



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# **IR Emitter and Detector** **Product Data Sheet**

**LTE-4238**

Spec No.: DS-50-92-0020

Effective Date: 04/12/2000

Revision: A

**LITE-ON DCC**

**RELEASE**

**BNS-OD-FC001/A4**

**LITE-ON Technology Corp. / Optoelectronics**

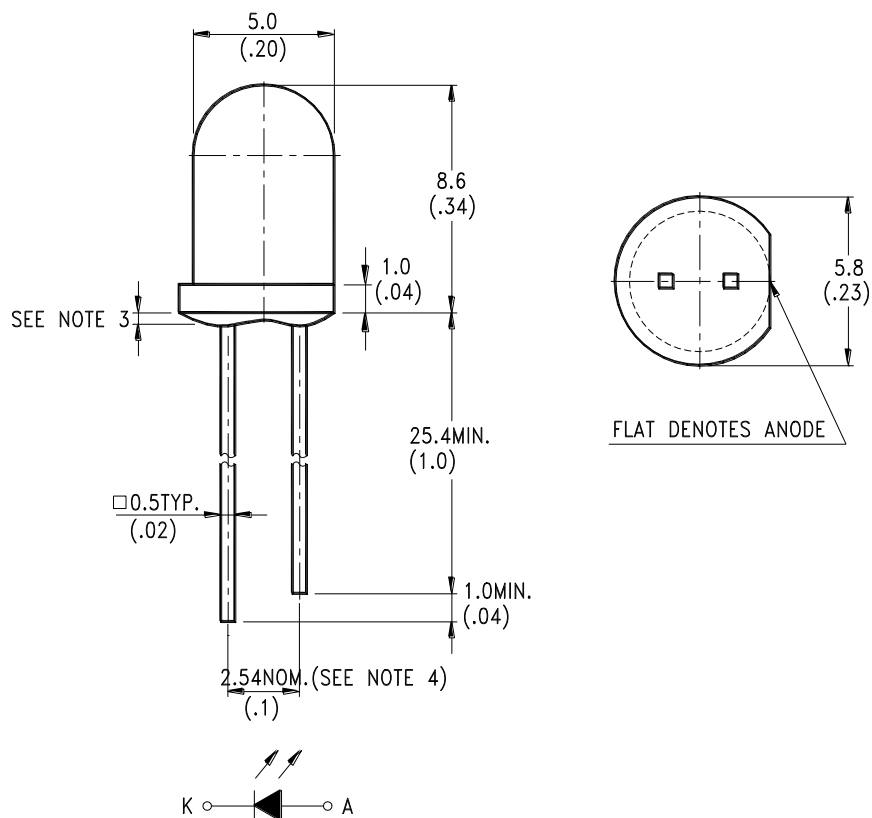
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**FEATURES**

- \* SELECTED TO SPECIFIC ON-LINE INTENSITY AND RADIANT INTENSITY RANGES
- \* HIGH POWER OUT PUT
- \* MECHANICALLY AND SPECTRALLY MATCHED TO THE LTR-3208 SERIES OF PHOTOTRANSISTOR
- \* WAVELENGTH IS 880nm

**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 1.0mm (.039") 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 T<sub>A</sub>=25°C**

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	150	mW
Peak Forward Current (300pps, 10 $\mu$ s pulse)	2	A
Continuous Forward Current	100	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 T<sub>A</sub>=25°C**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Aperture Radiant Incidence	E <sub>e</sub>	0.64			mW/cm <sup>2</sup>	I <sub>F</sub> = 20mA
Radiant Intensity	I <sub>E</sub>	4.81			mW/sr	I <sub>F</sub> = 20mA
Peak Emission Wavelength	$\lambda_{Peak}$		880		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>		1.3	1.8	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 $\theta_{1/2}$		20		deg.	

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

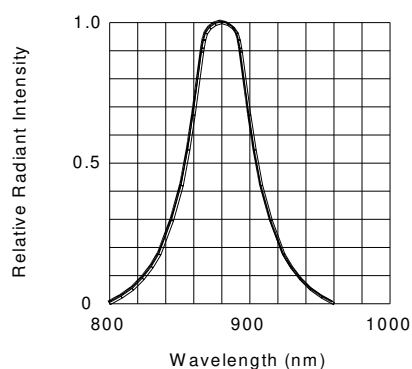


FIG.1 SPECTRAL DISTRIBUTION

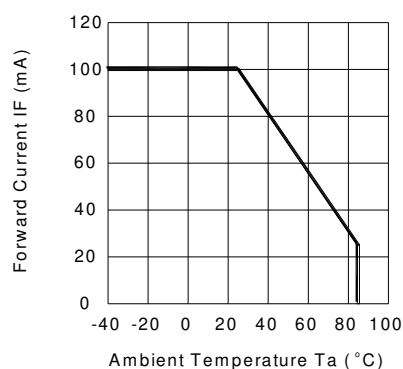


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

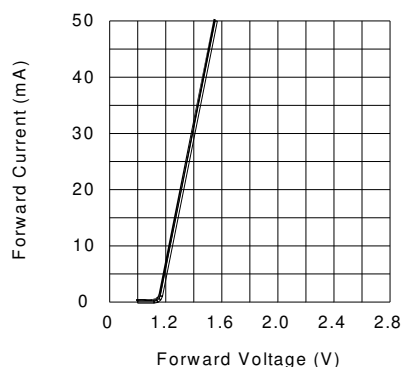


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

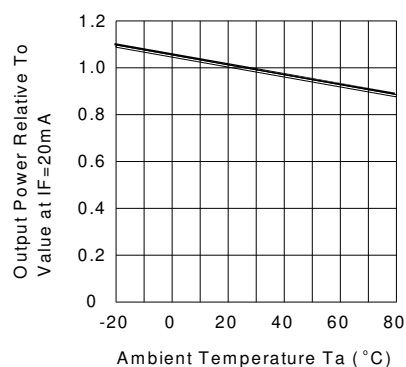


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

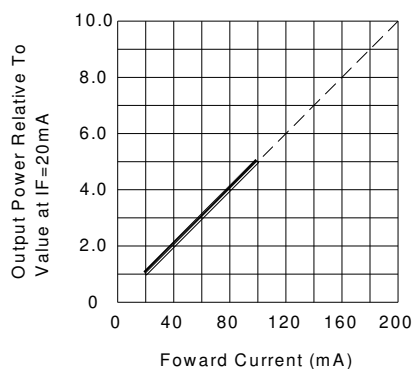


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

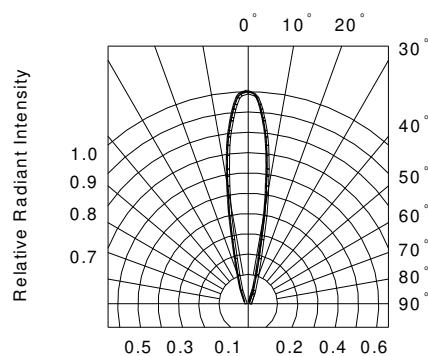


FIG.6 RADIATION DIAGRAM