Lead (Pb) Free Product – RoHS Compliant

L810-01AU

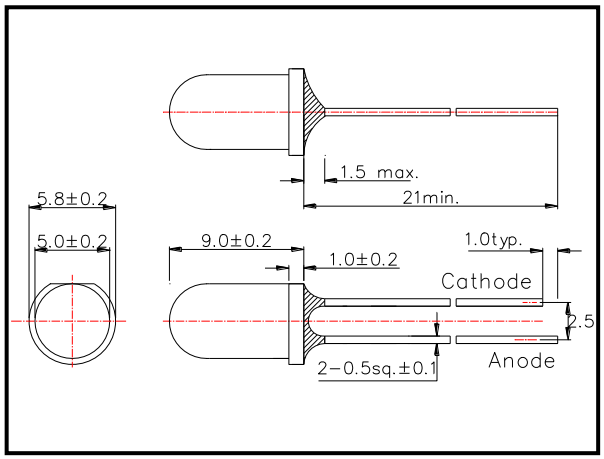
Infrared LED Lamp

L810-01AU 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.

Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L810-01AU
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	810nm typ.
4) Package	
(1) Type	Φ 5mm clear molding
(2) Resin Material	Epoxy Resin
(3) Lead Frame	Soldered (Lead Frame)

Outer dimension (Unit: mm)



Absolute Maximum Ratings [Ta=25°C]

Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	P_D	200	mW
Forward Current	I_F	100	mA
Pulse Forward Current	I_{FP}	500	mA
Reverse Voltage	V_R	5	V
Thermal Resistance	R_{thja}	250	K/W
Junction Temperature	T_j	120	°C
Operating Temperature	T_{OPR}	-40 ~ +100	°C
Storage Temperature	T_{STG}	-40 ~ +100	°C
Soldering Temperature	T_{SOL}	250	°C

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

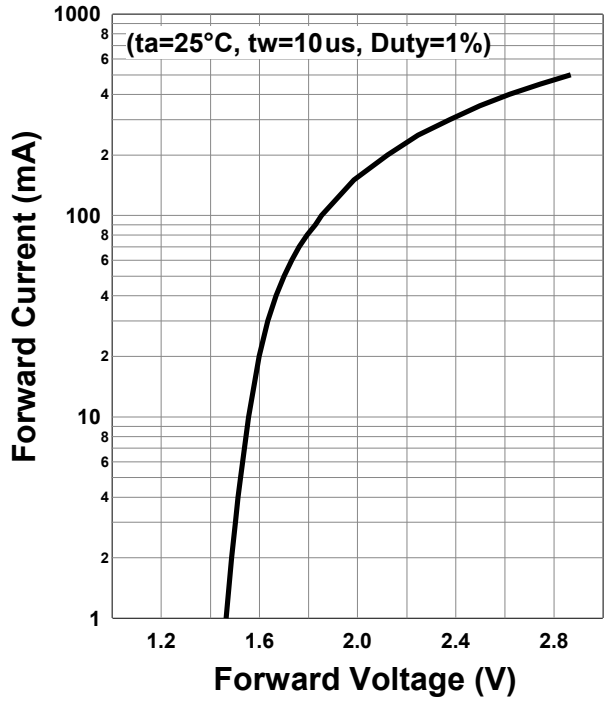
‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C

Electro-Optical Characteristics [Ta=25°C typ.]

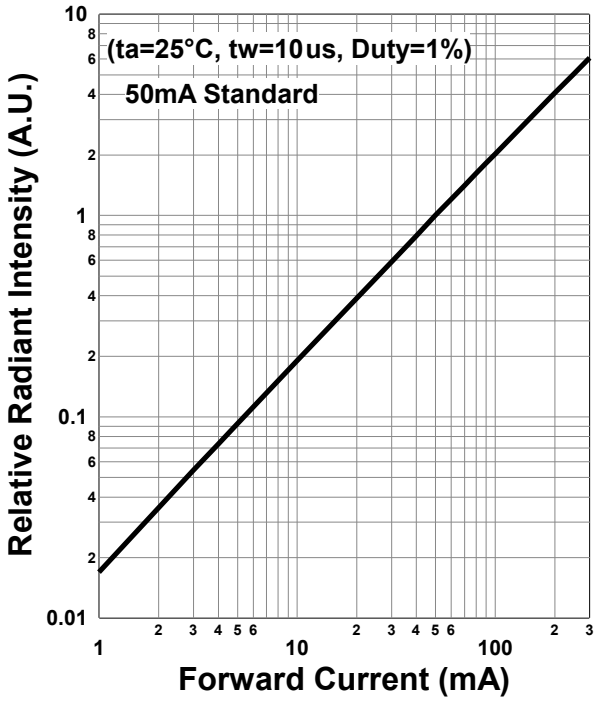
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	I_F=50mA		1.7	2.0	V
	V_{FP}	I_{FP}=500mA		2.9		
Radiated Power	P_O	I_F=50mA		27		mW
		I_{FP}=500mA		260		
Radiant Intensity	I_E	I_F=50mA		100		mW/sr
		I_{FP}=500mA		970		
Peak Wavelength	λ_P	I_F=50mA	800	810	820	nm
Half Width	$\Delta\lambda$	I_F=50mA		29		nm
Viewing Half Angle	$\theta 1/2$	I_F=50mA		±8		deg.
Rise Time	tr	I_F=50mA		35		ns
Fall Time	tf	I_F=50mA		30		ns

