

# L690-\_\_AU Infrared LED Lamp

This series of L690-\_\_AU is a GaAlAs LED mounted on a lead frame and encapsulated in various types of epoxy lens which offer different design settings.  
On forward bias, it emits a high power radiation of typical 5mW with a peak wavelength at 690nm.

## 1) Specifications

- |                     |                   |
|---------------------|-------------------|
| (1) Chip material   | AlGaAs            |
| (2) Peak wavelength | 690nm             |
| (3) Package         | Clear epoxy resin |
| (4) Lead frame      | Soldered          |

## 2) Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	110	mW	Ta=25°C
Forward Current	IF	50	mA	Ta=25°C
Pulse Forward Current	IFP	200	mA	Ta=25°C
Reverse Voltage	VR	5	V	Ta=25°C
Operating Temperature	TOPR	-30 ~ +85	°C	Ta=25°C
Storage Temperature	TSTG	-30 ~ +100	°C	
Soldering Temperature	TSOL	260	°C	

## 3) Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=20mA		1.9	2.3	V
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power	PO	IF=20mA	3.0	5.0		mW
Peak Wavelength	$\lambda P$	IF=20mA	675	690	705	nm
Half Width	$\Delta\lambda$	IF=20mA		20		nm
Rise Time	tr	IF=20mA		80		ns
Fall Time	tf	IF=20mA		80		ns

## 4) Characteristics of Radiant Intensity [Ta=25°C]

Type	Viewing Half Angle	Radiant Intensity IF=20mA unit: mW/sr			Outer Dimension	
		Minimum	Typical	Maximum	Dimension	Figure
L690-01AU	±10°		30		Φ5	1
L690-02AU	±5°		45		Φ5	2
L690-03AU	±15°		25		Φ5	3
L690-04AU	±20°		15		Φ5	4
L690-05AU	±40°		2		Φ5	5
L690-06AU	±6°		40		Φ5	6
L690-09AU	±25°(Long)		20		Φ5	7
	±15°(Short)				Oval	
L690-31AU					Φ3	8
L690-33AU	±15°		10		Φ3	9
L690-34AU					Φ3	10
L690-36AU	±30°		5		Φ3	11
L690-41AU					Φ4	12
L690-42AU					Φ4	12

‡ Radiant Intensity is measured by Tektronix J-16.

‡ Total Radiated Power is measured by Photodyne #500.