Lead (Pb) Free Product – RoHS Compliant

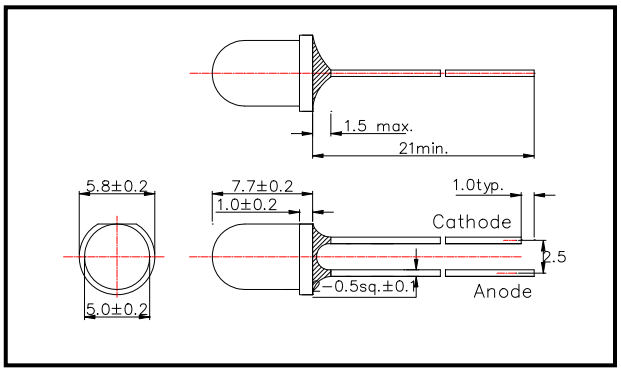
L940-04CU Infrared LED Lamp

L940-04CU is an AlGaAs LED mounted on a copper made lead frame with a clear epoxy lens and is 40mW typical of output power at 940nm.

♦Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L940-04CU
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	940nm typ.
4) Package	
(1) Type	Φ5mm clear molding
(2) Resin Material	Epoxy Resin
(3) Lead Frame	Cu made

♦Outer dimension (Unit: mm)

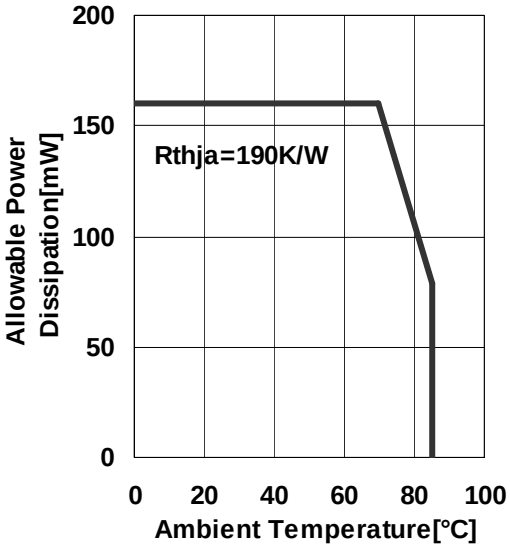


♦Absolute Maximum Ratings

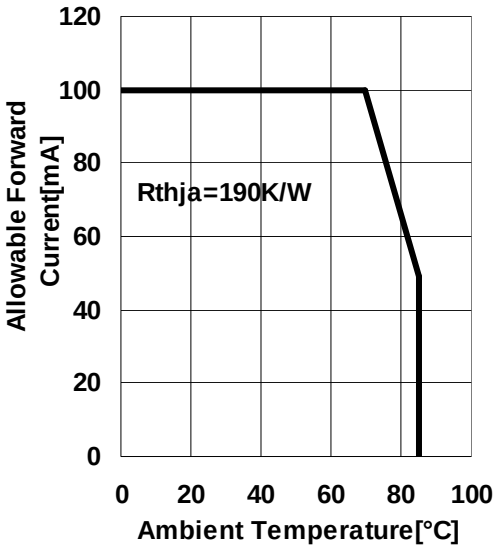
Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	160	mW	Ta=25°C
Forward Current	I_F	100	mA	Ta=25°C
Pulse Forward Current	I_{FP}	1000	mA	Ta=25°C
Reverse Voltage	V_R	5	V	Ta=25°C
Junction Temperature	T_J	100		
Thermal Resistance	Rthjp	190		
Operating Temperature	T_{OPR}	-30 ~ +85	°C	
Storage Temperature	T_{STG}	-30 ~ +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.

Allowable Power Dissipation-Ambient Temperature



Allowable Forward Current-Ambient Temperature



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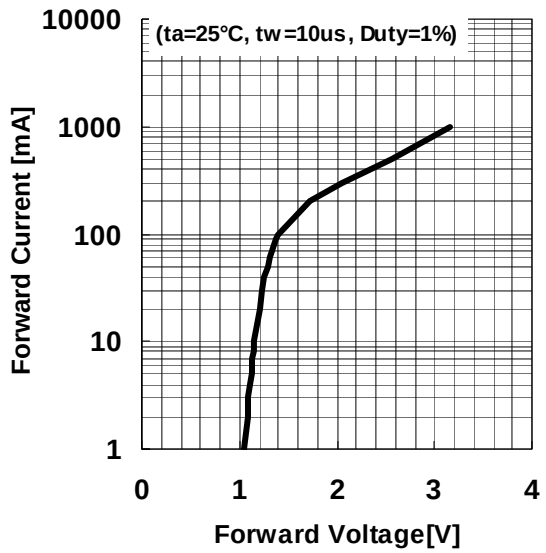
♦Electro-Optical Characteristics [Ta=25°C]

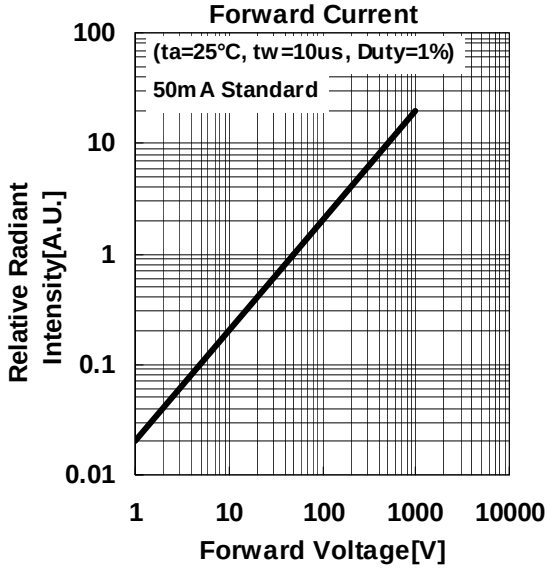
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	I_F=50mA DC		1.30	1.40	V
		I_F=100mA, tp=20ms		1.40	1.6	
Reverse Current	I_R	V_R=5V			10	uA
Total Radiated Power	P_O	I_F=50mA DC	16.0	20.0		mW
		I_F=100mA, tp=20ms		40.0		
Radiant Intensity	I_E	I_F=50mA DC		30		mW/sr
		I_F=100mA, tp=20ms		60		
Peak Wavelength	λ_P	I_F=50mA DC	930	940	955	nm
Half Width	$\Delta\lambda$	I_F=50mA DC		50		nm
Viewing Half Angle	$\theta_{1/2}$	I_F=50mA DC		±18		deg.
Rise Time	tr	I_F=50mA DC		1000		ns
Fall Time	tf	I_F=50mA DC		500		ns

‡Total Radiated Power is measured by Photodyne #500
‡Radiant Intensity is measured by Tektronix J-6512

Forward Current - Forward Voltage



Relative Radiant intensity - Forward Current



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