‡Radiated Power is measured by S.3584-08
‡Radiant Intensity is measured by CIE127-2007 Condition B.

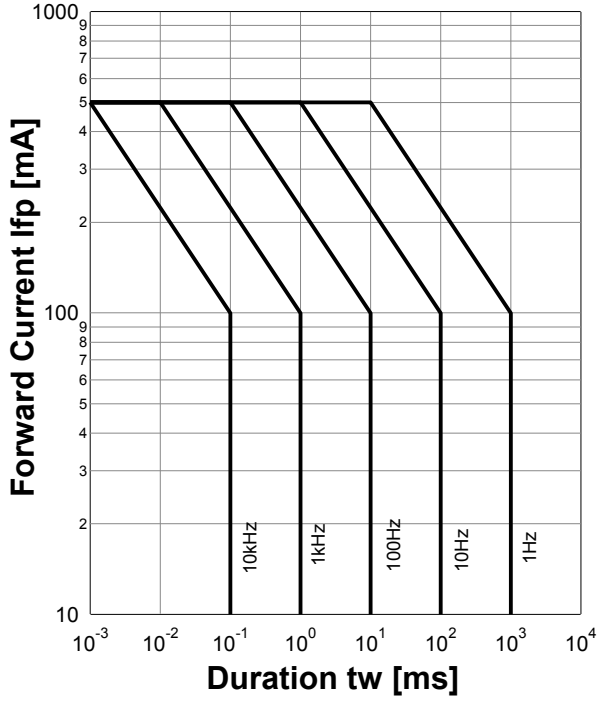
Forward Curent - Forward Voltage



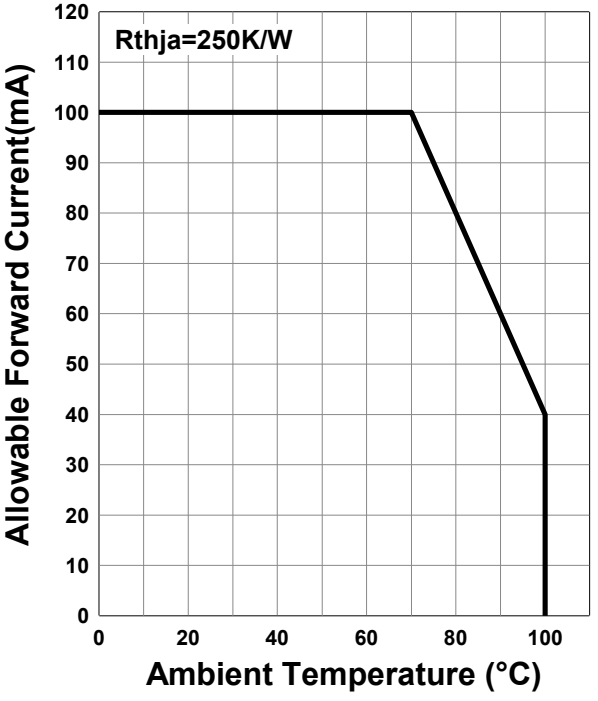
Relative Radiant Intensity - Forward Current



