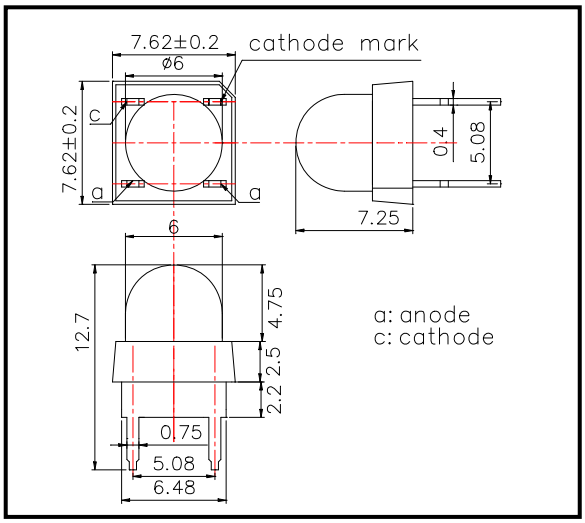
**Lead ( Pb ) Free Product – RoHS Compliant**

# FL810-03-80 High Power type LED

FL810-03-80 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 810nm.

♦Outer dimension (Unit: mm)




♦Specifications

| | |
|---|---|
| 1) Product Name | Super Flux mold type LED |
| 2) Type No. | FL810-03-80 |
| 3) Chip | |
| (1) Chip Material | GaAlAs |
| (2) Chip Dimension | 800um*800um |
| (3) Peak Wavelength | 810nm typ. |
| 4) Package | |
| (1) Type | Super Beam type LED |
| (2) Resin Material | Epoxy Resin |
| (3) Lead Frame | Silver Plated Cupper |

♦Absolute Maximum Ratings

| Item | Symbol | Maximum Rated Value | Unit | Ambient Temperature |
|---|---|---|---|---|
| Power Dissipation | $P_D$ | 400 | mW | Ta=25°C |
| Forward Current | $I_F$ | 250 | mA | Ta=25°C |
| Pulse Forward Current | $I_{FP}$ | 2000 | mA | Ta=25°C |
| Reverse Voltage | $V_R$ | 10 | V | Ta=25°C |
| Operating Temperature | $T_{OPR}$ | -30 ~ +85 | °C | |
| Storage Temperature | $T_{STG}$ | -30 ~ +100 | °C | |
| Soldering Temperature | $T_{SOL}$ | 265 | °C | |

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.
‡Soldering condition: Soldering condition must be completed within 3 seconds at 265°C

♦Electro-Optical Characteristics [Ta=25°C]

| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=100mA | | 1.48 | 1.70 | V |
| Pulsed Forward Voltage | $V_F$ | $I_{FP}$=2A | | 3.0 | | V |
| Reverse Current | $I_R$ | $V_R$=10V | | | 10 | uA |
| Total Radiated Power | $P_O$ | $I_F$=100mA | 20.0 | 24.0 | | mW |
| Radiant Intensity | $I_E$ | $I_F$=100mA | | 95 | | mW/sr |
| Peak Wavelength | $\lambda_P$ | $I_F$=50mA | 795 | 810 | 825 | nm |
| Half Width | $\Delta\lambda$ | $I_F$=50mA | | 25 | | nm |
| Viewing Half Angle | $\theta_{1/2}$ | $I_F$=50mA | | ±15 | | deg. |
| Rise Time | tr | $I_F$=50mA | | 80 | | ns |
| Fall Time | tf | $I_F$=50mA | | 80 | | ns |

‡Total Radiated Power is measured by Photodyne #500
‡Radiant Intensity is measured by Tektronix J-6512.

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