

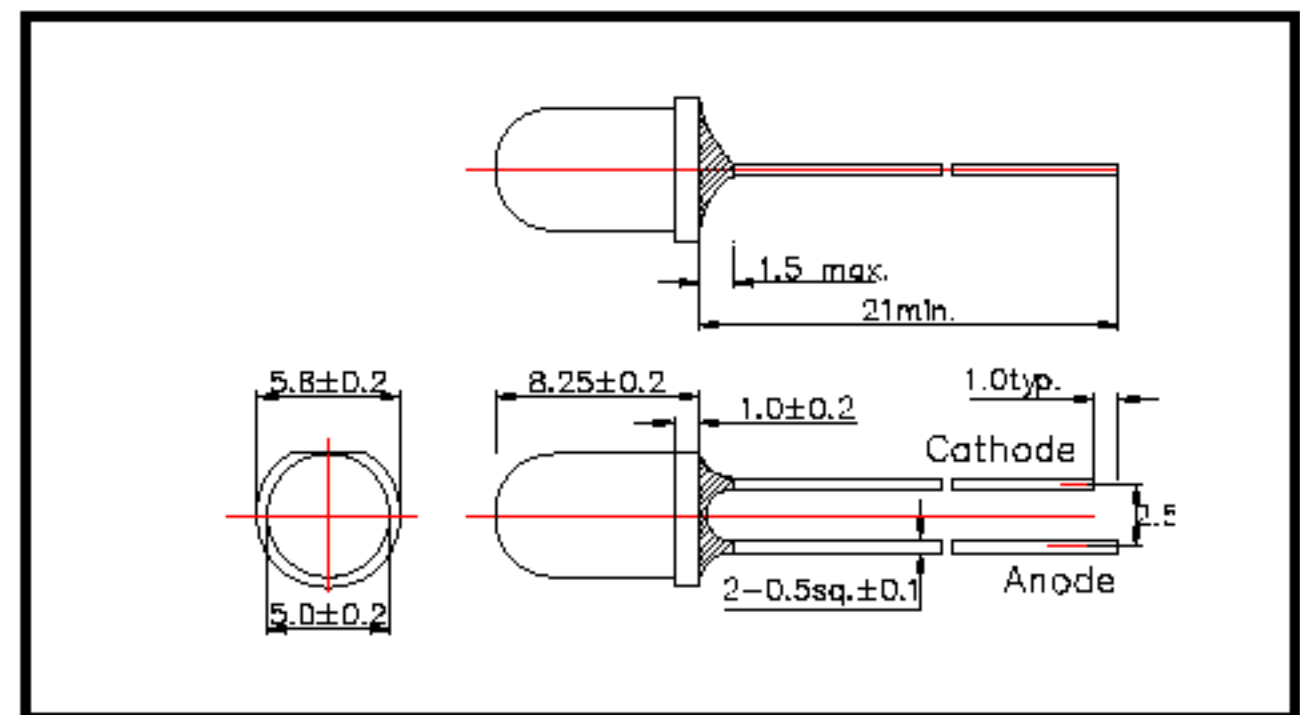
# L810-03AU Infrared LED Lamp

L810-03AU is an AlGaAs LED mounted on a lead frame with a clear epoxy lens. On forward bias, it emits a spectral band of radiation, which peaks at 810nm.

### ◆ Specifications

- 1) Product Name            Infrared LED Lamp
- 2) Type No.                L810-03AU
- 3) Chip
- (1) Chip Material        AlGaAs
- (2) Peak Wavelength    810nm typ.
- 4) Package
- (1) Type                  Φ5mm clear molding
- (2) Resin Material       Epoxy Resin
- (3) Lead Frame           Soldered

### ◆ Outer dimension (Unit : mm)



### ◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	170	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	100	mA	T <sub>a</sub> =25°C
Pulse Forward Current	I <sub>FP</sub>	500	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	5	V	T <sub>a</sub> =25°C
Operating Temperature	T <sub>OPR</sub>	-30 ~ +85	°C	
Storage Temperature	T <sub>STG</sub>	-30 ~ +100	°C	
Soldering Temperature	T <sub>SOL</sub>	260	°C	

‡ Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡ Soldering condition: Soldering condition must be completed within 3 seconds at 260°C

### ◆ Electro-Optical Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA		1.60	1.80	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	uA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =50mA	16.0	18.0		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA	40	80		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	790	810	830	nm
Half Width	Δλ	I <sub>F</sub> =50mA		35		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA		±15		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA		60		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		40		ns

‡ Total Radiated Power is measured by Photodyne #500

‡ Radiant Intensity is measured by Tektronix J-6512