

Lead (Pb) Free Product – RoHS Compliant

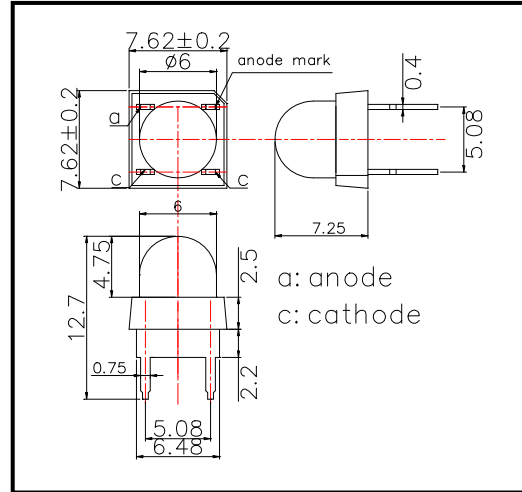
FL870-03-80 High Power type LED

FL870-03-80 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 870nm. 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. FL870-03-80
- 3) Chip
 - (1) Chip Material GaAlAs
 - (2) Chip Dimension 800um*800um
 - (3) Peak Wavelength 870nm typ.
- 4) Package
 - (1) Type Super Beam type LED
 - (2) Resin Material Epoxy Resin
 - (3) Lead Frame Silver Plated Copper



◆Absolute Maximum Ratings

| Item | Symbol | Maximum Rated Value | Unit | Ambient Temperature |
|-----------------------|------------------|---------------------|------|----------------------|
| Power Dissipation | P _D | 310 | mW | T _a =25°C |
| Forward Current | I _F | 500 | mA | T _a =25°C |
| Pulse Forward Current | I _{FP} | 4000 | mA | T _a =25°C |
| Reverse Voltage | V _R | 10 | V | T _a =25°C |
| Operating Temperature | T _{OPR} | -30 ~ +85 | °C | |
| Storage Temperature | T _{STG} | -30 ~ +100 | °C | |
| Soldering Temperature | T _{SOL} | 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_a=25°C]

| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
|------------------------|------------------|-----------------------|---------|---------|---------|-------|
| Forward Voltage | V _F | I _F =200mA | | 1.5 | 1.8 | V |
| Pulsed Forward Voltage | V _F | I _{FP} =4A | | 3.3 | 4.5 | V |
| Reverse Current | I _R | V _R =10V | | | 10 | uA |
| Total Radiated Power | P _O | I _F =200mA | 40.0 | 75.0 | | mW |
| Radiant Intensity | I _E | I _F =200mA | | 250 | | mW/sr |
| Peak Wavelength | λ _P | I _F =50mA | 855 | 870 | 885 | nm |
| Half Width | Δλ | I _F =50mA | | 40 | | nm |
| Viewing Half Angle | θ _{1/2} | I _F =50mA | | ±15 | | deg. |
| 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.

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