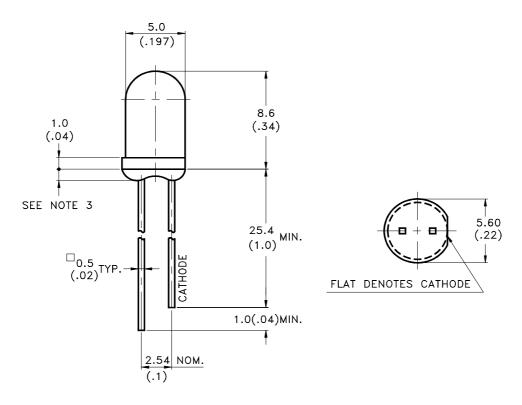
LITEON LITE-ON ELECTRONICS, INC.

Property of Lite-On Only

Features

- * Integral current limiting resistor LED.
- * Chip resistor built in, required with 12 volts supply.
- * Cost effective (save external resistor space and cost)

Package Dimensions



Part No.	Lens	Source Color		
LTL-4223-R2	Red Diffused	Hi-Eff.Red		

Notes:

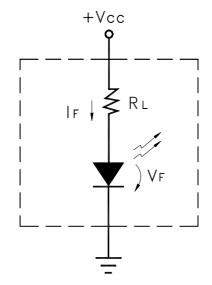
- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is \pm 0.25mm(.010") unless otherwise noted.
- 3. Protruded resin under flange is 1.0mm(.04") max.
- 4. Lead spacing is measured where the leads emerge from the package.
- 5. Specifications are subject to change without notice.

Part No.: LTL-4223-R2 Page: of 4

Absolute Maximum Ratings at TA=25°C

Parameter	Maximum Rating	Unit	
DC Forward Voltage (TA=25°C)	15	V	
Derating Linear From 50°C	0.086	V/°C	
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		

Equivalent circuit:



Vcc = 12 Volts $(RL = 800 \text{ ohms}\pm20\%)$

$$I_F = \frac{V_{CC} - V_F}{R_L}$$

Part No.: LTL-4223-R2 Page: 2 of 4



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Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min.	Тур.	Max.	Unit	Test Condition
Luminous Intensity	Iv	8.7	29		mcd	V _{CC} = 12V Note 1,4
Viewing Angle	2 heta 1/2		36		deg	Note 2 (Fig.5)
Peak Emission Wavelength	λР		635		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d		623		nm	Note 3
Spectral Line Half-Width	Δλ		40		nm	
Forward Current	$ m I_F$	8	12	16	mA	$V_{CC} = 12V$
Reverse Current	I_R			100	μ A	$V_R = 5V$

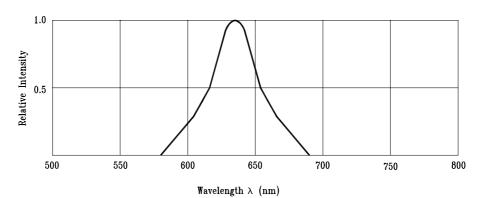
Note: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclairage) eye-response curve.

- 2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3. The dominant wavelength, λ d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- 4. The Iv guarantee should be added \pm 15%.

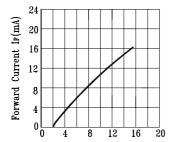
3 Part No.: LTL-4223-R2 Page: of 4

Typical Electrical / Optical Characteristics Curves

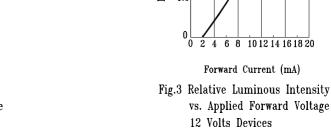
(25°C Ambient Temperature Unless Otherwise Noted)



Relative Intensity vs. Wavelength



Applied Forward Voltage Vcc (V) Fig.2 Forward Current vs. Applied Forward Voltage 12 Volts Devices



1.5

1.0

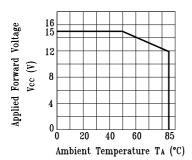


Fig4. Maximum Allowed Applied Forward Voltage vs. 12 Volts Devices

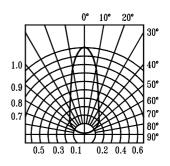


Fig.5 Spatial Distribution

Part No.: LTL-4223-R2 Page: of 4