



T-1 (3mm) SOLID STATE LAMPS

LTL-422INLC HIGH EFFICIENCY RED

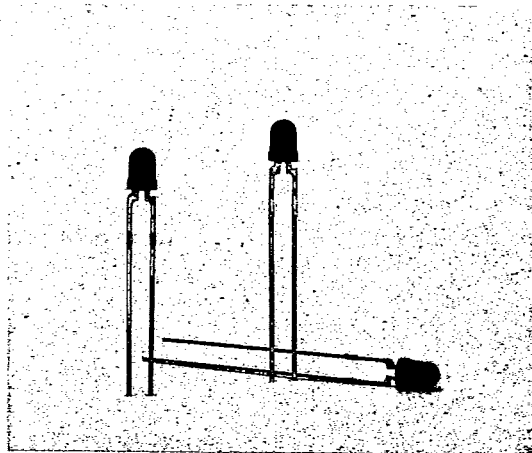
FEATURES

- LOW POWER CONSUMPTION.
- HIGH EFFICIENCY.
- VERSATILE MOUNTING ON P.C. BOARD OR PANEL.
- I.C. COMPATIBLE/LOW CURRENT REQUIREMENTS.
- POPULAR T-1 DIAMETER 25mm(1") LENGTH OF LEADS PACKAGE.
- RELIABLE AND RUGGED.

DESCRIPTION

The LTL-422INLC is made with Gallium Arsenide Phosphide on Gallium Phosphide Red Light Emitting Diode.

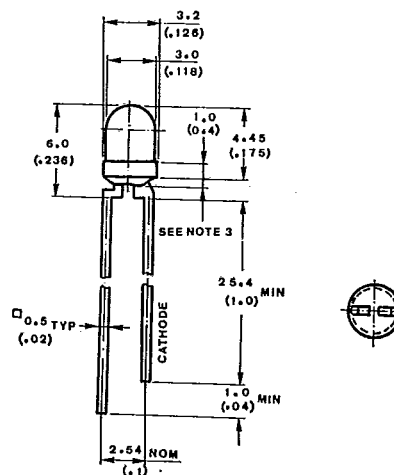
These lamp use low current, and it has High Efficiency Red Brightness.



DEVICES

PART NO. LTL-	LENS		SOURCE COLOR
	COLOR	DIFFUSION	
422INLC	Red	Diffused	Hi. Eff. Red

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (0.010") unless otherwise noted.
3. Protruded resin under flange is 1.5mm (0.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

ABSOLUTE MAXIMUM RATINGS AT $T_A = 25^\circ\text{C}$

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	24	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	500	mA
Continuous Forward Current	7	mA
Derating Linear From 25°C	0.4	$\text{mA}/^\circ\text{C}$
Reverse Voltage	5	V
Operating Temperature Range	-55°C to $+100^\circ\text{C}$	
Storage Temperature Range	-55°C to $+100^\circ\text{C}$	
Lead Soldering Temperature [1.6mm (0.063 in) From Body]	260°C for 5 Seconds	

