

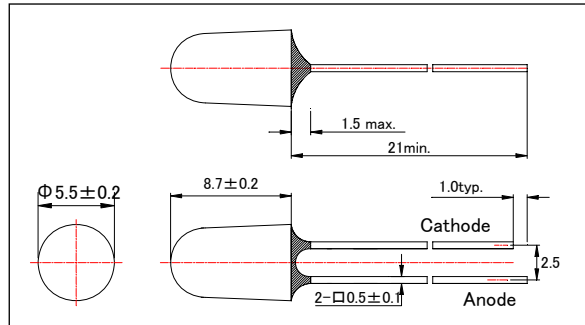
**L850F-06-45CU****Infrared LED Lamp for High Current Drive**

L850F-06-45CU is an AlGaAs LED mounted on a copper made lead frame with a clear epoxy lens. On forward bias it emits a spectral band of radiation, which peaks at 850nm. These devices are intended to be operated at pulsed current of 1A under max. 3.4V.

## &lt;Specifications&gt;

1. Product Name: Infrared LED Lamp
2. Type Number: L850F-06-45CU
3. Chip:
  - Chip material: AlGaAs
  - Dimension: 450um x 450um
  - Peak Wavelength: 850nm typ.
4. Package
  - Type: Φ5mm Clear Molding
  - Resin Material: Epoxy Resin
  - Lead Frame: Cu made

## Outer Dimension (Unit:mm)



| Absolute Maximum Ratings[Ta=25°C] |        |                     |      |
|-----------------------------------|--------|---------------------|------|
| Item                              | Symbol | Maximum Rated Value | Unit |
| Power Dissipation                 | PD     | 165                 | mW   |
| Forward Current                   | IF     | 100                 | mA   |
| Pulse Forward Current*            | IFP    | 1000                | mA   |
| Reverse Voltage                   | VR     | 10                  | V    |
| Junction Temperature              | Tj     | 100                 | °C   |
| Thermal Resistance**              | Rthja  | 150                 | K/W  |
| Operating Temperature             | TOPR   | -30 ~ +85           | °C   |
| Storage Temperature               | TSTG   | -30 ~ +100          | °C   |
| Soldering Temperature***          | TSOL   | 265                 | °C   |

\* Duty=1% and Pulse Width=10us.

\*\* Junction - ambient, leads 7mm, soldered on PCB

\*\*\* Soldering condition must be completed within 3 second at 265°C.

| Electro-Optical Characteristics [Ta=25°C ] |           |                   |         |         |         |       |
|--------------------------------------------|-----------|-------------------|---------|---------|---------|-------|
| Item                                       | Symbol    | Condition         | Minimum | Typical | Maximum | Unit  |
| Forward Voltage                            | VF<br>VFP | IF=50mA           |         | 1.43    | 1.50    | V     |
|                                            |           | IF=100mA, tp=20ms |         | 1.55    | 1.65    |       |
|                                            |           | IFP=1A            |         | 3.4     | 4.0     |       |
| Reverse Current                            | IR        | VR=10V            |         |         | 10      | uA    |
| Total Radiated Power*                      | PO        | IF=50mA           | 18      | 24      |         | mW    |
|                                            |           | IF=100mA, tp=20ms | 36      | 48      |         |       |
| Radiant Intensity**                        | IE        | IF=50mA           | 120     | 150     |         | mW/sr |
|                                            |           | IF=100mA, tp=20ms |         | 300     |         |       |
| Peak wavelength                            | λP        | IF=50mA           | 840     | 850     | 860     | nm    |
| Half Width                                 | Δλ        | IF=50mA           |         | 40      |         | nm    |
| Viewing Half Angle                         | θ1/2      | IF=50mA           |         | ±7      |         | deg   |
| Rise Time                                  | tr        | IF=50mA           |         | 15      |         | ns    |
| Fall Time                                  | tf        | IF=50mA           |         | 10      |         | ns    |

\* Measured by Photodyne #500

\*\* Measured by Tektronix J-6512

