



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.

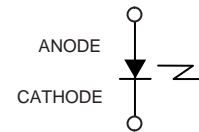
Features

- $\lambda = 940 \text{ nm}$
- 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 _{OPR}	Operating Temperature	40 to +100	°C
T _{STG}	Storage Temperature	40 to +100	°C

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

		260 for 10 s	°C
I _F	Continuous Forward Current	100	mA
V _R	Reverse Voltage	5	V
P _D	Power Dissipation (Note 1)	200	mW
I _{FP}	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

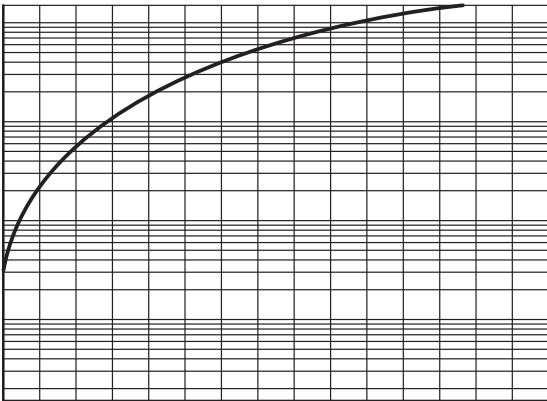
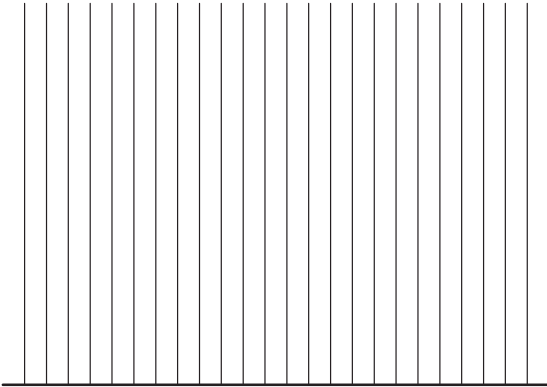
Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
λ_{PE}	Peak Emission Wavelength	$I_F = 20 \text{ mA}$		940		nm
	Spectral Bandwidth	$I_F = 20 \text{ mA}$	50			nm
TC_λ	Temp. Coefficient of λ_{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

onsemi, **onsemi**, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "**onsemi**" or its affiliates and/or subsidiaries in the United States and/or other countries. **onsemi** owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of **onsemi**'s product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. **onsemi** reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and **onsemi** makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using **onsemi**
