

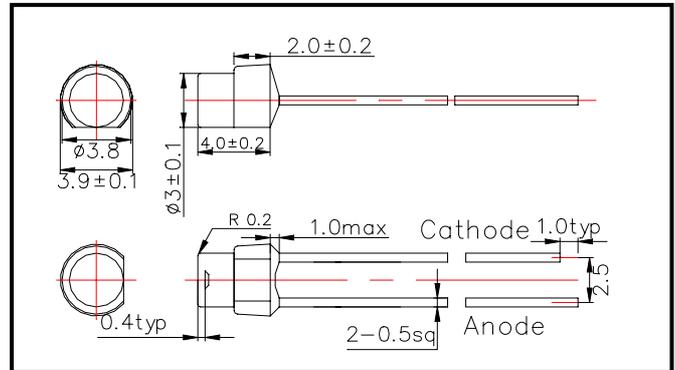
# L770-31-2C Infrared LED Lamp

L770-31-2C 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 770nm.

◆ Specifications

- 1)Product Name      Infrared LED Lamp
- 2)Type No.          L770-31-2C
- 3)Chip
  - (1)Chip Material      AlGaAs
  - (2)Chip Size          400um\*400um
  - (3)Peak Wavelength 770nm typ.
- 4)Package
  - (1)Type                Φ3mm clear molding
  - (2)Resin Material    Epoxy Resin
  - (3) Lead Frame/ cup 0.35mm depth
  - (4)Lead Frame        Soldered ( Lead Free)

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	230	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
Junction Temperature	T <sub>J</sub>	100	°C	
Thermal Resistance	R <sub>thjp</sub>	250	K/W	
Operating Temperature	T <sub>OPR</sub>	-40 ~ +85	°C	
Storage Temperature	T <sub>STG</sub>	-40 ~ +100	°C	
Soldering Temperature	T <sub>SOL</sub>	265	°C	

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

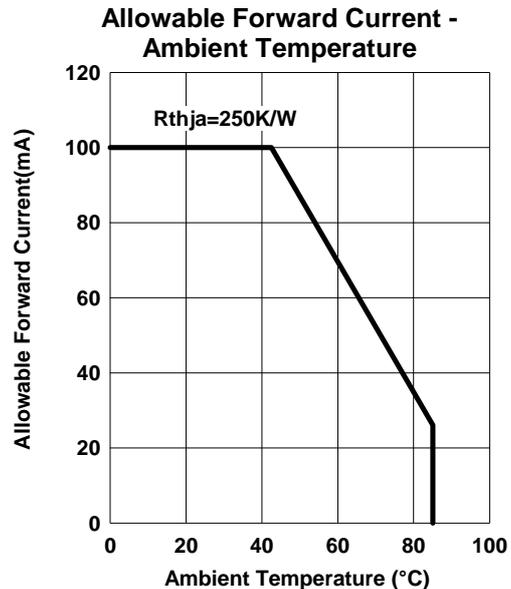
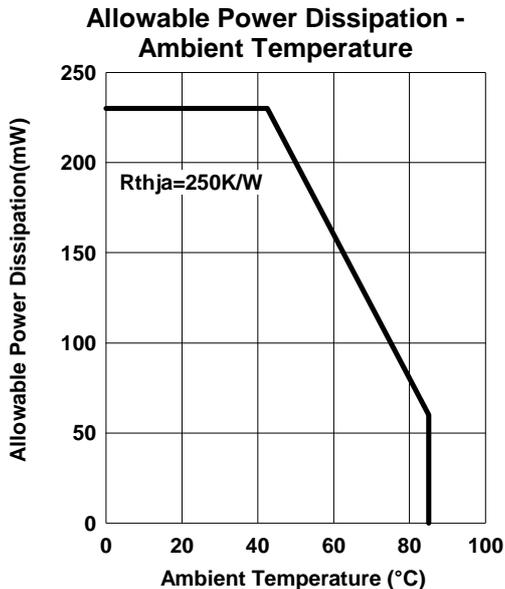
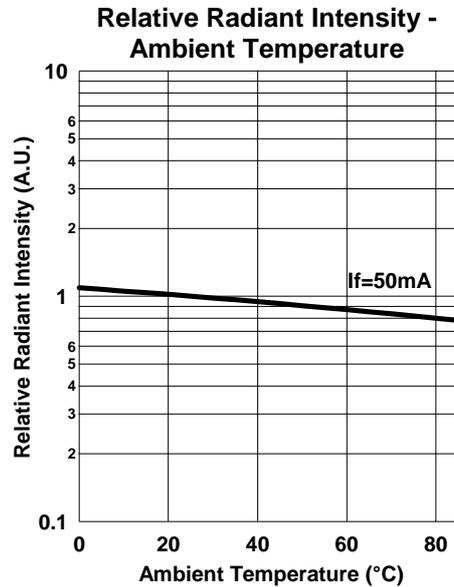
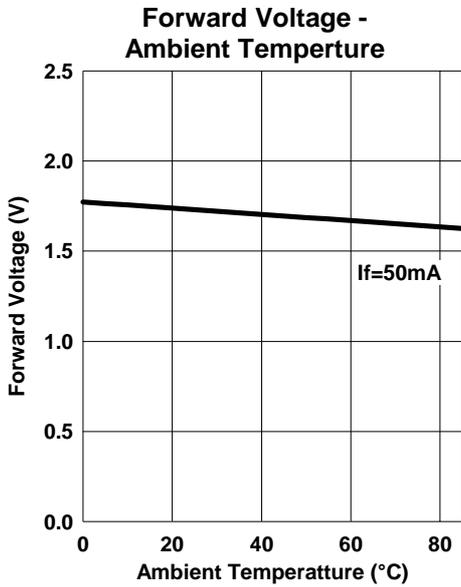
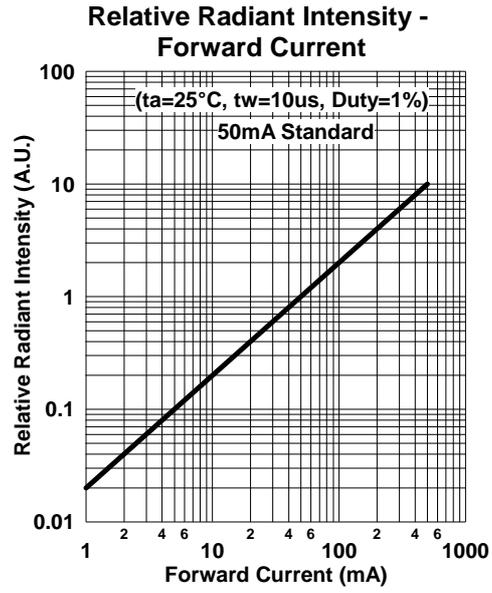
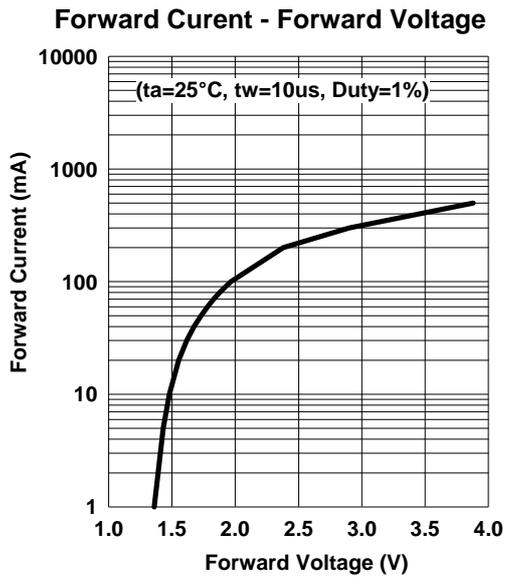
‡Thermal resistance: junction – ambient, leads 7mm, soldered on PCB.

