

# L850-41UP (LN850-41UP) Infrared LED Lamp

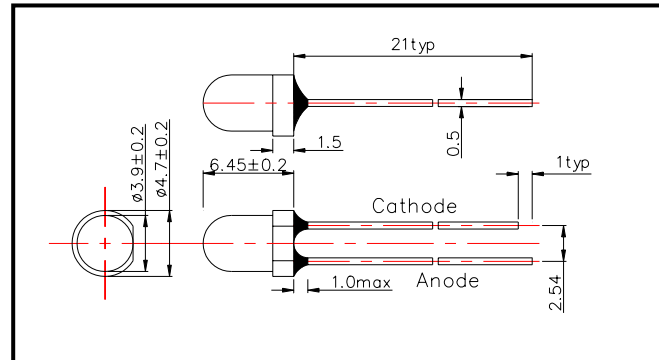
L850-41UP is an AlGaAs LED mounted on a lead frame with a clear epoxy lens.

On forward bias it emits a spectral band of radiation, which peaks at 850nm.

## ◆ Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L850-41UP
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	24.0		mW
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		48.0		
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA DC	30	50		mW/sr
		I <sub>F</sub> =100mA, t <sub>p</sub> =20ms		100		
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		±22		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.