

L810N-06-55 Infrared LED Lamp for High Current Drive

L810N-06-55 is an AlGaAs LED mounted on a lead frame with a clear epoxy lens.

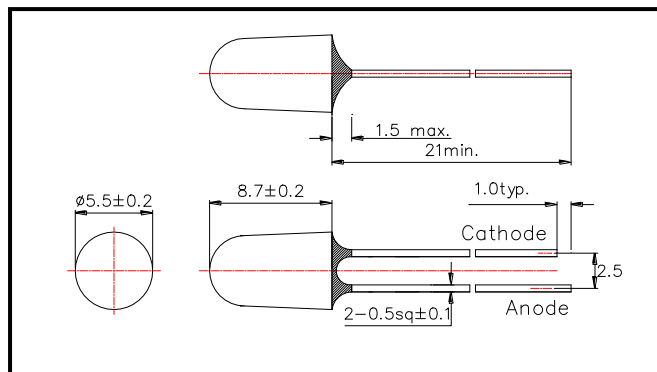
On forward bias, it emits a spectral band of radiation which peaks at 810nm.

These devices are intended to be operated at pulsed current of 2A under maximum 4.0V.

◆ Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. L810N-06-55
- 3) Chip
- (1) Chip Material AlGaAs
- (2) Chip Dimension 550um*50um
- (3) Peak Wavelength 810nm typ.
- 4) Package
- (1) Type Φ5mm clear molding
- (2) Resin Material Epoxy Resin
- (3) Lead Frame Soldered

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	170	mW	T _a =25°C
Forward Current	I _F	100	mA	T _a =25°C
Pulse Forward Current	I _{FP}	2000	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Junction Temperature	T _J	100	°C	
Thermal Resistance	R _{thjp}	250	K/W	
Operating Temperature	T _{OPR}	-40 ~ +85	°C	
Storage Temperature	T _{STG}	-40 ~ +100	°C	
Soldering Temperature	T _{SOL}	265	°C	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 265°C

