



# Plastic Infrared Light Emitting Diode

## QED234

### Description

The QED234 is a 940 nm GaAs / AlGaAs LED encapsulated in a clear untinted, plastic T-1 3/4 package.

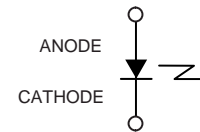
### Features

- $\lambda = 940 \text{ nm}$
- Chip Material = GaAs with AlGaAs Window
- Package Type: T-1 3/4 (5 mm lens diameter)
- Matched Photosensor: QSD123/124
- Medium Emission Angle, 40°
- High Output Power
- Package Material and Color: Clear, Untinted, Plastic
- Ideal for Remote Control Applications
- This is a Pb-Free Device



T-1 3/4, 5MM LED  
CASE 100CC

### CONNECTION DIAGRAM



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
T <sub>OPR</sub>	Operating Temperature	40 to +100	°C
T <sub>STG</sub>	Storage Temperature	40 to +100	°C

°C Soldering Temperature (Flow) (Note 2) (Note 3)

		260 for 10 s	°C
I <sub>F</sub>	Continuous Forward Current	100	mA
V <sub>R</sub>	Reverse Voltage	5	V
P <sub>D</sub>	Power Dissipation (Note 1)	200	mW
I <sub>FP</sub>	Peak Forward Current	1.5	A

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. Derate power dissipation linearly 2.67 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or Isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6 mm) minimum from housing.
5. Pulse conditions; tp = 100 μs, T = 10 ms

### ORDERING INFORMATION

Device	Package	Shipping†
QED234	T 1 3/4, 5MM LED (Pb Free)	250 / Bulk Bag

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, [BRD8011/D](#).

## QED234

### ELECTRICAL / OPTICAL CHARACTERISTICS

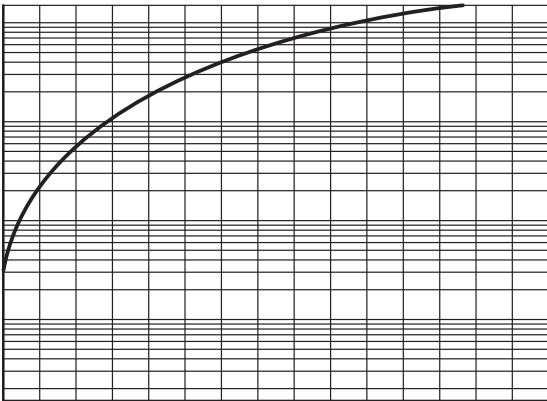
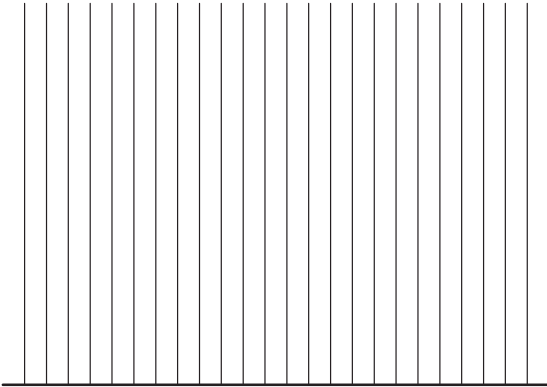
Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$\lambda_{PE}$	Peak Emission Wavelength	$I_F = 20 \text{ mA}$		940		nm
	Spectral Bandwidth	$I_F = 20 \text{ mA}$	50			nm
$TC_\lambda$	Temp. Coefficient of $\lambda_{PE}$	$I_F = 100 \text{ mA}$		0.2		nm/K
$2\theta_{1/2}$	Emission Angle	$I_F = 100 \text{ mA}$		40		°
$V_F$	Forward Voltage	$I_F = 100 \text{ mA}$ , $t_p = 20 \text{ ms}$			1.6	V
$TC_V$	Temp. Coefficient of $V_F$	$I_F = 100 \text{ mA}$		1.5		mV/K
$I_R$	Reverse Current	$V_R = 5 \text{ V}$			10	ns
$I_E$	Radiant Intensity	$I_F = 100 \text{ mA}$ , $t_p = 20 \text{ ms}$	27			ns
$TC_I$	Temp. Coefficient of $I_E$	$I_F = 20 \text{ mA}$		0.6		ns
$t_r$	Rise Time	$I_F = 100 \text{ mA}$		1000		ns
$t_f$	Fall Time			1000		ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

# QED234

## TYPICAL CHARACTERISTICS



**T-1 3/4, 5MM LED**  
CASE 100CC  
ISSUE O

DATE 30 NOV 2016

**Notes:**

1. Dimensions f

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