◆ Electro-Optical Characteristics [T<sub>a</sub>=25°C]

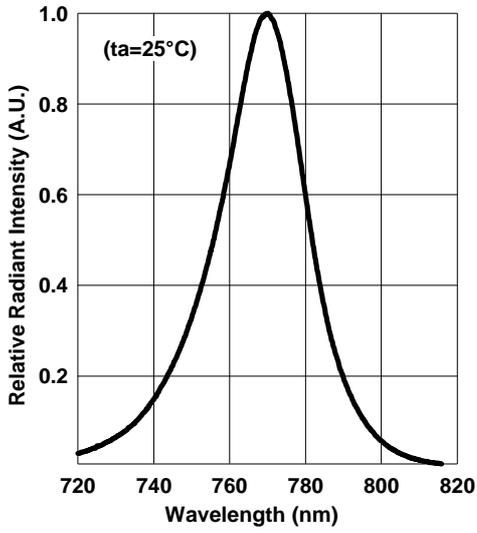
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA DC		1.70	2.00	V
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		2.00	2.30	
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =50mA DC	15.0	20.0		mW
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		40.0		
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA DC		10		mW/sr
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		20		
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA DC	755	770	785	nm
Half Width	Δλ	I <sub>F</sub> =50mA DC		30		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA DC		±41		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA DC		50		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA DC		25		ns

‡Total Radiated Power is measured by Photodyne #500

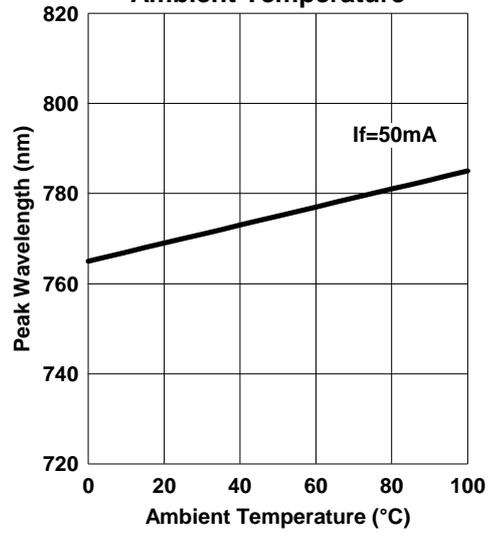
‡Radiant Intensity is measured by Tektronix J-6512.



**Relative Spectral Emission**



**Peak Wavelength - Ambient Temperature**



**Radiation Characteristics**