LED LAMPS

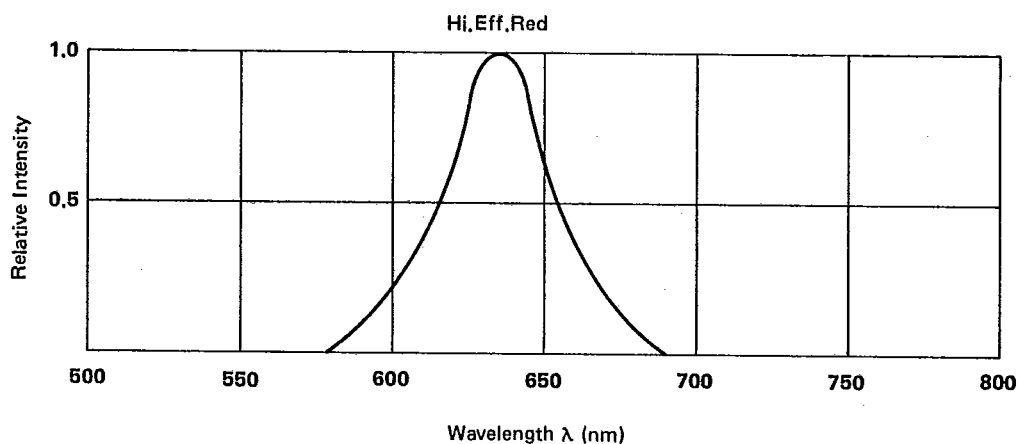


FIG. 1 RELATIVE INTENSITY VS. WAVELENGTH

ELECTRICAL OPTICAL CHARACTERISTICS AND CURVES AT $T_A = 25^\circ\text{C}$

PARAMETER	SYMBOL	PART NO. LTL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	I_v	4221NLC	1.0	1.8		md	$I_F = 2\text{ mA}$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	4221NLC		45		deg.	Note 2 (Fig. 6)
Peak Emission Wavelength	λ_{PEAK}	4221NLC		635		nm	Measurement @ Peak (Fig. 1)
Spectral Line Half-Width	$\Delta\lambda$	4221NLC		40		nm	
Forward Voltage	V_F	4221NLC		1.8	2.2	V	$I_F = 2\text{ mA}$
Reverse Current	I_R	4221NLC			100	μA	$V_R = 5\text{ V}$
Capacitance	C	4221NLC		4		PF	$V_F = 0$ $f = 1\text{ MHz}$

NOTES: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.

2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

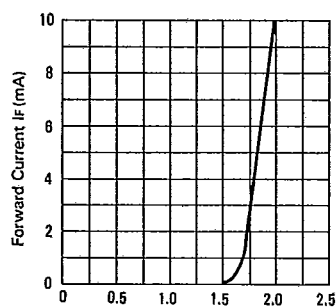


FIG. 2 FORWARD CURRENT VS. FORWARD VOLTAGE

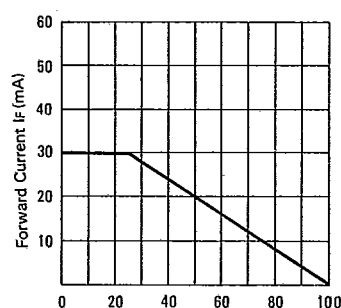


FIG. 3 FORWARD CURRENT DERATING CURVE

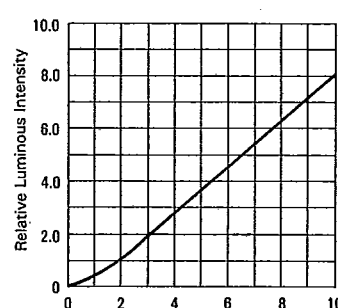


FIG. 4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

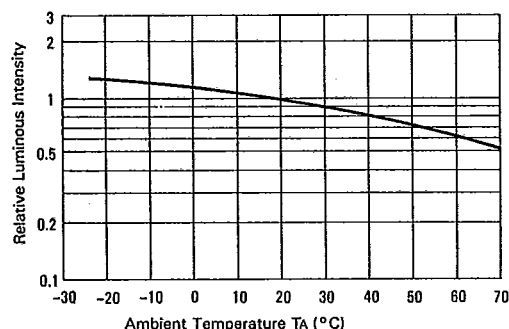


FIG. 5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

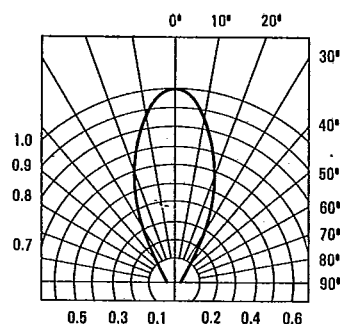


FIG. 6 SPATIAL DISTRIBUTION