

L810N-04CU Infrared LED Lamp

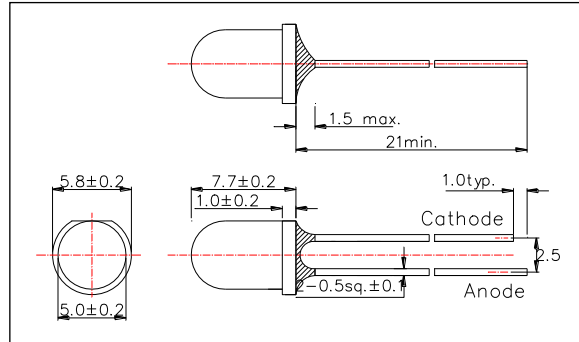
L810N-04CU is an AlGaAs LED mounted on a lead frame with a clear epoxy lens and is 46mW type of output power and 200mW/sr type of radiant intensity.

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

<Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L810N-04CU
3. Chip:
 - Chip material: AlGaAs
 - Peak Wavelength: 810nm typ.
4. Package
 - Type: Φ5mm Clear Molding
 - Resin Material: Epoxy Resin
 - Lead Frame: Soldered(Lead Free)

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25°C]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	170	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	100	°C
Thermal Resistance**	Rthjp	160	K/W
Operating Temperature	TOPR	-40 ~ +85	°C
Storage Temperature	TSTG	-40 ~ +100	°C
Soldering Temperature***	TSOL	265	°C

* Duty=1% and Pulse Width=10us.

** Junction - ambient, leads 7mm, soldered on PCB

*** Soldering condition must be completed within 3 second at 265°C.

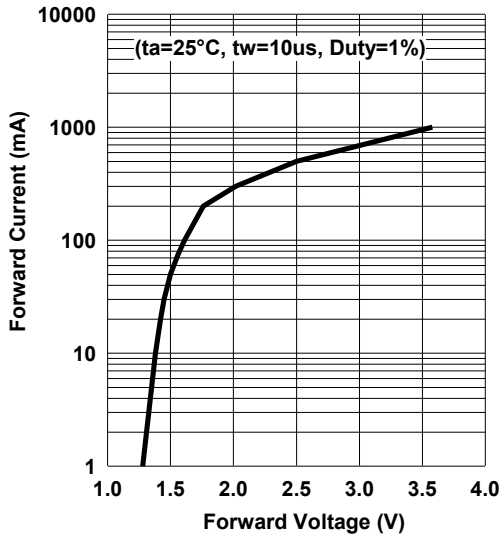
Electro-Optical Characteristics [Ta=25°C]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.50	1.70	V
		IF=100mA, tp=20ms		1.60	1.90	
Total Radiated Power*	PO	IF=50mA DC	18	23		mW
		IF=100mA, tp=20ms		46		
Radiant Intensity**	IE	IF=50mA DC		55		mcd
		IF=100mA, tp=20ms		110		
Peak Wavelength	λP	IF=50mA DC	800	810	820	nm
Half Width	Δλ	IF=50mA DC		35		nm
Viewing Half Angle	θ1/2	IF=50mA DC		±16		deg
Rise Time	Tr	IF=50mA DC		20		ns
Fall Time	tf	IF=50mA DC		15		ns

