

L850D-06-50L6CU

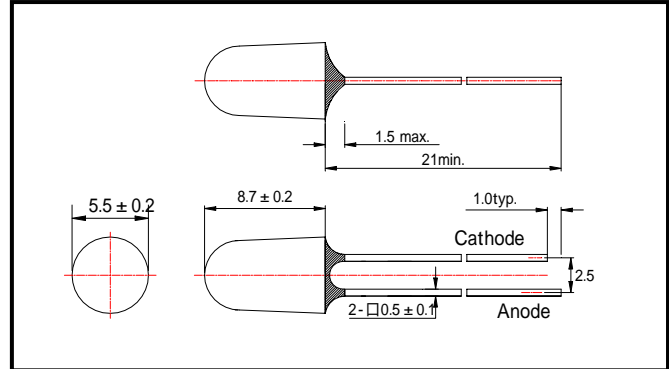
Infrared LED Lamp for High Radiant Intensity

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)



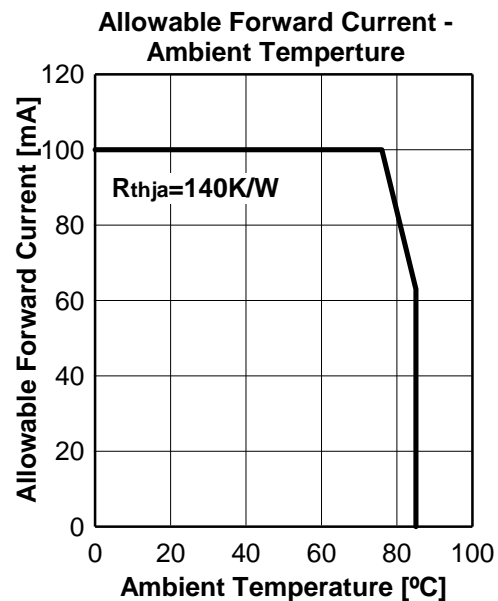
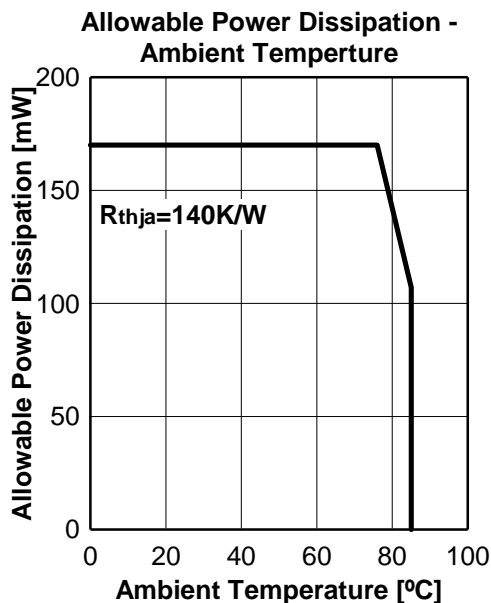
◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	170	mW	$T_a=25^\circ\text{C}$
Forward Current	I_F	100	mA	$T_a=25^\circ\text{C}$
Pulse Forward Current	I_{FP}	2000	mA	$T_a=25^\circ\text{C}$
Reverse Voltage	V_R	5	V	$T_a=25^\circ\text{C}$
Junction Temperature	T_J	100	$^\circ\text{C}$	
Thermal Resistance	R_{thja}	140	K/W	
Operating Temperature	T_{OPR}	-40 ~ +85	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-40 ~ +100	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	265	$^\circ\text{C}$	

‡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	V _F /V _{FP}	I _F =50mA		1.45	1.50	V
		I _F =100mA, t _p =20ms		1.50	1.70	
Reverse Current	I _R	I _{FP} =2A		3.4	4.0	uA
		V _R =5V			10	
Total Radiated Power	P _O	I _F =50mA	20.0	28.0		mW
		I _F =100mA, t _p =20ms	40	56		
Radiant Intensity	I _E	I _F =50mA		220		mW/sr
		I _F =100mA, t _p =20ms		440		
		I _{FP} =2A		8000		
Peak Wavelength	λ _P	I _F =50mA	835	850	865	nm
Half Width	Δλ	I _F =50mA		40		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±4		°
Rise Time	t _r	I _F =50mA		15		ns
Fall Time	t _f	I _F =50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.

