

SMC850

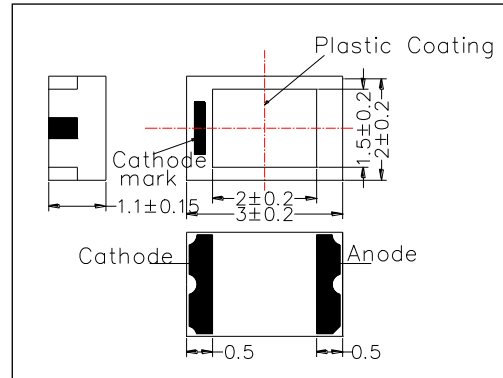
High Performance Infrared SMD LED on Ceramics

SMC850 consists of an AlGaAs LED mounted on the ceramics package and is 38mW typical of output power. It emits a spectral band of radiation at 850nm and is sealed with silicone or epoxy resin.

<Specifications>

1. Product Name: Ceramics SMD IRED
2. Type Number: SMC850
3. Chip:
 - Chip Material: AlGaAs
 - Chip Dimension: 0.4mm x 0.4mm
 - Peak Wavelength: 850nm type
4. Package
 - Package: Ceramics
 - Lens: Silicone or Epoxy Resin

Outer Dimension (Unit:mm)



| Absolute Maximum Ratings | | | | |
|--------------------------|--------|---------------------|------|---------------------|
| Item | Symbol | Maximum Rated Value | Unit | Ambient Temperature |
| Power Dissipation | PD | 160 | mW | Ta=25°C |
| Forward Current | IF | 100 | mA | Ta=25°C |
| Pulse Forward Current* | IFP | 1000 | mA | Ta=25°C |
| Reverse Voltage | VR | 5 | V | Ta=25°C |
| Junction Temperature | Tj | 100 | °C | |
| Thermal Resistance | Rthja | 190 | K/W | |
| Operating Temperature | TOPR | -20 ~ +80 | °C | |
| Storage Temperature | TSTG | -30 ~ +80 | °C | |
| Soldering Temperature** | TSOL | 250 | °C | |

* Duty=1% and Pulse Width=10us

** Soldering condition must be completed within 5 seconds at 250 °C

| Electro-Optical Characteristics[Ta=25°C] | | | | | | |
|--|--------|-------------------|---------|---------|---------|-------|
| Item | Symbol | Condition | Minimum | Typical | Maximum | Unit |
| Forward Voltage | VF | IF=50mA DC | | 1.45 | 1.60 | V |
| | | IF=100mA, tp=20ms | | 1.50 | 1.8 | |
| Reverse Current | IR | VR=5V | | | 10 | uA |
| Radiated Power* | PO | IF=50mA DC | 15.0 | 19.0 | | mW |
| | | IF=100mA, tp=20ms | | 38.0 | | |
| Radiant Intensity** | IE | IF=50mA DC | | 10 | | mW/sr |
| | | IF=100mA, tp=20ms | | 20 | | |
| Peak Wavelength | λP | IF=50mA DC | | 850 | | nm |
| Half Width | Δλ | IF=50mA DC | | 40 | | nm |
| Viewing Half Angle | θ1/2 | IF=50mA DC | | ±55 | | deg |
| Rise Time | tr | IF=50mA DC | | 15 | | ns |
| Fall Time | tf | IF=50mA DC | | 10 | | ns |

* Measured by Photodyne #500

** Measured by Tektronix J-6512