* Measured by Photodyne #500

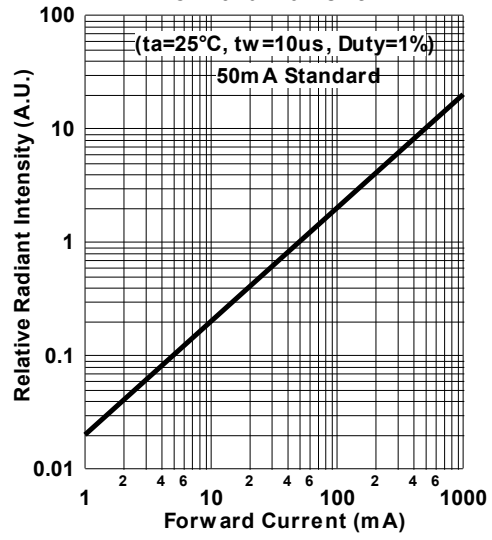
** Measured by Tektronix J-6512



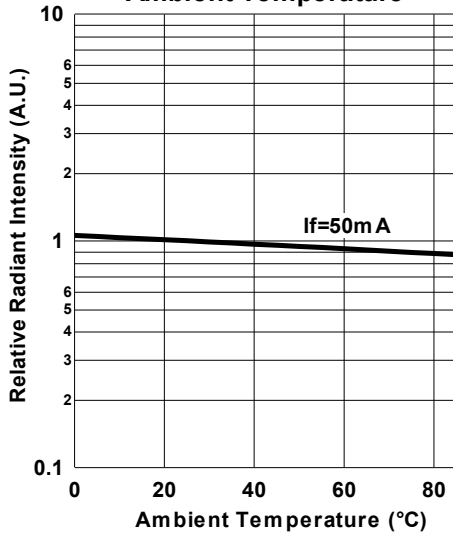
Forward Current - Forward Voltage



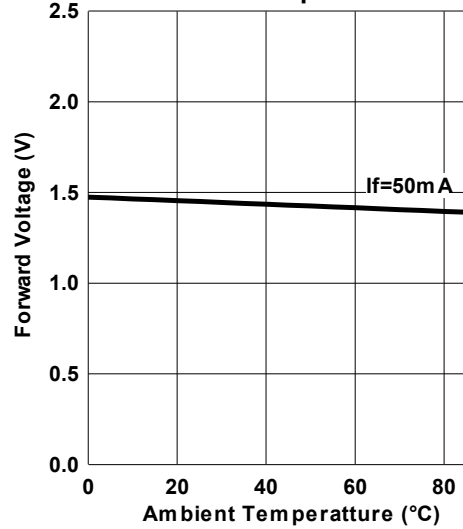
Relative Radiant Intensity - Forward Current



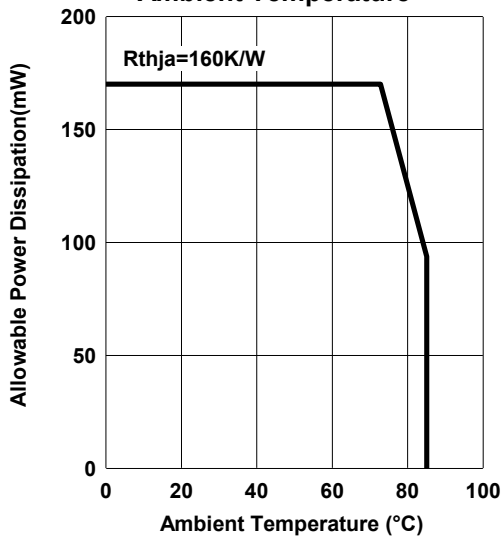
Relative Radiant Intensity - Ambient Temperature



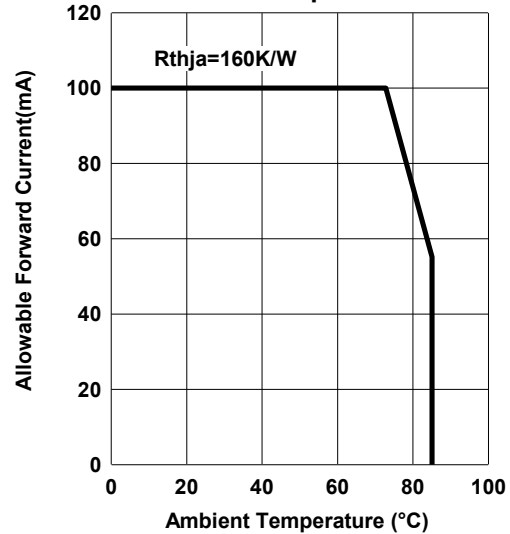
Forward Voltage - Ambient Temperature



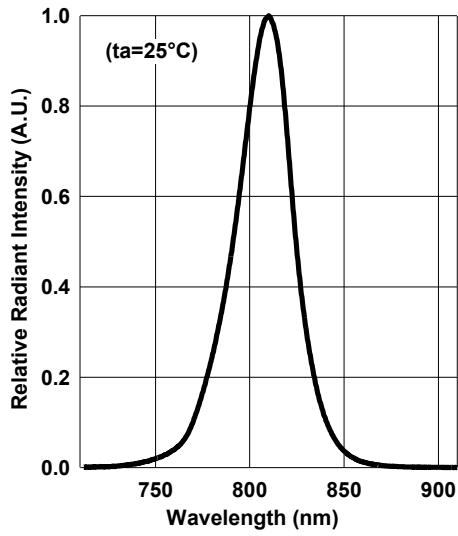
Allowable Power Dissipation - Ambient Temperature



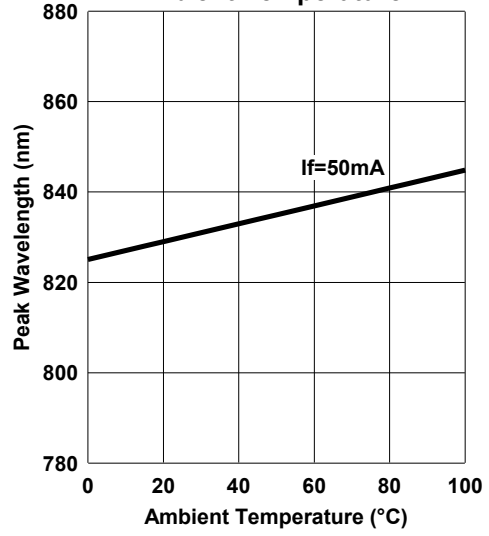
Allowable Forward Current - Ambient Temperature



Relative Spectral Emission



Peak Wavelength - Ambient Temperature



Radiation Characteristics