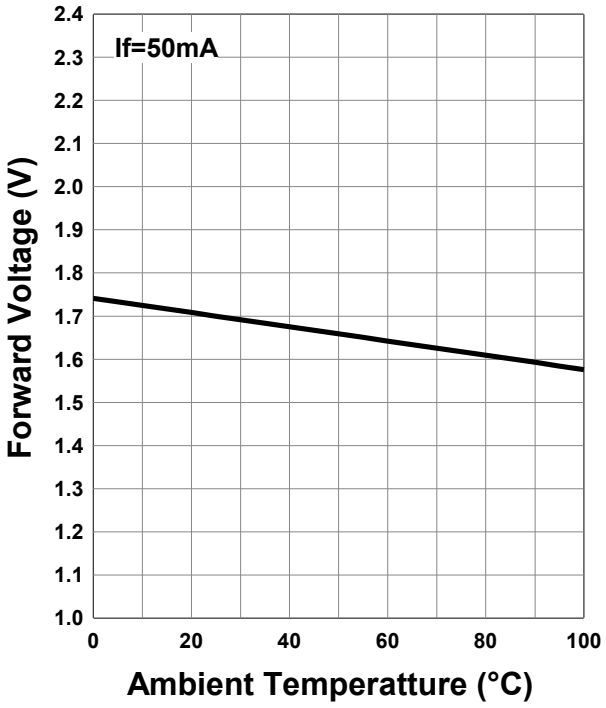
Forward Current - Pulse Duration



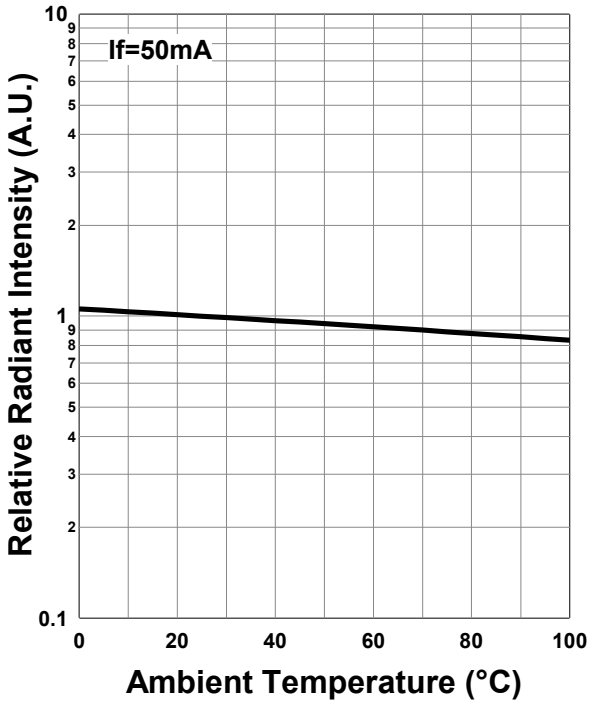
Allowable Forward Current - Ambient Temperature



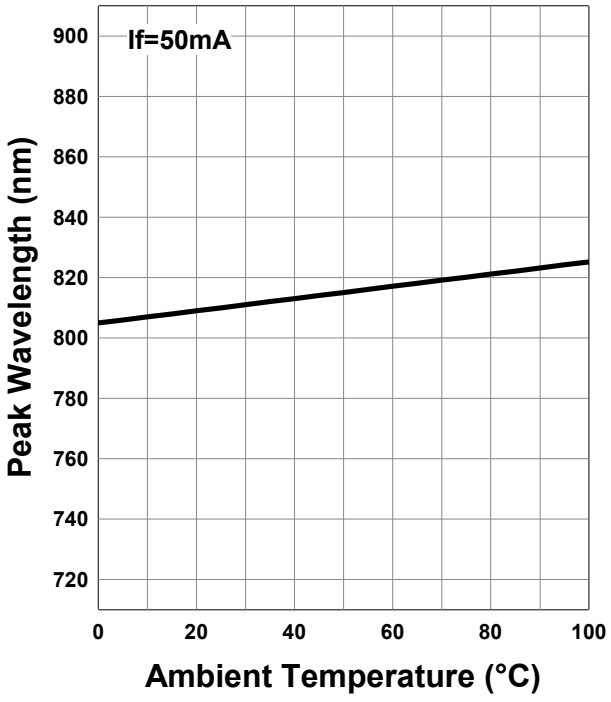
Forward Voltage - Ambient Temperture



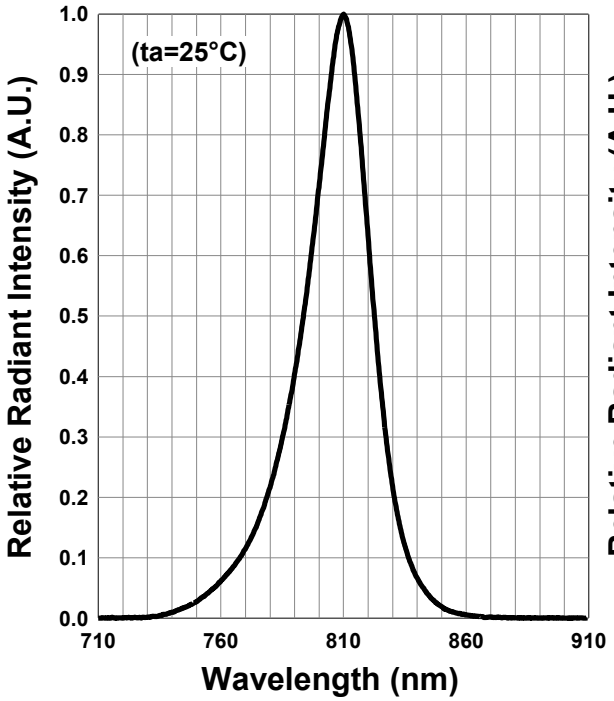
Relative Radiant Intensity - Ambient Temperature



