



# 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**

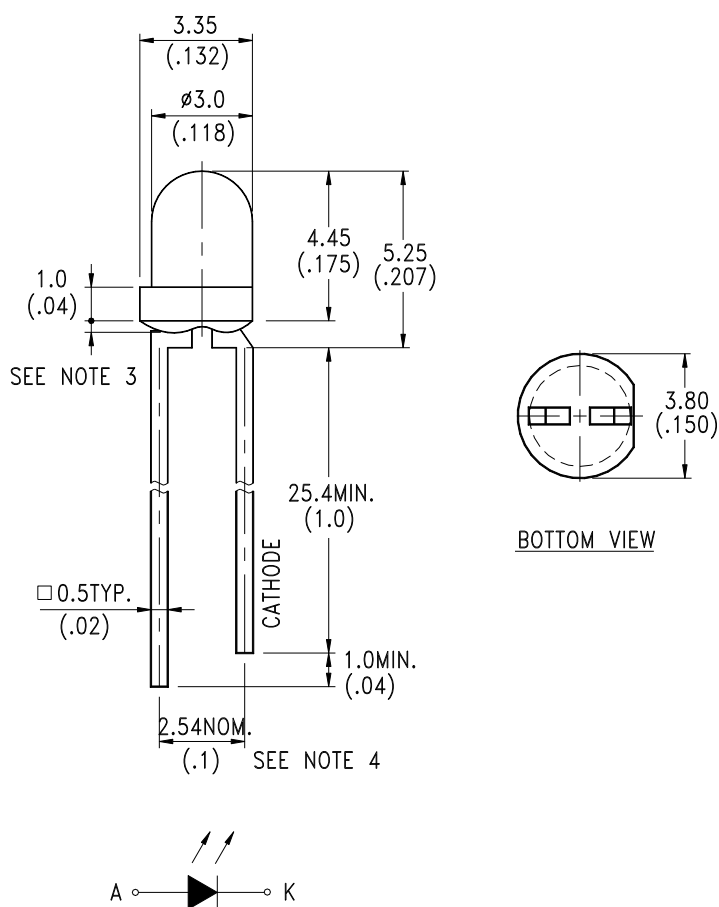
**RELEASE**

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") 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 $\mu$ 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	Ee	0.184		0.54	mW/cm <sup>2</sup>	I <sub>F</sub> = 20mA	BIN A
		0.36		0.78			BIN B
		0.52		1.02			BIN C
		0.68					BIN D
Radiant Intensity	I <sub>E</sub>	1.383		4.06	mW/sr	I <sub>F</sub> = 20mA	BIN A
		2.71		5.87			BIN B
		3.91		7.67			BIN C
		5.11					BIN D
Peak Emission Wavelength	$\lambda_P$		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> = 50mA	
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)

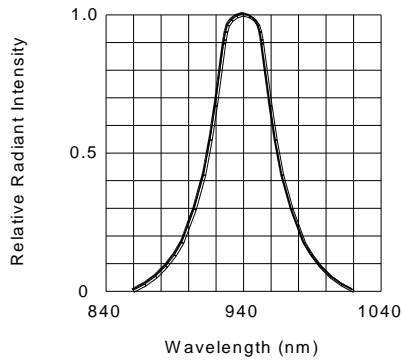


FIG.1 SPECTRAL DISTRIBUTION

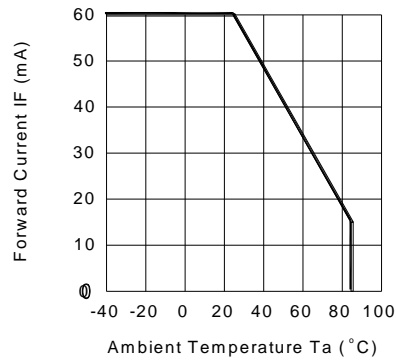


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

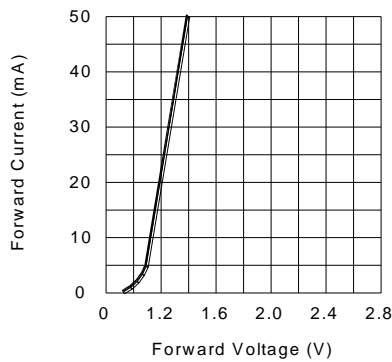


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

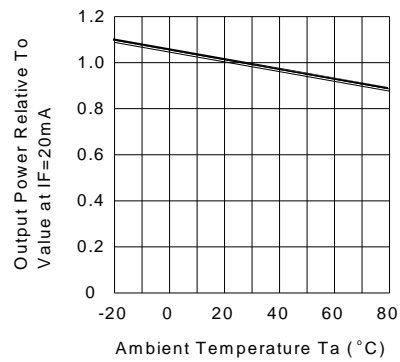


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

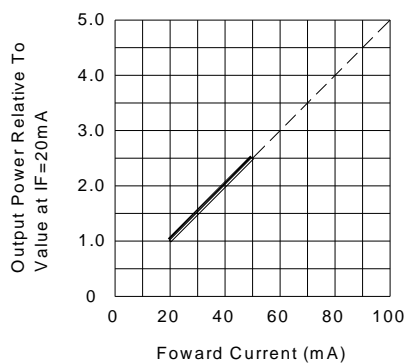


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

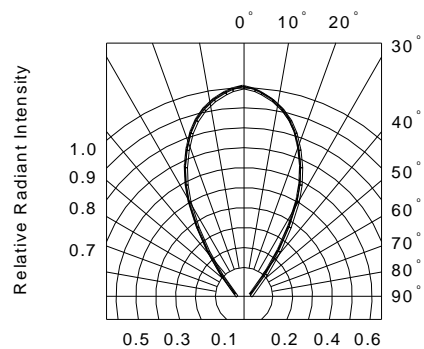


FIG.6 RADIATION DIAGRAM