



# IR Emitter and Detector Product Data Sheet

## LTE-302

Spec No.: DS-50-92-0009

Effective Date: 04/12/2000

Revision: B

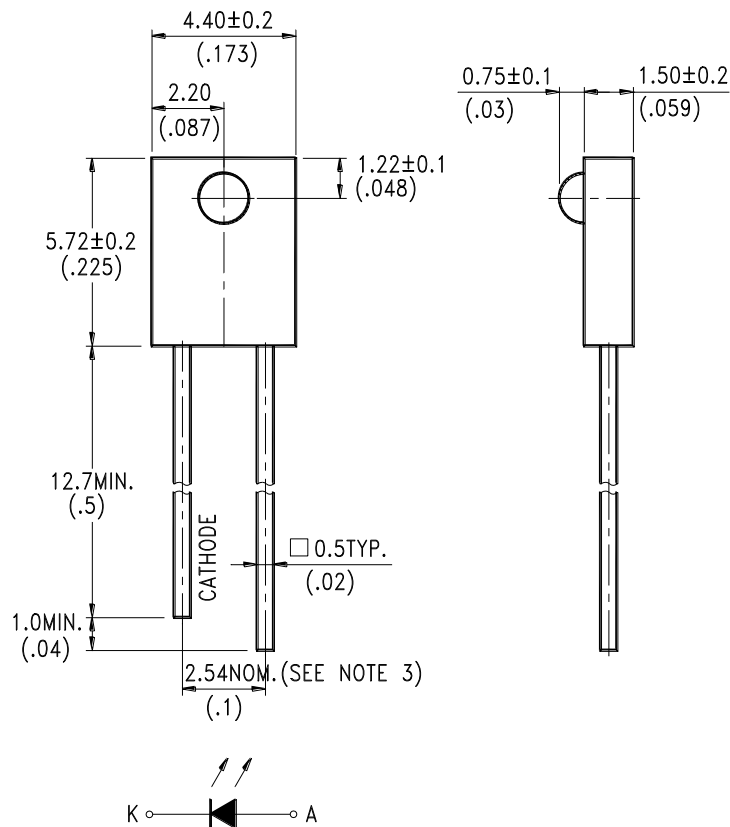
**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**FEATURES**

- \* SELECTED TO SPECIFIC ON-LINE INTENSITY AND RADIANT INTENSITY RANGES
- \* LOW COST MINIATURE PLASTIC SIDE LOOKING PACKAGE
- \* MECHANICALLY AND SPECTRALLY MATCHED TO THE LTR-301 SERIES OF PHOTOTRANSISTOR

**PACKAGE DIMENSIONS****NOTES:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.



# LITE-ON ELECTRONICS, INC.

Property of Lite-On Only

## ABSOLUTE MAXIMUM RATINGS AT TA=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	75	mW
Peak Forward Current (300pps, 10 $\mu$ s pulse)	1	A
Continuous Forward Current	50	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	0.088		0.168	mW/cm <sup>2</sup>	I <sub>F</sub> = 20mA	BIN B
		0.112		0.204			BIN C
		0.136		0.240			BIN D
		0.160		0.288			BIN E
		0.192					BIN F
Radiant Intensity	I <sub>E</sub>	0.662		1.263	mW/sr	I <sub>F</sub> = 20mA	BIN B
		0.842		1.534			BIN C
		1.023		1.805			BIN D
		1.203		2.165			BIN E
		1.444					BIN F
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 $\theta_{1/2}$		40		deg.		

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

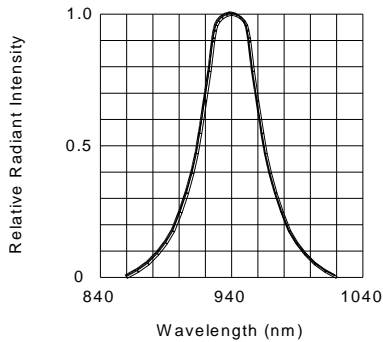


FIG.1 SPECTRAL DISTRIBUTION

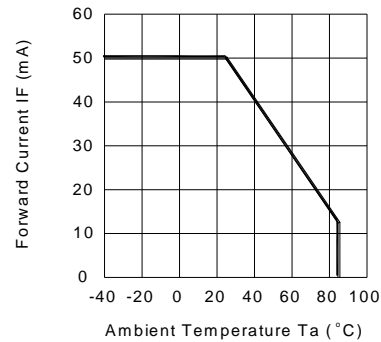


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

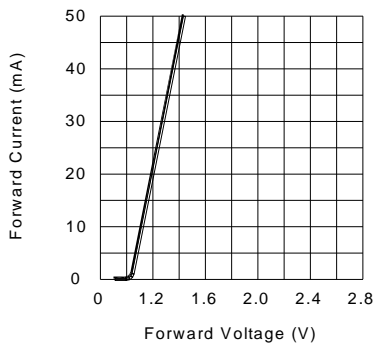


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

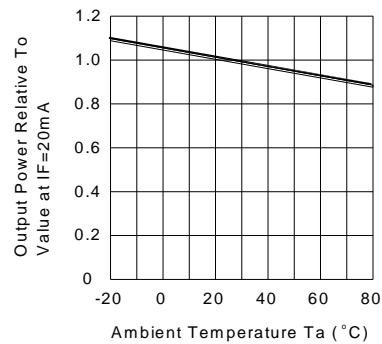


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

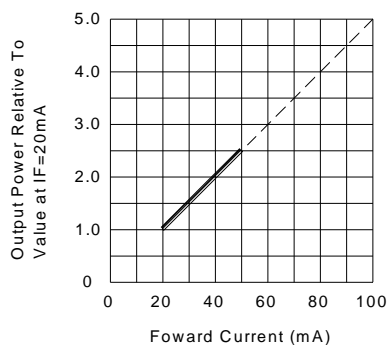


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

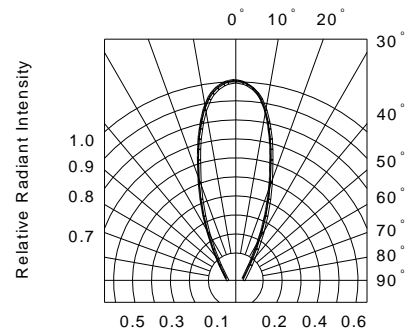


FIG.6 RADIATION DIAGRAM

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