



# IR Emitter and Detector Product Data Sheet

LTE-3273L

Spec No.: DS50-2014-0015

Effective Date: 04/30/2014

Revision: A

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

## IR Emitter and Detector LTE-3273L

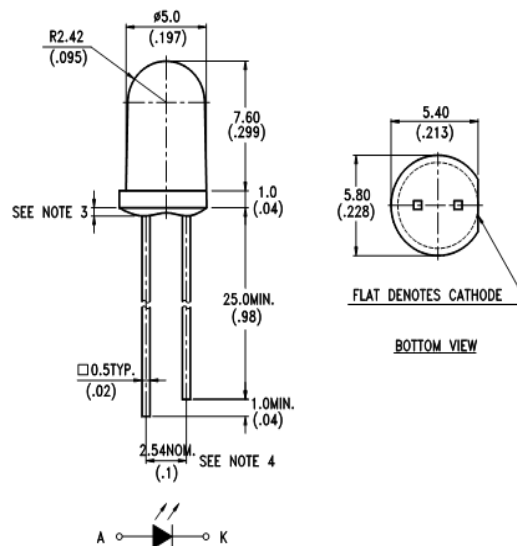
### 1. Description

Lite-On offers a broad range of discrete infrared components for application such as remote control, IR wireless data transmission, security alarm & etc. Customers need infrared solutions featuring high power, high speed and wide viewing angels. The product line includes GaAs 940nm IREs, AlGaAs high speed 850nm IREs, PIN Photodiodes and Phototransistors. Photodiodes and Phototransistors can be provided with a filter that reduces digital light noise in the sensor function, which enables a high signal-to-noise ratio.

#### 1.1. Features

- SPECIAL FOR HIGH CURRENT AND LOW FORWARD VOLTAGE
- HIGH POWER
- AVAILABLE FOR PULSE OPERATING
- WIDE VIEWING ANGLE
- CLEAR TRANSPARENT COLOR PACKAGE

### 2. Outline Dimensions



#### Notes :

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$ mm unless otherwise noted.
3. Protruded resin under flange is 1.5mm(.059") max.
4. Specifications are subject to change without notice.
5. Lead spacing is measured where the leads emerge from the package.

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3. Absolute Maximum Ratings at TA=25°C

Parameter	Maximum Rating	Unit
Power Dissipation	150	mW
Peak Forward Current (300pps, 10µs 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	

4. Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Radiant Intensity	$I_E$	5.6	8.0		mW/sr	$I_F = 20\text{mA}$
		28.0	40.0		mW/sr	$I_F = 100\text{mA}$
Peak Emission Wavelength	$\lambda_{\text{Peak}}$		940		nm	$I_F = 20\text{mA}$
Spectral Line Half-Width	$\Delta \lambda$		50		nm	$I_F = 20\text{mA}$
Forward Voltage	$V_F$		1.25	1.6	V	$I_F = 50\text{mA}$
Forward Voltage	$V_F$		1.85	2.3	V	$I_F = 500\text{mA}$
Reverse Current	$I_R$			100	µA	$V_R = 5\text{V}$
Viewing Angle (See FIG.6)	$2\theta_{1/2}$		40		deg.	

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## 5. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

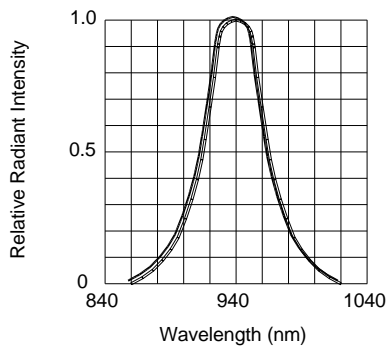


FIG.1 SPECTRAL DISTRIBUTION

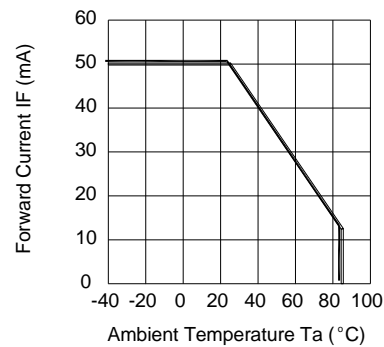


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

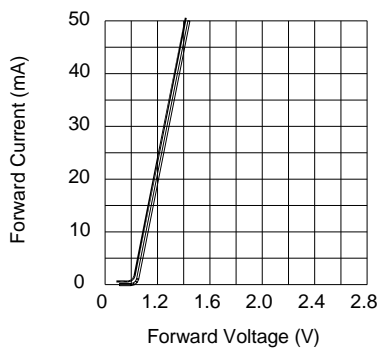


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

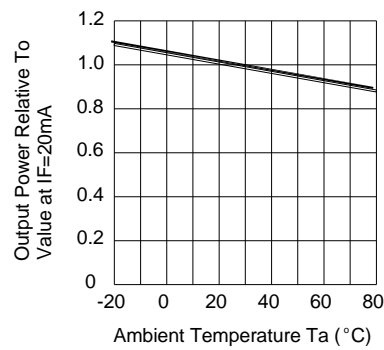


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

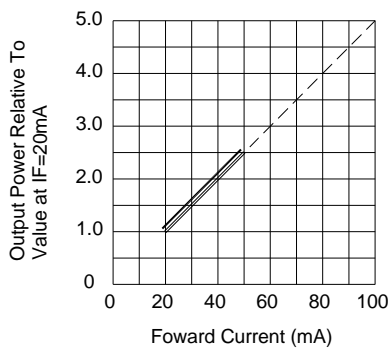


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

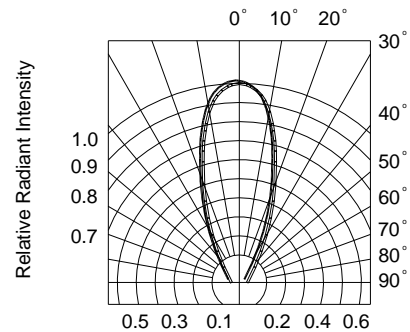


FIG.6 RADIATION DIAGRAM