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

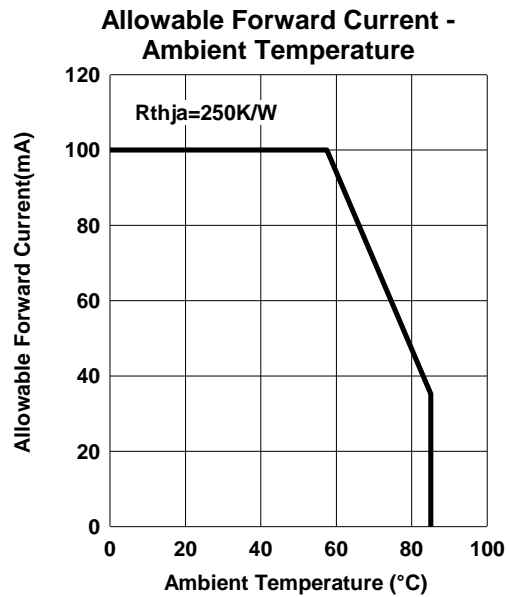
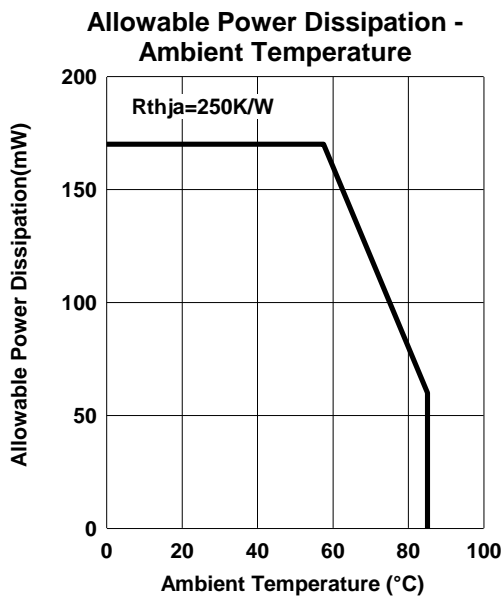
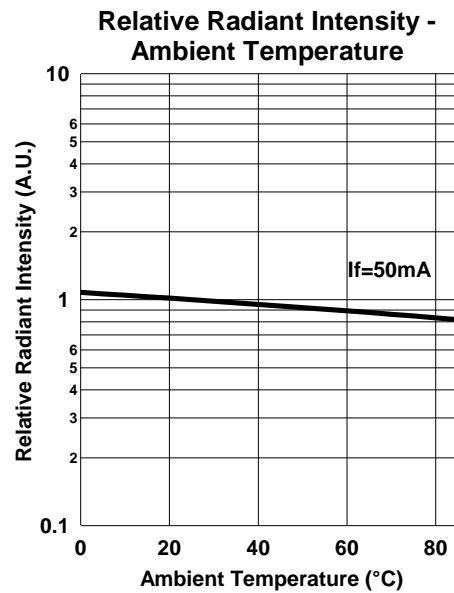
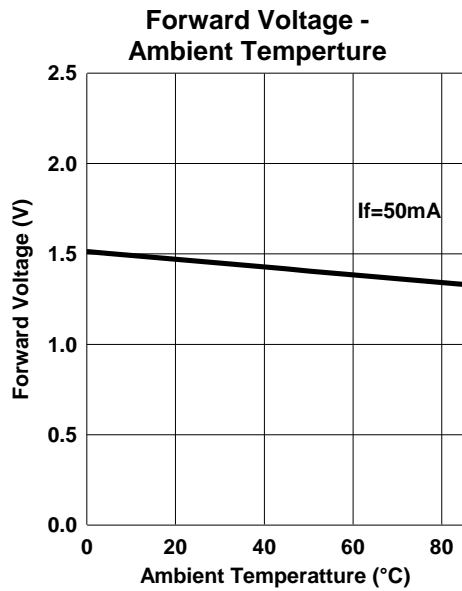
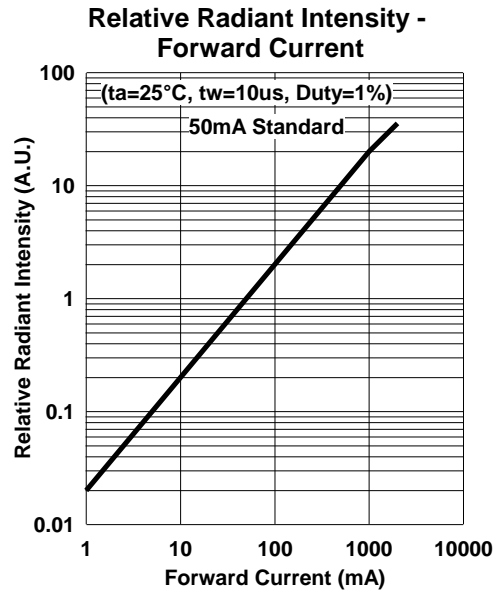
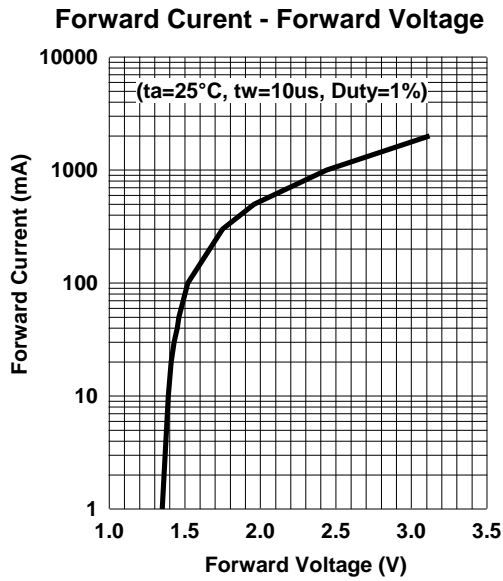
◆ Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA		1.50	1.55	V
		I _F =100mA		1.55	1.70	
Reverse Current	I _R	I _{FP} =2000mA		3.0	4.0	uA
		V _R =5V			10	
Total Radiated Power	P _o	I _F =50mA	16	20		mW
		I _F =100mA		40		
		I _{FP} =2000mA		800		
Radiant Intensity	I _E	I _F =50mA		100		mW/sr
		I _F =100mA		200		
		I _{FP} =2000mA		3800		
Peak Wavelength	λ _P	I _F =50mA	800	810	820	nm
Half Width	Δλ	I _F =50mA		35		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±9		deg.
Rise Time	t _r	I _F =50mA		25		ns
Fall Time	t _f	I _F =50mA		15		ns

