

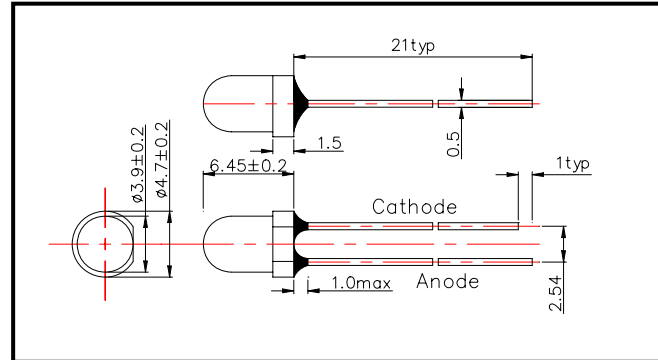
## L850-42UP (LN850-42UP) Infrared LED Lamp

L850-42UP 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 850nm.

### ◆ Specifications

1)Product Name	Infrared LED Lamp
2)Type No.	L850-42UP
3)Chip	
(1)Chip Material	AlGaAs
(2)Chip Size	0.4mm*0.4mm
(3)Peak Wavelength	850nm typ.
4)Package	
(1)Type	Φ4mm clear molding
(2)Resin Material	Epoxy Resin

### ◆ Outer dimension (Unit : mm)



### ◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	160	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>	1000	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	5	V	T <sub>a</sub> =25°C
Operating Temperature	T <sub>OPR</sub>	-30 ~ +85	°C	
Storage Temperature	T <sub>STG</sub>	-30 ~ +100	°C	
Soldering Temperature	T <sub>SOL</sub>	260	°C	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 260°C

### ◆ Electro-Optical Characteristics [T<sub>a</sub>=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA DC		1.50	1.70	V
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		1.55	1.90	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	uA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =50mA DC	18.0	22.0		mW
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		44.0		
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA DC	50	90		mW/sr
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		180		
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA DC	835	850	865	nm
Half Width	Δλ	I <sub>F</sub> =50mA DC		40		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA DC		±16		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA DC		15		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA DC		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.