



## ELD-1550-525

- IR Through Hole LED
- 1550 nm, 3.3 mW
- AlGaAs chip
- 5 mm Epoxy Resin Package
- Beam Angle:  $\pm 7.5^\circ$



### Description

**ELD-1550-525** is an AlGaAs based infrared LED, emitting at a peak wavelength of typically 1550 nm and optical output power of 3.3mW @ 20 mA. It comes in a **5 mm through hole** clear epoxy resin mold package with a beam angle of  $\pm 7.5^\circ$ .

### Maximum Ratings\*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	$P_D$		150	mW
Forward Current	$I_F$		100	mA
Pulse Forward Current **	$I_{FP}$		200	mA
Reverse Voltage ( $I_R=10 \mu A$ )	$U_R$		5	V
Operating Temperature	$T_{CASE}$	- 20	+ 80	$^\circ C$
Storage Temperature	$T_{STG}$	- 55	+ 85	$^\circ C$
Lead Solder Temperature ( $t_{max. 3s}$ )	$T_{SLD}$		+ 260	$^\circ C$

\*Operating close to or exceeding these parameters may damage the device

\*\* duty cycle = 50 %, pulse width < 50  $\mu s$

### Electro-Optical Characteristics ( $T_{CASE} = 25^\circ C$ )

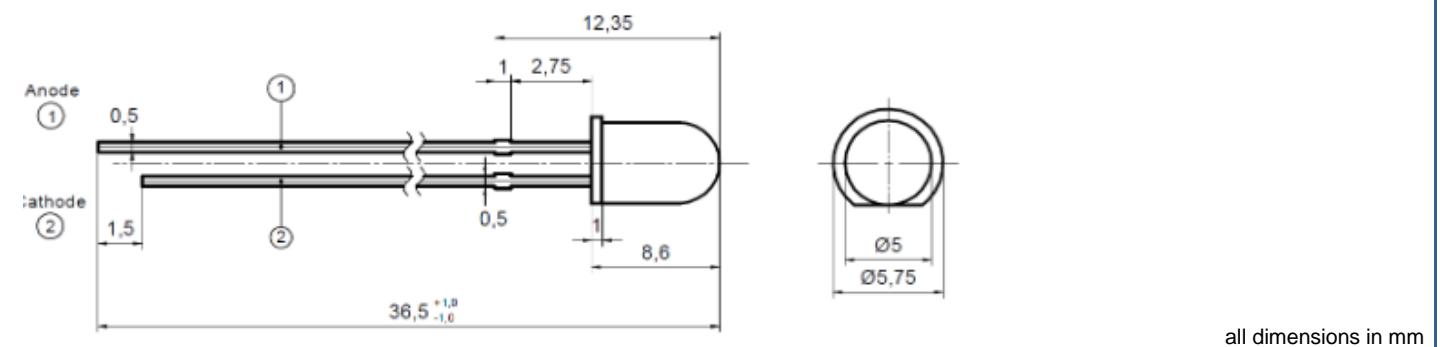
Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength	$\lambda_P$	$I_F=20 \text{ mA}$	1530	1550	1570	nm
Half Width	$\lambda_\Delta$	$I_F=20 \text{ mA}$		90		nm
Forward Voltage	$U_F$	$I_F=20 \text{ mA}$		0.9		V
	$U_F$	$I_F=100 \text{ mA}$		1.1		
Total Radiated Power	$P_O$	$I_F=20 \text{ mA}$		3.3		mW
		$I_F=100 \text{ mA}$		6.0		
Beam Angle	$2\theta_{1/2}$	$I_F=20 \text{ mA}$		15		deg
Rise Time	$t_r$	$I_F=20 \text{ mA}$		25		ns
Fall Time	$t_f$	$I_F=20 \text{ mA}$		40		ns





## Outline Dimensions

### 5 mm Through Hole



## General Notes

### Soldering

- Do avoid overheating of the LED
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux
- Do not apply current to the LED until it has cooled down to room temperature after soldering

### Cleaning

- **Cleaning with isopropyl alcohol, propanol, or ethyl alcohol is recommended**
- DO NOT USE acetone, chloroform, trichloroethylene, or MKS
- DO NOT USE ultrasonic cleaners

### Static Electricity

- **LEDs are sensitive to electrostatic discharge (ESD).**
- Precautions against ESD must be taken when handling or operating these LEDs
- Surge voltage or electrostatic discharge can result in complete failure of the LED.

### Radiation

- During operation these LEDs do emit light, which **could be hazardous to skin and eyes**, and **may cause cancer**.
- Do avoid exposure to the emitted light. Protective glasses if needed
- It is further advised to attach a warning label on products/systems.

### Operation

- **Do only operate LEDs with a current source.**
- Running these LEDs from a voltage source will result in complete failure of the device.
- Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory.

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