



Infrared  
Product Data Sheet  
LTR-3208E

Spec No. :DS-50-92-0068  
Effective Date: 01/05/2019  
Revision: B

**LITE-ON DCC**

**RELEASE**

## Detector LTR-3208E

### 1. Description

Lite-On offers a broad range of discrete infrared components for application such as remote controller, IR wireless data transmission, security alarm & etc. The product line includes GaAs 940nm IREDs, AlGaAs high power 880nm IREDs, AlGaAs high speed 875nm/850nm IREDs, PIN Photodiodes, Phototransistor and Photodarlington.

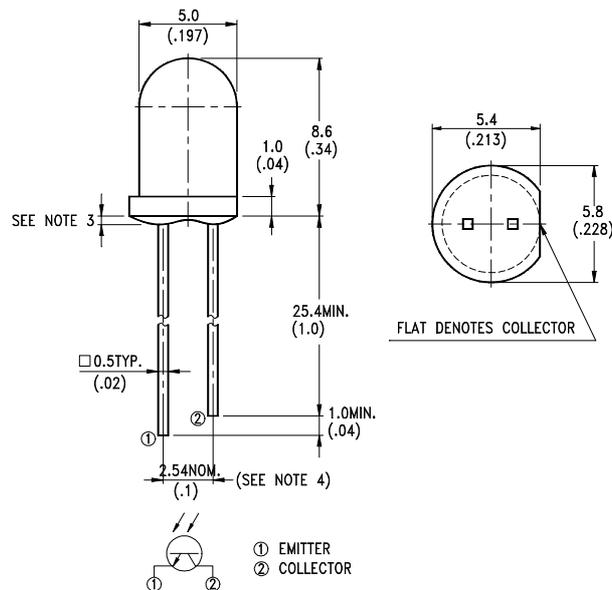
#### 1.1. Features

- Wide range of collector current
- The lens is for high sensitivity
- Low cost plastic package
- The LTR-3208E is a special dark plastic package that cut the visible light and suitable for the detectors of infrared applications

#### 1.2. Applications

- Detector

### 2. Outline 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.

## Detector LTR-3208E

### 3. Absolute Maximum Ratings at TA=25°C

Parameter	Maximum Rating	Unit
Power Dissipation	100	mw
Collector-Emitter Voltage	30	V
Emitter-Collector 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	Bin No
Collector-Emitter Breakdown Voltage	V(BR)CEO	30			V	IC = 1mA Ee = 0mW/cm <sup>2</sup>	
Emitter-Collector Breakdown Voltage	V(BR)ECO	5			V	IE = 100μA Ee = 0mW/cm <sup>2</sup>	
Collector Emitter Saturation Voltage	V <sub>CE(SAT)</sub>		0.1	0.4	V	IC = 100μA Ee = 1mW/cm <sup>2</sup>	
Rise Time	Tr		10		μS	Vcc=5V Ic=1mA RL = 1KΩ	
Fall Time	Tf		15		μS		
Collector Dark Current	I <sub>ceo</sub>			100	nA	VCE = 10V Ee = 0mW/cm <sup>2</sup>	
On State Collector Current	IC(ON)	0.64		1.68	mA	VCE = 5V Ee = 1mW/Cm <sup>2</sup> λ =940nm	BIN A
		1.12		2.16			BIN B
		1.44		2.64			BIN C
		1.76		3.12			BIN D
		2.08		3.60			BIN E
		2.40					BIN F

**5. Typical Electrical / Optical Characteristics Curves**

(25°C Ambient Temperature Unless Otherwise Noted)

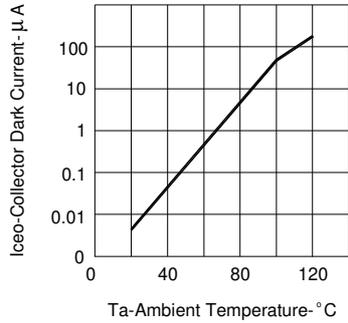


FIG.1 COLLECTOR DARK CURRENT VS AMBIENT TEMPERATURE

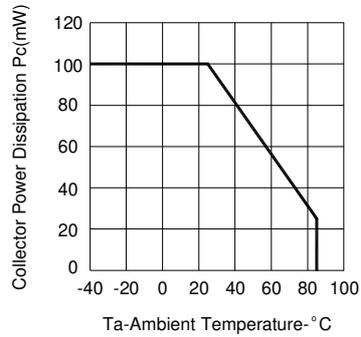


FIG.2 COLLECTOR POWER DISSIPATION VS AMBIENT TEMPERATURE

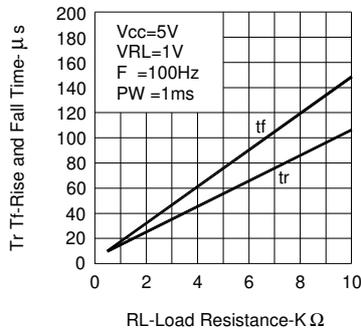


FIG.3 RISE AND FALL TIME VS LOAD RESISTANCE

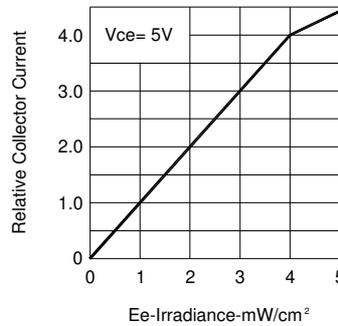


FIG.4 RELATIVE COLLECTOR CURRENT VS IRRADIANCE

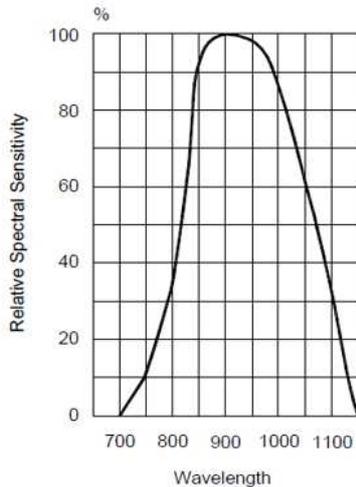


Fig.5 RELATIVE SPECTRAL SENSITIVITY VS WAVELENGTH

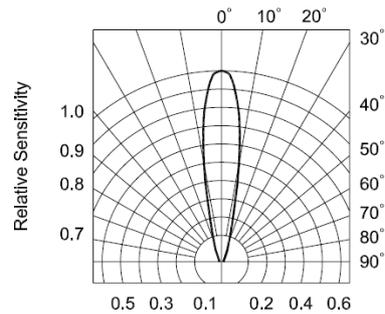


FIG.6 SENSITIVITY DIAGRAM