L810-_ _AU Infrared LED Lamp

This series of L810-_ _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 18mW with a peak wavelength at 810nm.

1) Specifications

(1) Chip material	AlGaAs
(2) Peak wavelength	810nm
(3) Package	Clear epoxy resin
(4) Lead frame	Soldered

2) Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	170	mW	Ta=25°C
Forward Current	IF	100	mA	Ta=25°C
Pulse Forward Current	IFP	500	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		1.60	1.80	V
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power	PO	IF=50mA	13.0	18.0		mW
Peak Wavelength	λP	IF=50mA		810		nm
Half Width	Δλ	IF=50mA		35		nm
Rise Time	tr	IF=50mA		60		ns
Fall Time	tf	IF=50mA		40		ns

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

Type	Viewing Half Angle	Radiant Intensity IF=50mA unit: mW/sr			Outer Dimension	
		Minimum	Typical	Maximum	Dimension	Figure
L810-01AU	±10°		90		Φ5	1
L810-02AU	±5°		100		Φ5	2
L810-03AU	±15°		70		Φ5	3
L810-04AU	±20°		35		Φ5	4
L810-05AU	±40°		10		Φ5	5
L810-06AU	±6°		110		Φ5	6
L810-09AU	±25°(Long) ±15°(Short)		60		Φ5 Oval	7
L810-31AU					Φ3	8
L810-33AU	±15°		40		Φ3	9
L810-34AU					Φ3	10
L810-36AU	±30°		20		Φ3	11
L810-41AU	±16°		60		Φ4	12
L810-42AU	±22°		35		Φ4	12

‡ Radiant Intensity is measured by Tektronix J-16.
‡ Total Radiated Power is measured by Photodyne #500.

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