

FL850-03-80 High Power type LED

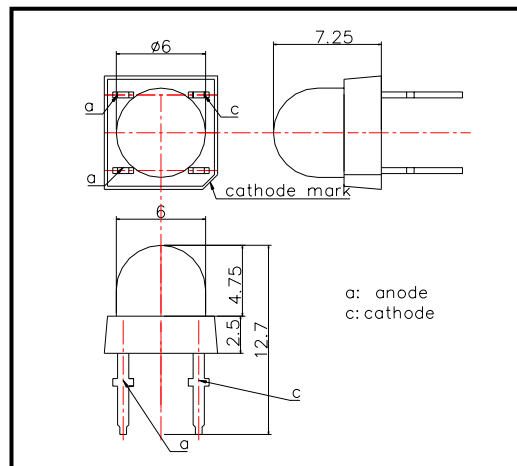
FL850-03-80 is an AlGaAs LED mounted on a lead frame and molded with super beam lens. On forward bias, it emits a band of visible light which peaks 850nm.

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_D | 310 | mW | $T_a=25^\circ\text{C}$ |
| Forward Current | I_F | 200 | mA | $T_a=25^\circ\text{C}$ |
| Pulse Forward Current | I_{FP} | 4000 | mA | $T_a=25^\circ\text{C}$ |
| Reverse Voltage | V_R | 10 | V | $T_a=25^\circ\text{C}$ |
| Operating Temperature | T_{OPR} | -30 ~ +85 | $^\circ\text{C}$ | |
| Storage Temperature | T_{STG} | -30 ~ +100 | $^\circ\text{C}$ | |
| Soldering Temperature | T_{SOL} | 260 | $^\circ\text{C}$ | |

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 260 $^\circ\text{C}$

◆ Electro-Optical Characteristics [Ta=25 $^\circ\text{C}$]

| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
|------------------------|-----------------|--------------------|---------|---------|---------|---------------|
| Forward Voltage | V_F | $I_F=100\text{mA}$ | | 1.4 | 1.5 | V |
| Pulsed Forward Voltage | V_F | $I_{FP}=4\text{A}$ | | 3.3 | 4.5 | V |
| Reverse Current | I_R | $V_R=10\text{V}$ | | | 10 | μA |
| Total Radiated Power | P_O | $I_F=100\text{mA}$ | 35.0 | 60.0 | | mW |
| Radiant Intensity | I_E | $I_F=100\text{mA}$ | | 230 | | mW/sr |
| Peak Wavelength | λ_P | $I_F=50\text{mA}$ | 840 | 850 | 860 | nm |
| Half Width | $\Delta\lambda$ | $I_F=50\text{mA}$ | | 40 | | nm |
| Viewing Half Angle | $\theta_{1/2}$ | $I_F=50\text{mA}$ | | ± 8 | | deg. |
| Rise Time | t_r | $I_F=50\text{mA}$ | | 15 | | ns |
| Fall Time | t_f | $I_F=50\text{mA}$ | | 10 | | ns |

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.