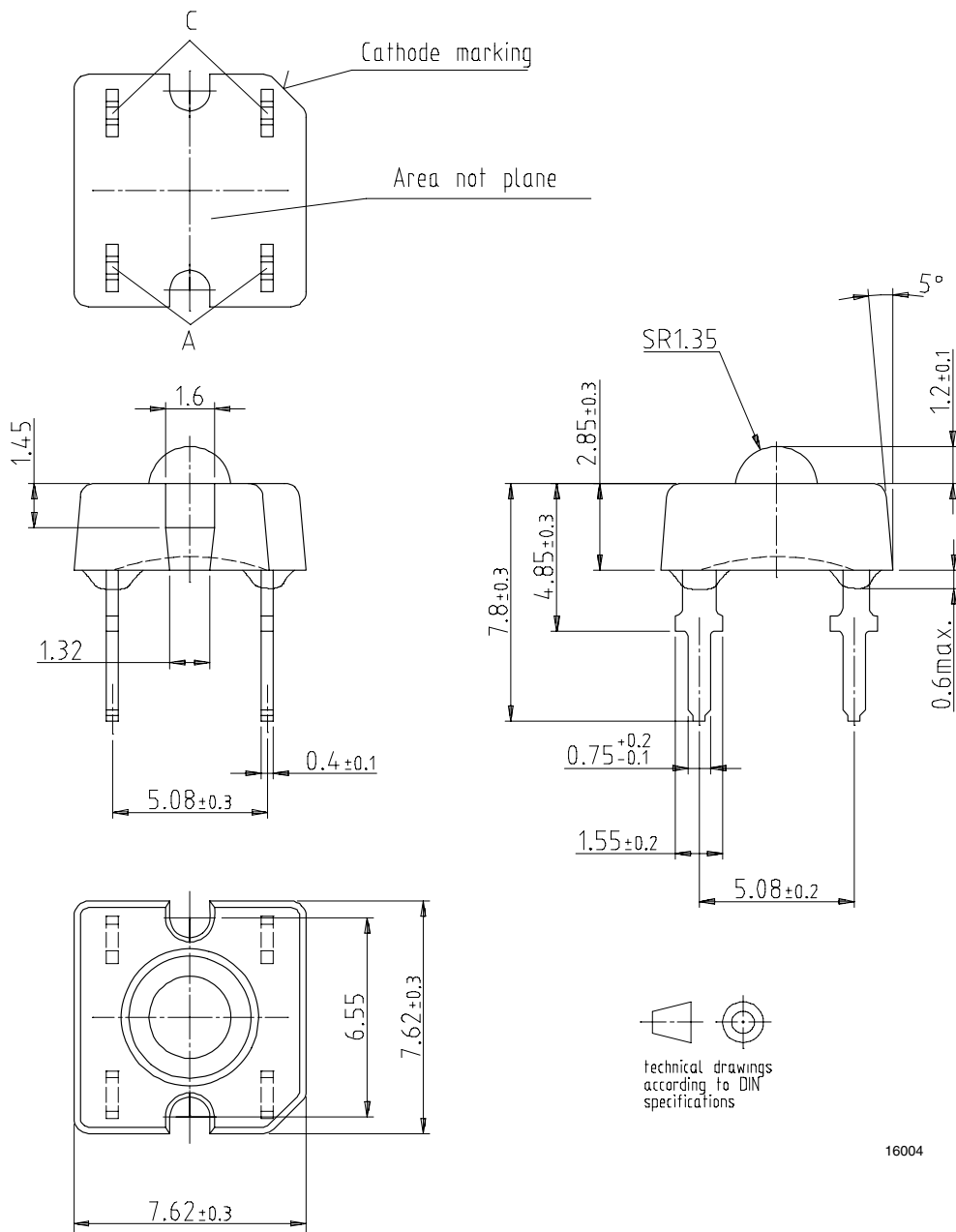
<sup>1)</sup>  $T_{\text{amb}} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

<b>OPTICAL AND ELECTRICAL CHARACTERISTICS<sup>1)</sup> TLWR9600, RED</b>						
PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Total flux	$I_F = 70 \text{ mA}$ , $R_{\text{thJA}} = 200 \text{ }^\circ\text{K/W}$	$\phi_V$	2500	3200		mlm
Luminous intensity/total flux	$I_F = 70 \text{ mA}$ , $R_{\text{thJA}} = 200 \text{ }^\circ\text{K/W}$	$I_V/\phi_V$		0.8		mcd/mlm
Dominant wavelength	$I_F = 70 \text{ mA}$ , $R_{\text{thJA}} = 200 \text{ }^\circ\text{K/W}$	$\lambda_d$	611	615	634	nm
Peak wavelength	$I_F = 70 \text{ mA}$ , $R_{\text{thJA}} = 200 \text{ }^\circ\text{K/W}$	$\lambda_p$		624		nm
Angle of half intensity	$I_F = 70 \text{ mA}$ , $R_{\text{thJA}} = 200 \text{ }^\circ\text{K/W}$	$\phi$		$\pm 30$		deg
Total included angle	90 % of total flux captured	$\phi_{0.9V}$		75		deg
Forward voltage	$I_F = 70 \text{ mA}$ , $R_{\text{thJA}} = 200 \text{ }^\circ\text{K/W}$	$V_F$	1.83	2.2	2.7	V
Reverse voltage	$I_R = 100 \mu\text{A}$	$V_R$	10	20		V
Temperature coefficient $\langle \lambda_d$	$I_F = 70 \text{ mA}$	$\text{TC}_{\lambda_d}$		17		nm/K
Temperature coefficient $V_F$	$I_F = 70 \text{ mA}$ , $T > - 25 \text{ }^\circ\text{C}$	$\text{TC}_{V_F}$		- 2.9		mV/K

Note:

<sup>1)</sup>  $T_{\text{amb}} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

## PACKAGE DIMENSIONS in millimeters



16004