

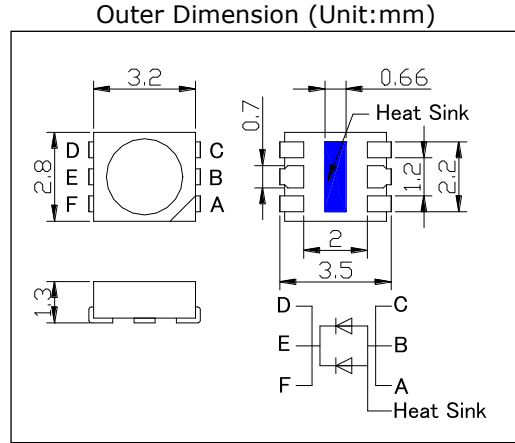
**SMTT850D-2\*50**

High Performance Infrared TOP LED

This consists of two large AlGaAs LEDs mounted on the lead frame as TOP LED package with copper heat sink. It is 42mW typical of output power and 20mW/sr of radiant intensity. This is suitable for strobe flash light and able to emit 0.8W/sr light operating at pulsed current 4A under 3.5V type. It emits a spectral band of radiation at 850nm.

<Specifications>

1. Product Name: TOP IR LED
2. Type Number: SMT850D-2\*50
3. Chip:
  - Chip Material: AlGaAs
  - Dimension: 500um x 500um
  - Number: 2pcs
  - Peak Wavelength: 850nm
4. Package
  - Lead Frame Die: Silver Plated
  - Package Resin: PPA Resin
  - Cap: Clear Epoxy Resin
  - Heatsink: Copper



| Absolute Maximum Ratings[Ta=25°C] |        |                     |      |
|-----------------------------------|--------|---------------------|------|
| Item                              | Symbol | Maximum Rated Value | Unit |
| Power Dissipation                 | PD     | 300                 | mW   |
| Forward Current                   | IF     | 200                 | mA   |
| Pulse Forward Current*            | IFP    | 4000                | mA   |
| Reverse Voltage                   | VR     | 5                   | V    |
| Operating Temperature             | TOPR   | -20 ~ +80           | °C   |
| Storage Temperature               | TSTG   | -30 ~ +80           | °C   |
| Soldering Temperature**           | TSOL   | 255                 | °C   |

\* Duty=1% and Pulse width=10μs

\*\* Soldering condition must be completed within 10 second at 255°C.

| Electro-Optical Characteristics [Ta=25°C ] |        |             |         |         |         |       |
|--|--------|-------------|---------|---------|---------|-------|
| Item                                       | Symbol | Condition   | Minimum | Typical | Maximum | Unit  |
| Forward Voltage                            | VF     | IF=100mA DC |         | 1.45    | 1.60    | V     |
|  |        | IFP=4A      |         | 3.5     | 4.2     |       |
| Reverse Current                            | IR     | VR=5V       |         |         | 10      | uA    |
| Total Radiated Power*                      | PO     | IF=100mA DC | 32      | 42      |         | mW    |
| Radiant Intensity**                        | IE     | IF=100mA DC |         | 20      |         | mW/sr |
|  |        | IFP=4A      |         | 800     |         |       |
| Peak wavelength                            | λP     | IF=50mA DC  | 835     | 850     | 865     | nm    |
| Half Width                                 | Δλ     | IF=50mA DC  |         | 28      |         | nm    |
| Viewing Half Angle                         | θ1/2   | IF=50mA DC  |         | ±60     |         | 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

- Heat sink should be provided by soldering for stable use.

