

# L940-\_\_ \_\_V Infrared LED Lamp

This series of L940-\_\_ \_\_V is a GaAs 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 40mW with a peak wavelength at 940nm.

## 1) Specifications

(1) Chip material	GaAs	(4) Package	Clear epoxy resin
(2) Chip Size	0.4mm*0.4mm	(5) Lead frame	Soldered
(3) Peak wavelength	940nm		

## 2) Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	140	mW	Ta=25°C
Forward Current	IF	100	mA	Ta=25°C
Pulse Forward Current	IFP	1000	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=50mA DC		1.30	1.45	V
		IF=100mA, tp=20ms		1.40	1.65	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power	PO	IF=50mA DC	16.0	20.0		mW
		IF=100mA, tp=20ms		40.0		
Peak Wavelength	$\lambda_P$	IF=50mA DC		940		nm
Half Width	$\Delta\lambda$	IF=50mA DC		50		nm
Rise Time	tr	IF=50mA DC		1000		ns
Fall Time	tf	IF=50mA DC		500		ns

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

Type	Viewing Half Angle	Radiant Intensity IF=100mA, tp=20ms unit: mW/sr			Outer Dimension	
		Minimum	Typical	Maximum	Dimension	Figure
L940-01V	±10°		130		Φ5	1
L940-02V	±5°		160		Φ5	2
L940-03V	±15°		110		Φ5	3
L940-04V	±20°		50		Φ5	4
L940-05V	±40°		14		Φ5	5
L940-06V	±7°		180		Φ5	6
L940-09V	±25°(Long)		80		Φ5	7
	±15°(Short)			Oval		
L940-31V					Φ3	8
L940-33V	±15°		50		Φ3	9
L940-34V					Φ3	10
L940-36V	±30°		26		Φ3	11
L940-41V					Φ4	12
L940-42V					Φ4	12

‡ Radiant Intensity is measured by Tektronix J-16.

‡ Total Radiated Power is measured by Photodyne #500.