



LEDS-85ASL 850nm LED in SMD Package

Description

The Lasermate LEDS-85ASL is an 850nm LED packaged as a surface mount device (SMD) for use in OEM manufacturing applications.



Features

- Infrared LED in miniature SMD package
- Molded in water clear plastic with spherical top view lens
- Small double-end package
- Low forward voltage
- Good spectral matching to Si photodetector
- Pb free

Applications

- PCB mounted infrared sensor
- Infrared remote control units with high power requirement
- Scanner
- Infrared applied system

Specifications

| Absolute Maximum Ratings | | | |
|---|-----------|---------|------|
| Parameters | Symbol | Rating | Unit |
| Continuous Forward Current | I_f | 65 | mA |
| Reverse Voltage | V_R | 5 | V |
| Operating Temperature | T_{opr} | -40~+85 | °C |
| Storage Temperature | T_{stg} | -40~+85 | °C |
| Soldering Temperature | T_{sol} | 260 | °C |
| Power Dissipation at (or below) 25°C Free Air Temperature | P_d | 110 | mW |

| Electro-Optical Characteristics ($T_a=25^\circ\text{C}$ unless otherwise stated) | | | | | | |
|---|-----------------|------|-------|-------|-------|-------------------|
| Parameters | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| Radiant Intensity | I_e | 14.0 | 16.0 | - | mW/sr | $I_f=20\text{mA}$ |
| Peak Wavelength | λ_p | - | 850 | - | nm | $I_f=20\text{mA}$ |
| Spectral Bandwidth | $\Delta\lambda$ | - | 42 | - | nm | $I_f=20\text{mA}$ |
| View Angle | $2\theta_{1/2}$ | - | 20 | - | ° | $I_f=20\text{mA}$ |
| Forward Voltage | V_f | - | 1.45 | 1.70 | V | $I_f=20\text{mA}$ |
| Reverse Current | I_R | - | - | 10 | uA | $V_R=5\text{V}$ |
| Optical Rise and Fall Time | t_r/t_f | - | 25/15 | 35/35 | ns | $I_f=50\text{mA}$ |

