

# FL850-03-80 High Power type LED

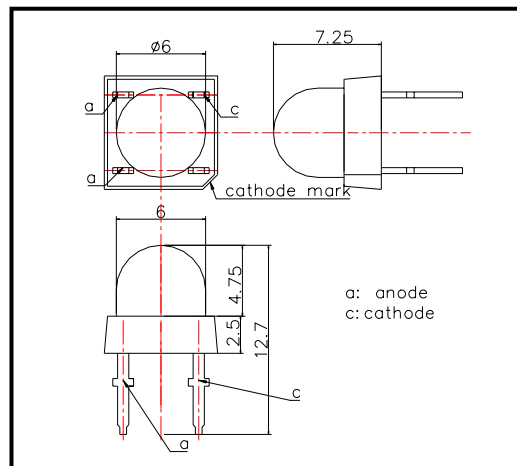
FL850-03-80 is an AlGaAs LED mounted on a lead frame and molded with super beam lens. On forward bias, it emits a band of visible light which peaks 850nm.

These devices are intended to be operated at pulsed current of 4A under maximum 4.5V for stable long life.

◆ Outer dimension (Unit: mm)

## ◆ Specifications

- 1) Product Name Super Flux mold type LED  
 2) Type No. FL850-03-80  
 3) Chip  
 (1) Chip Material GaAlAs  
 (2) Chip Dimension 800um\*800um  
 (3) Peak Wavelength 850nm typ.  
 4) Package  
 (1) Type Super Beam type LED  
 (2) Resin Material Epoxy Resin  
 (3) Lead Frame Soldered



## ◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	310	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	200	mA	T <sub>a</sub> =25°C
Pulse Forward Current	I <sub>FP</sub>	4000	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	10	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> =100mA		1.4	1.5	V
Pulsed Forward Voltage	V <sub>F</sub>	I <sub>FP</sub> =4A		3.3	4.5	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =10V			10	uA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =100mA	35.0	60.0		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =100mA		230		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	840	850	860	nm
Half Width	Δλ	I <sub>F</sub> =50mA		40		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA		±8		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA		15		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.