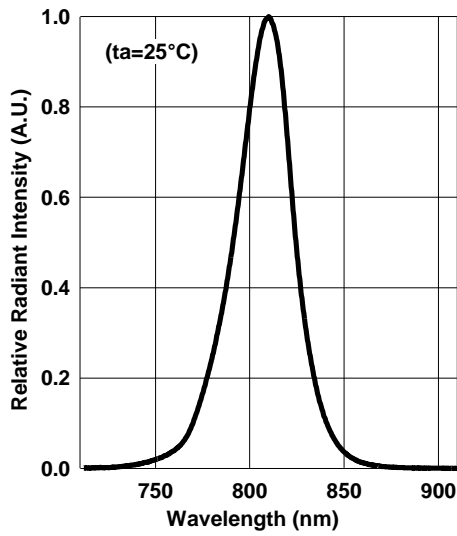
‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Total Radiated Power is measured by Photodyne #500

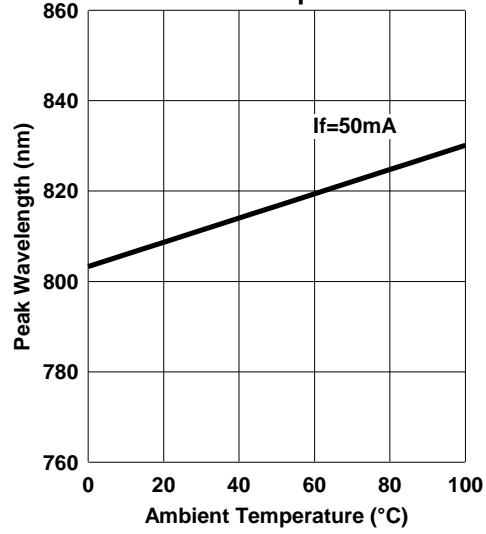
‡Radiant Intensity is measured by Tektronix J-6512.



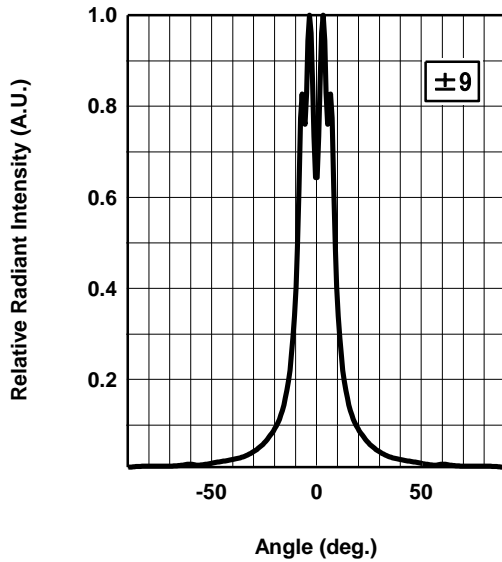
Relative Spectral Emission



Peak Wavelength - Ambient Temperature



Radiation Characteristics



Forward Current - Pulse Duration