Typical Characteristic Curves

Fig. 1 Forward Current vs. Ambient Temperature

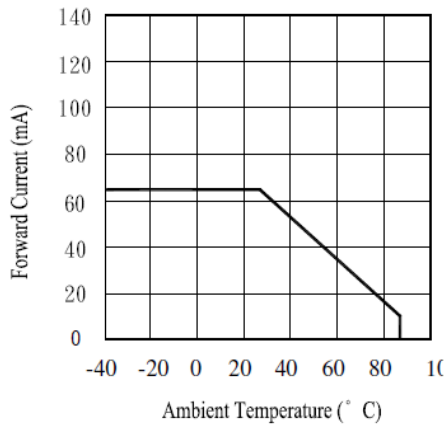


Fig. 2 Spectral Distribution

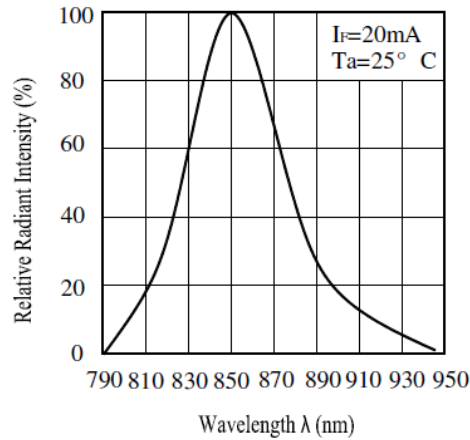


Fig. 3 Peak Emission Wavelength Ambient Temperature

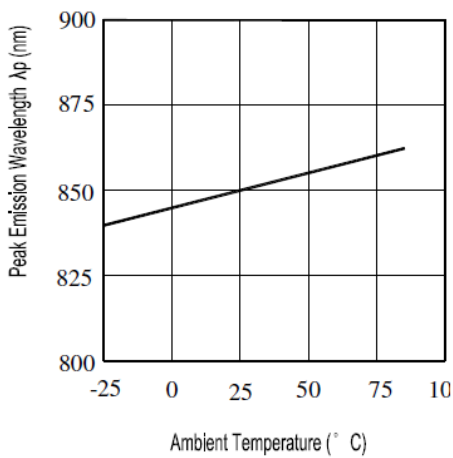


Fig. 4 Forward Current vs. Forward Voltage

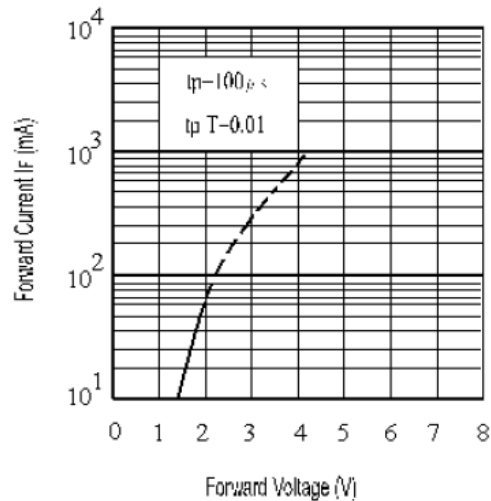


Fig. 5 Radiant Intensity vs. Angular Displacement

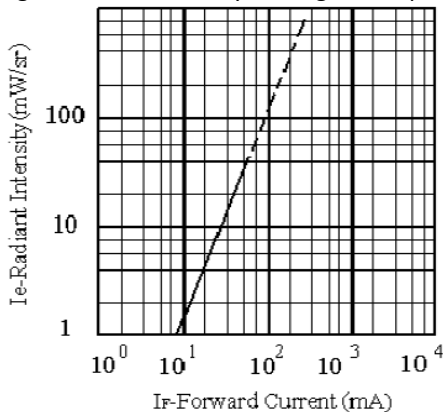
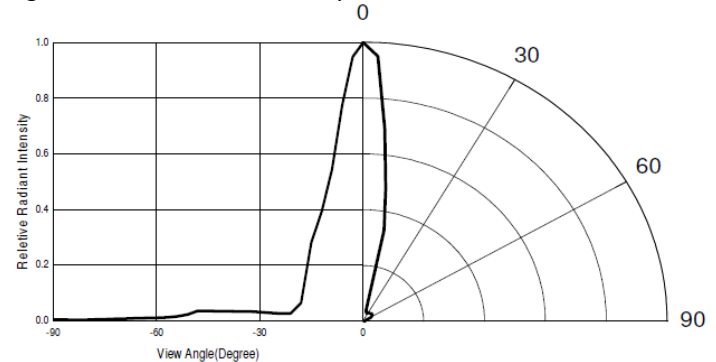
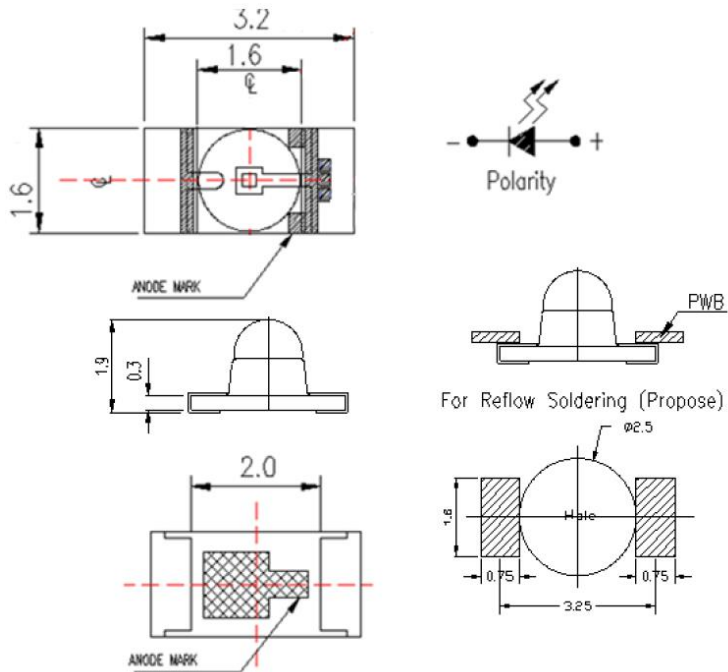


Fig. 6 Relative Radiant Intensity vs. Forward Current



Outline Dimensions



Notes:

- All dimensions are in millimeters.
- Tolerances unless specified ± 0.1 mm.

Additional Notes

- Specifications are subject to change without notice.