



# IR Emitter and Detector Product Data Sheet

LTE-1550

Spec No.: DS-50-96-0049

Effective Date: 04/12/2000

Revision: B

**LITE-ON DCC**

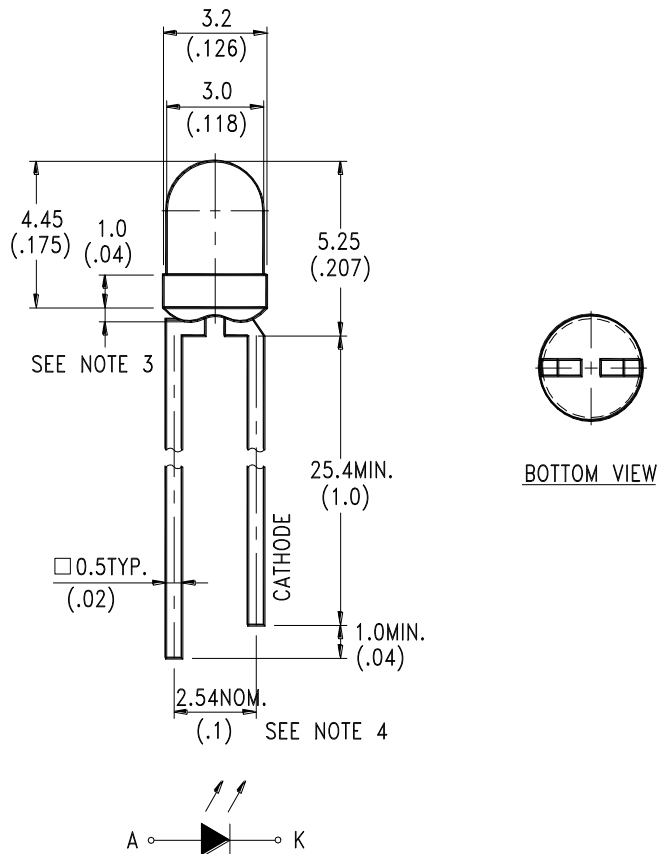
**RELEASE**

BNS-OD-FC001/A4

## FEATURES

- \* SELECTED TO SPECIFIC ON-LINE INTENSITY AND RADIANT INTENSITY RANGES
- \* LOW COST MINIATURE PLASTIC END LOOKING PACKAGE
- \* 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  $1.5\text{mm}(.059\text{'})$  max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

### ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	90	mW
Peak Forward Current (300pps, 10 $\mu$ s 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	E <sub>e</sub>	0.096		0.276	mW/cm <sup>2</sup>	I <sub>F</sub> = 20mA	BIN A1
		0.184		0.540			BIN A
		0.360		0.780			BIN B
		0.520		1.020			BIN C
		0.680					BIN D
Radiant Intensity	I <sub>E</sub>	0.722		2.075	mW/sr	I <sub>F</sub> = 20mA	BIN A1
		1.383		4.060			BIN A
		2.707		5.865			BIN B
		3.910		7.669			BIN C
		5.113					BIN D
Peak Emission Wavelength	$\lambda_{Peak}$		940		nm	I <sub>F</sub> = 20mA	
Spectral Line Half-Width	$\Delta \lambda$		50		nm	I <sub>F</sub> = 20mA	
Forward Voltage	V <sub>F</sub>		1.2	1.6	V	I <sub>F</sub> = 20mA	
Reverse Current	I <sub>R</sub>			100	$\mu$ A	V <sub>R</sub> = 5V	
Viewing Angle (See FIG.6)	2 $\theta_{1/2}$		60		deg.		

**TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES**

(25°C Ambient Temperature Unless Otherwise Noted)

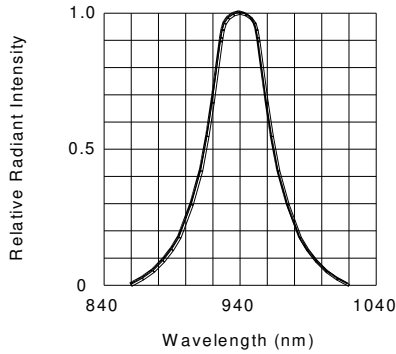


FIG.1 SPECTRAL DISTRIBUTION

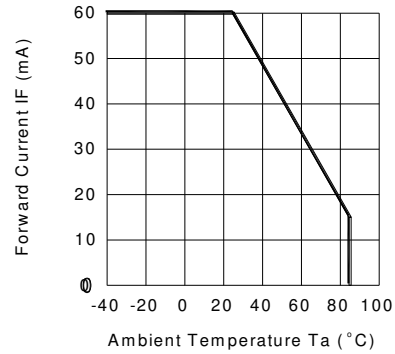


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

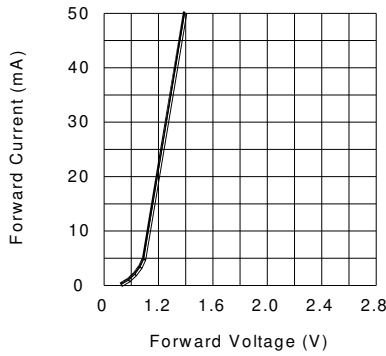


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

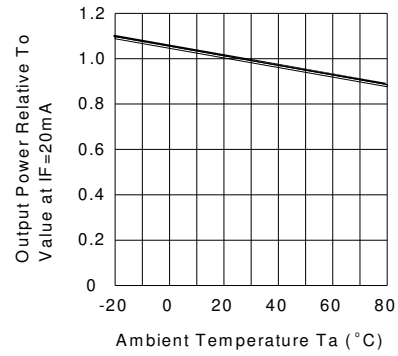


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

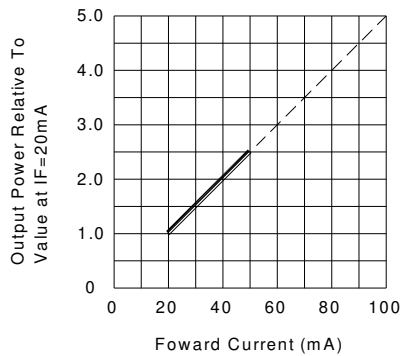


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

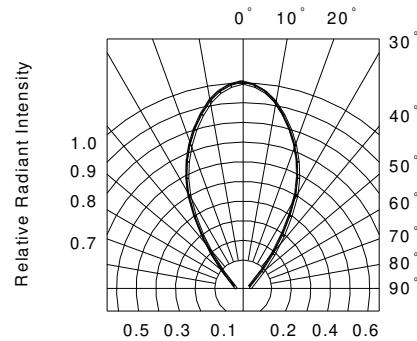


FIG.6 RADIATION DIAGRAM