

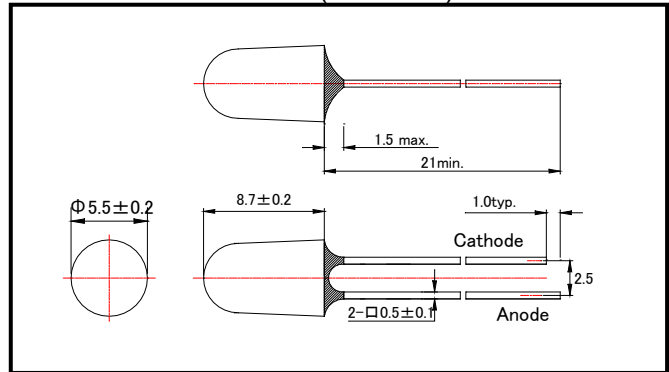
# L850D-06-50L6CU Infrared LED Lamp for High Radiant Intensity

L850D-06-50L6CU is an AlGaAs LED mounted on a copper made lead frame with a clear epoxy lens. On forward bias, it emits a spectral band of radiation which peaks at 850nm. These devices are intended to be operated at pulsed current of 2A under 3.5V typ.

◆ Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. L850D-06-50L6CU
- 3) Chip
  - (1) Chip Material AlGaAs
  - (2) Chip Dimension 500umx500um
  - (3) Peak Wavelength 850nm typ.
- 4) Package
  - (1) Type Φ5mm clear molding
  - (2) Resin Material Epoxy Resin
  - (3) Lead Frame Soldered on Cu made

◆ Outer dimension(Unit: mm)



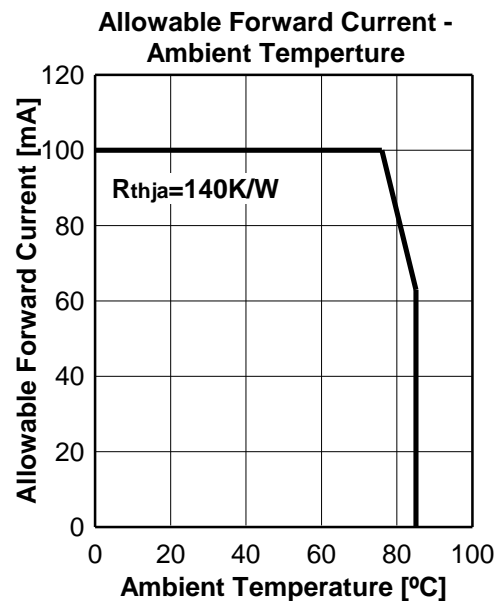
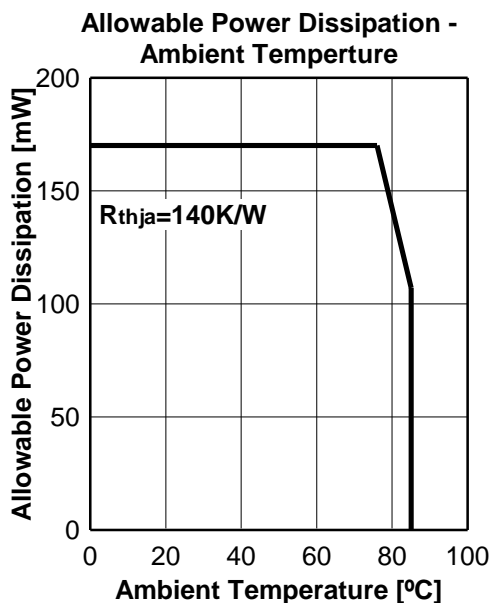
◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	170	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	100	mA	T <sub>a</sub> =25°C
Pulse Forward Current	I <sub>FP</sub>	2000	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	5	V	T <sub>a</sub> =25°C
Junction Temperature	T <sub>J</sub>	100	°C	
Thermal Resistance	R <sub>thja</sub>	140	K/W	
Operating Temperature	T <sub>OPR</sub>	-40 ~ +85	°C	
Storage Temperature	T <sub>STG</sub>	-40 ~ +100	°C	
Soldering Temperature	T <sub>SOL</sub>	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.



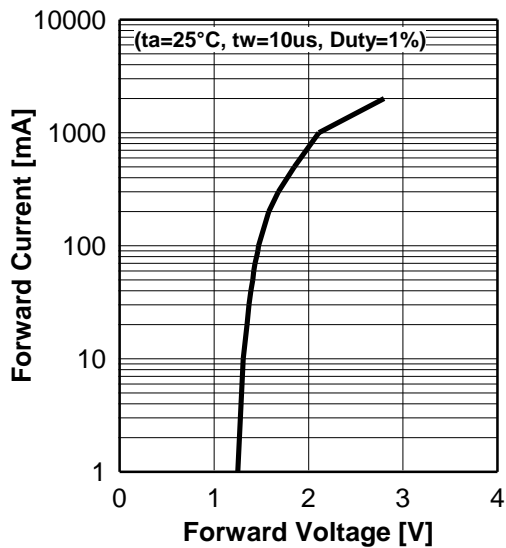
◆ Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF/VFP	IF=50mA		1.45	1.50	V
		IF=100mA, tp=20ms		1.50	1.70	
Reverse Current	IR	IFP=2A		3.4	4.0	uA
		VR=5V			10	
Total Radiated Power	Po	IF=50mA	20.0	28.0		mW
		IF=100mA, tp=20ms	40	56		
Radiant Intensity	IE	IF=50mA		220		mW/sr
		IF=100mA, tp=20ms		440		
		IFP=2A		8000		
Peak Wavelength	$\lambda_P$	IF=50mA	835	850	865	nm
Half Width	$\Delta\lambda$	IF=50mA		40		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA		$\pm 4$		°
Rise Time	tr	IF=50mA		15		ns
Fall Time	tf	IF=50mA		10		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

