

Infrared Emitting Diode

EL-1L7

1. General Description:

The EL-1L7 is a GaAlAs infrared emitting diode mounted in a T1 $\frac{3}{4}$ plastic package. Specially designed GaAlAs chip emits significant infrared light and specially designed plastic lens makes the component radiates wide beam.

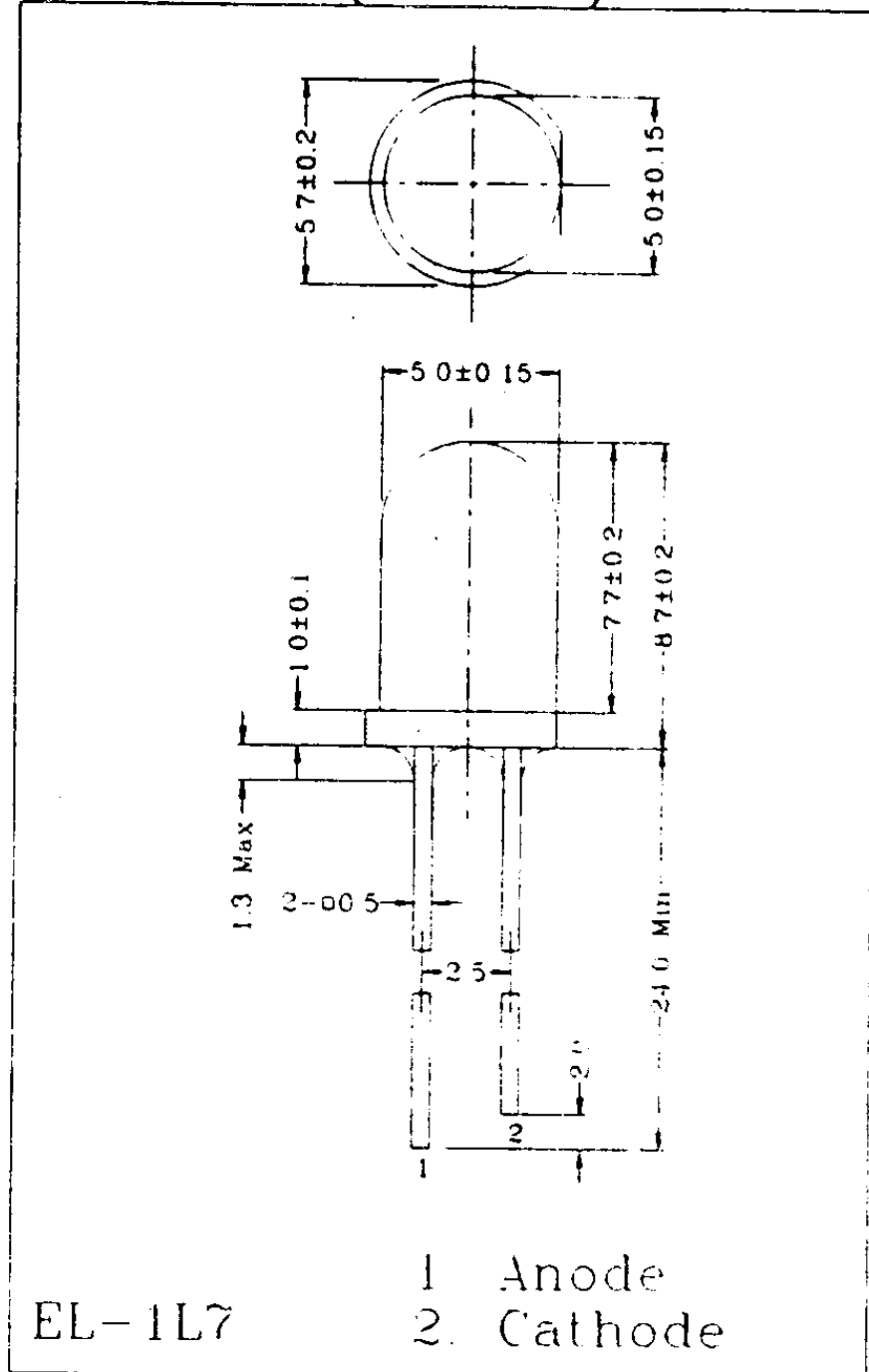
2. Features

- High output power
- Suitable beam angle
- High reliability
- Capable of pulse operation

3. Applications

- Optical emitters
- Optical switches
- Smoke sensors
- IR remote control
- IR sound transmission

Dimensions (Unit:mm)



4. Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I _F	100	mA
Pulse Forward current *1	I _{FP}	1	A
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	100	mW
Operating Temperature	T _{opr}	-30 ~ +70	°C
Storage Temperature	T _{stg}	-30 ~ +80	°C
Soldering Temperature *2	T _{sol}	260	°C

*1 Pulse width $t_w \leq 100\mu\text{sec}$. Duty ratio $T = 10\text{msec}$.

*2 At the position of 2mm from the bottom of the package within 5 seconds.

5. Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Testing Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V _F	I _F =100mA		1.4	1.7	V
Reverse Current	I _R	V _R =5V			10	μA
Radiant Intensity	I _e	I _F =100mA	30	50		mW/sr
Terminal Capacitance	C _t	f=1MHz		20		pF
Half Power Beam Angle	Δθ			±30		deg.
Peak Emission Wavelength	λ _p	I _F =50mA		940		nm
Spectral Bandwidth at 50%	Δλ	I _F =50mA		50		nm