



L870-__US (LN870-__US) Infrared LED Lamp

This series of L870-__US 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 18W with a peak wavelength at 870nm.

1) Specifications

- (1) Chip material AlGaAs
- (2) Peak wavelength 870nm
- (3) Package Clear epoxy resin
- (4) Lead frame Soldered

2) Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	150	mW	T _a =25°C
Forward Current	I _F	100	mA	T _a =25°C
Pulse Forward Current	I _{FP}	1000	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-30 ~ +85	°C	T _a =25°C
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	260	°C	

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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA		1.45	1.7	V
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =50mA	15.0	18.0		mW
Peak Wavelength	λ _P	I _F =50mA		870		nm
Half Width	Δλ	I _F =50mA		35		nm
Rise Time	t _r	I _F =50mA		15		ns
Fall Time	t _f	I _F =50mA		10		ns

4) Characteristics of Brightness [T_a=25°C]

Type	Viewing Half Angle	Radiant Intensity I _F =50mA unit: mW/sr			Outer Dimension	
		Minimum	Typical	Maximum	Dimension	Figure
L870-01US	±10°		75		φ5	1
L870-02US	±5°		110		φ5	2
L870-03US	±15°		70		φ5	3
L870-04US	±20°		40		φ5	4
L870-05US	±40°		12		φ5	5
L870-06US	±7°		120		φ5	6
L870-09US	±25°(Long)		45		φ5	7
	±15°(Short)				Oval	
L870-33US	±15°		35		φ3	9
L870-36US	±30°		20		φ3	10

‡ Radiant Intensity is measured by Tektronix J-16.

‡ Total Radiated Power is measured by Photodyne #500.