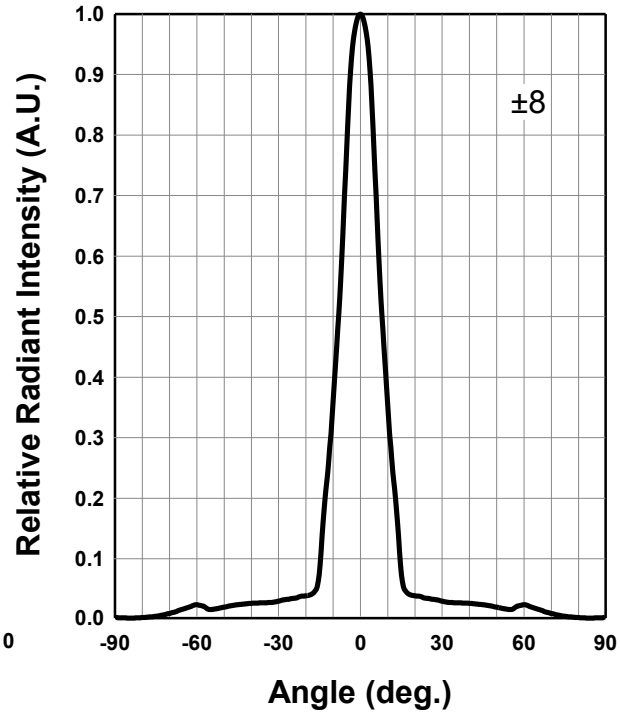
Peak Wavelength - Ambient Temperature



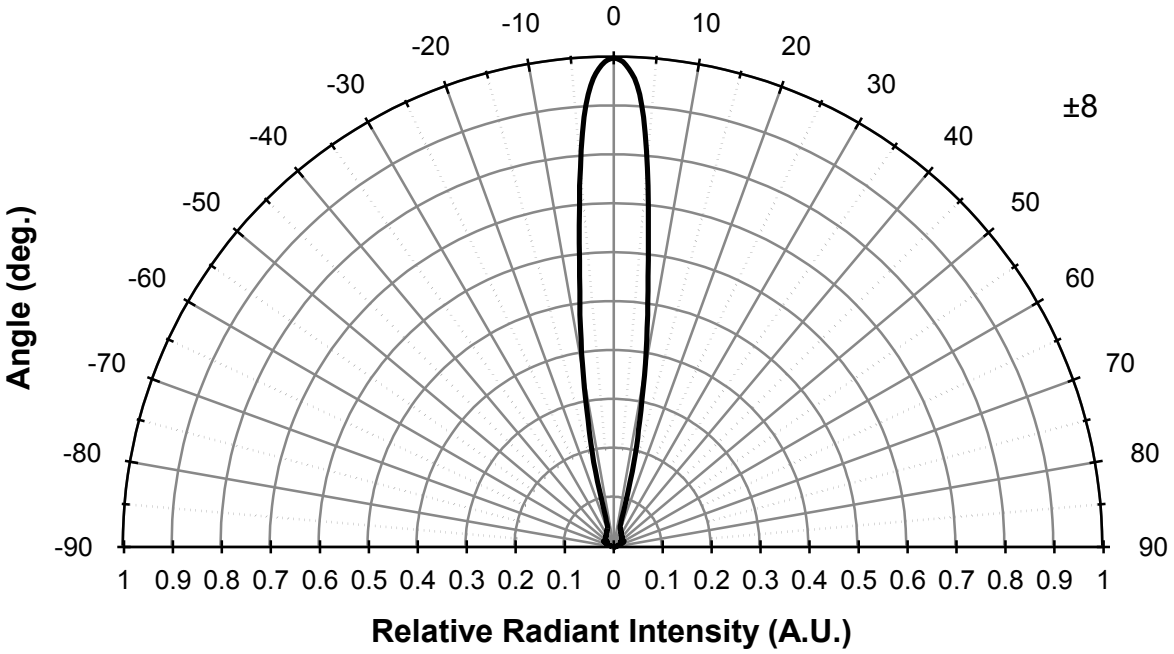
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



Disclaimer

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements. Product data and parameters may vary by user application and over time.

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