



IR Emitter and Detector Product Data Sheet

LTE-1650

Spec No.: DS-50-95-0017

Effective Date: 04/12/2000

Revision: B

LITE-ON DCC

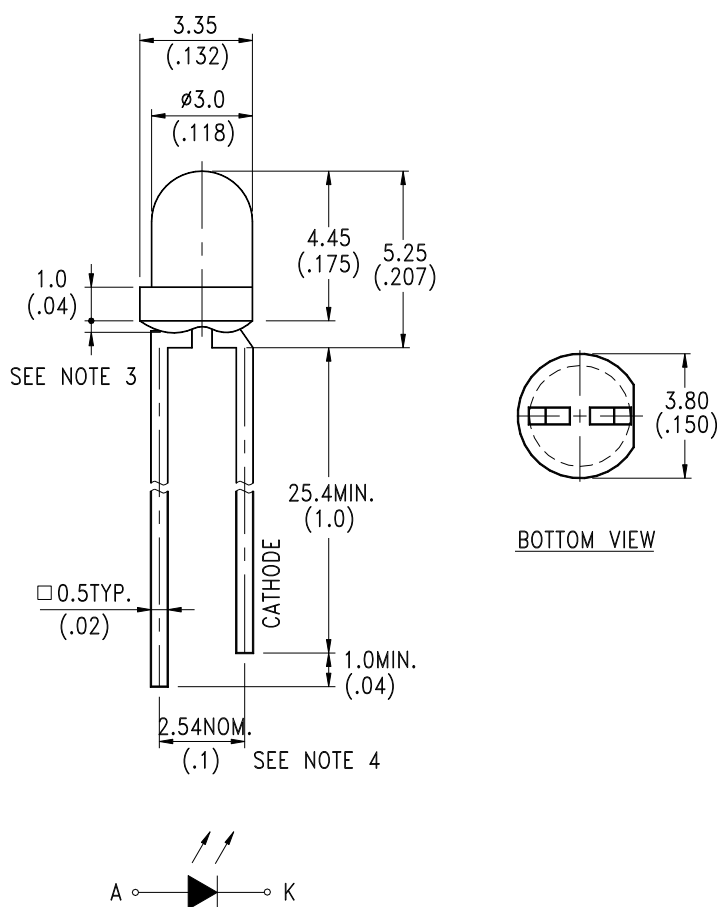
RELEASE

BNS-OD-FC001/A4

FEATURES

- * SPECIAL FOR HIGH CURRENT AND LOW FORWARD VOLTAGE
- * LOW COST MINIATURE PLASTIC END LOOKING PACKAGE
- * WIDE VIEWING ANGLE
- * CLEAR TRANSPARENT COLOR PACKAGE

PACKAGE DIMENSIONS



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}(.010\text{'})$ unless otherwise noted.
3. Protruded resin under flange is 1.5mm(.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice for performance improvement.

ABSOLUTE MAXIMUM RATINGS AT TA=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|--|---------------------|------|
| Power Dissipation | 100 | mW |
| Peak Forward Current (300pps, 10 μs pulse) | 1 | A |
| Continuous Forward Current | 60 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature Range | -40°C to + 85°C | |
| Storage Temperature Range | -55°C to + 100°C | |
| Lead Soldering Temperature [1.6mm(.063") From Body] | 260°C for 5 Seconds | |

ELECTRICAL / OPTICAL CHARACTERISTICS AT TA=25°C

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION | BIN NO. |
|----------------------------|-------------------|-------|------|------|--------------------|-----------------------|---------|
| Aperture Radiant Incidence | Ee | 0.184 | | 0.54 | mW/cm ² | I _F = 20mA | BIN A |
| | | 0.36 | | 0.78 | | | BIN B |
| | | 0.52 | | 1.02 | | | BIN C |
| | | 0.68 | | | | | BIN D |
| Radiant Intensity | I _E | 1.383 | | 4.06 | mW/sr | I _F = 20mA | BIN A |
| | | 2.71 | | 5.87 | | | BIN B |
| | | 3.91 | | 7.67 | | | BIN C |
| | | 5.11 | | | | | BIN D |
| Peak Emission Wavelength | λ _P | | 940 | | nm | I _F = 20mA | |
| Spectral Line Half-Width | Δλ | | 50 | | nm | I _F = 20mA | |
| Forward Voltage | V _F | | 1.2 | 1.6 | V | I _F = 50mA | |
| Reverse Current | I _R | | | 100 | μA | V _R = 5V | |
| Viewing Angle (See FIG.6) | 2θ _{1/2} | | 60 | | deg. | | |

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

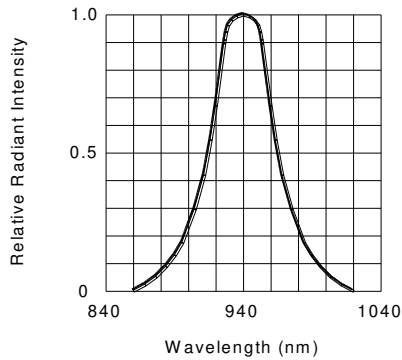


FIG.1 SPECTRAL DISTRIBUTION

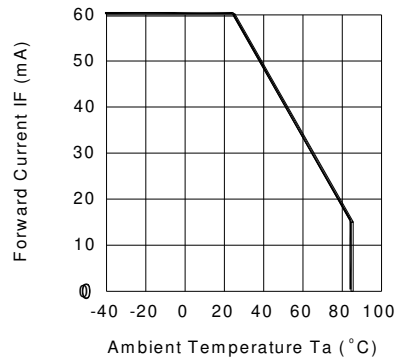


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

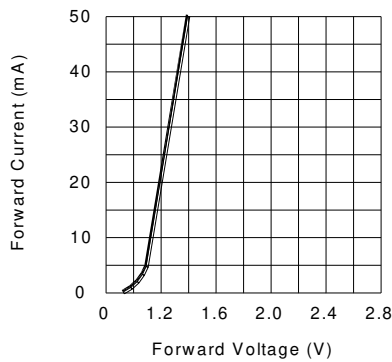


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

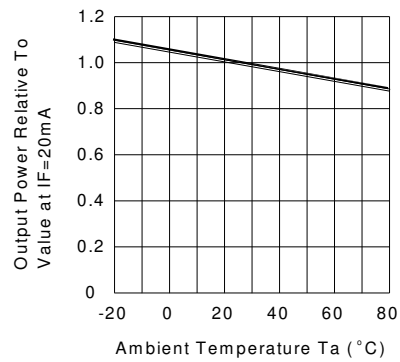


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

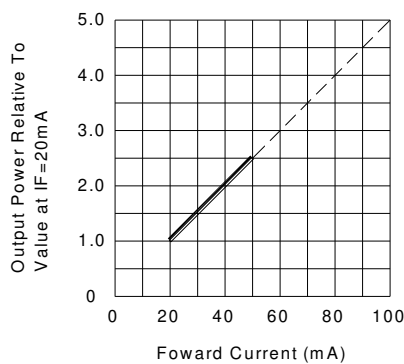


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

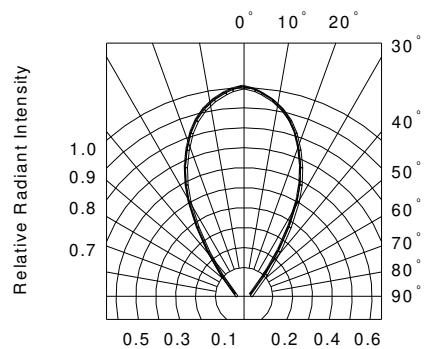


FIG.6 RADIATION DIAGRAM