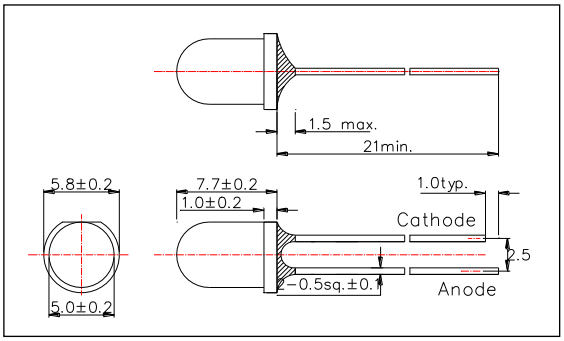
L940-04CU
Infrared LED Lamp

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

<Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L940-04CU
3. Chip:
   - Chip material: AlGaAs
   - Peak Wavelength: 940nm typ.
4. Package
   - Type: Φ5mm Clear Molding
   - Resin Material: Epoxy Resin
   - Lead Frame: Cu made

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	160	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	100	℃
Thermal Resistance**	Rthja	190	K/W
Operating Temperature	TOPR	-40 ~ +85	℃
Storage Temperature	TSTG	-40 ~ +100	℃
Soldering Temperature***	TSOL	265	℃

* Duty=1% and Pulse Width=10us.
** Junction - ambient, leads 7mm, soldered on PCB.
*** Soldering condition must be completed within 3 second at 265℃.

Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.3	1.4	V
		IF=100mA,t=20ms		1.4	1.6	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=50mA DC	16	20		mW
		IF=100mA,t=20ms		40		
Radiant Intensity**	IE	IF=50mA DC		30		mW/sr
		IF=100mA,t=20ms		60		
Peak Wavelength	λP	IF=50mA DC	930	940	955	nm
Half Width	Δλ	IF=50mA DC		50		nm
Viewing Half Angle	θ1/2	IF=50mA DC		±18		deg
Rise Time	tr	IF=50mA DC		1000		ns
Fall Time	tf	IF=50mA DC		500		ns

* Measured by Photodyne #500
** Measured by Tektronix J-6512

RoHS Compliant

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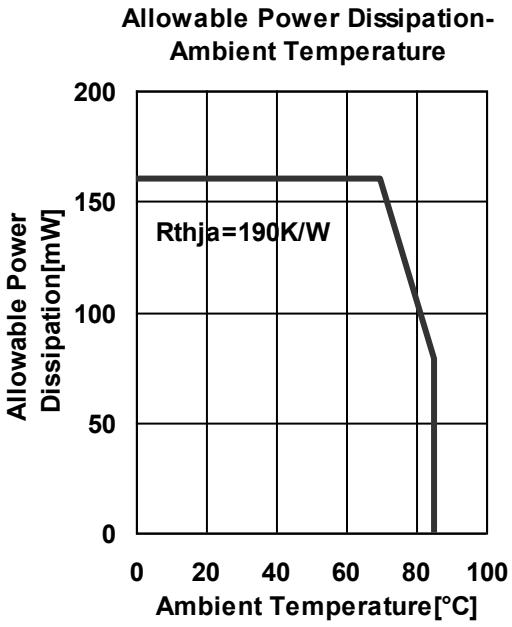
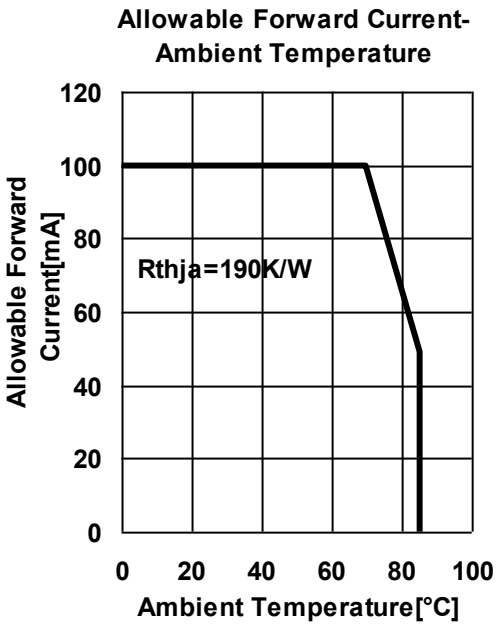
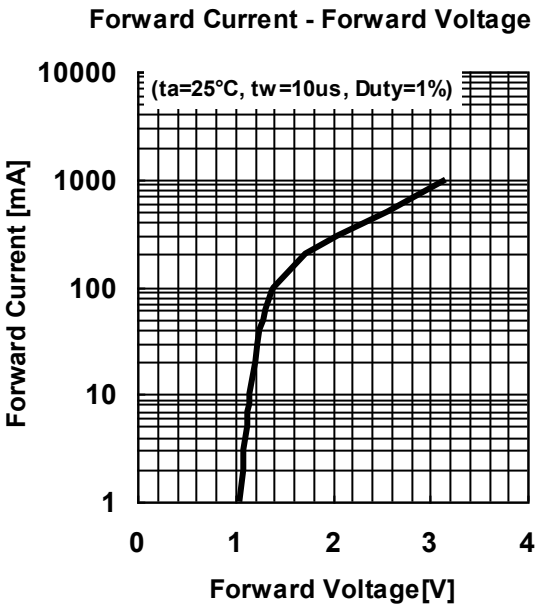
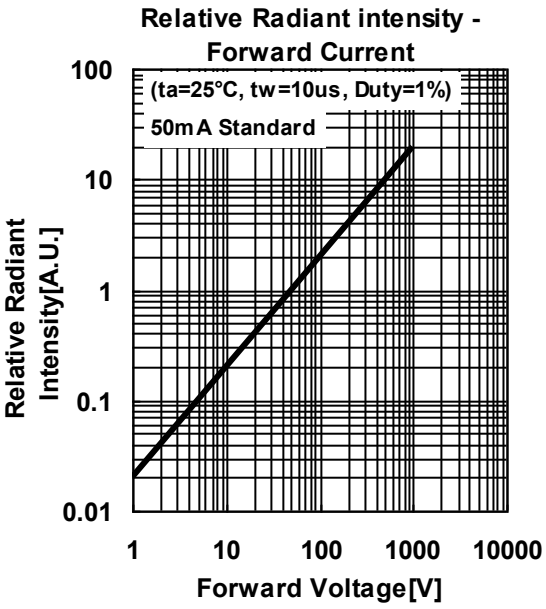

Allowable Power Dissipation-
Ambient Temperature
Allowable Power Dissipation[mW]
200
150
100
50
0
Rthja=190K/W
0
20
40
60
80
100
Ambient Temperature[°C]


Allowable Forward Current-
Ambient Temperature
Allowable Forward Current[mA]
120
100
80
60
40
20
0
Rthja=190K/W
0
20
40
60
80
100
Ambient Temperature[°C]


Forward Current - Forward Voltage
Forward Current [mA]
10000
1000
100
10
1
(ta=25°C, tw=10us, Duty=1%)
0
1
2
3
4
Forward Voltage[V]


Relative Radiant intensity -
Forward Current
Relative Radiant Intensity[A.U.]
100
10
1
0.1
0.01
(ta=25°C, tw=10us, Duty=1%)
50mA Standard
1
10
100
1000
10000
Forward Voltage[V]