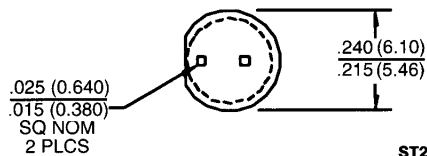
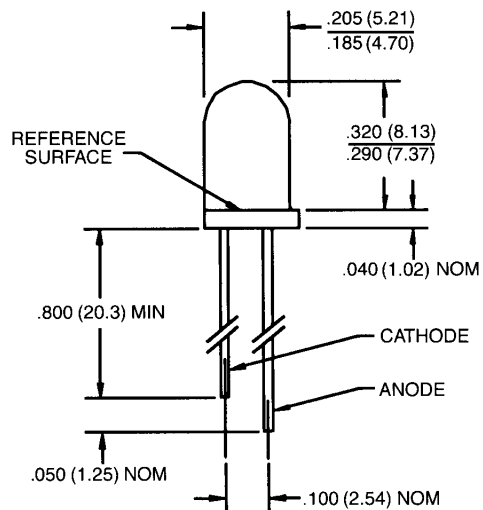




## GaAs INFRARED EMITTING DIODE

### QED233/234

#### PACKAGE DIMENSIONS



ST2134

#### DESCRIPTION

The QED23X is a 940nm GaAs LED encapsulated in a clear plastic T-1 $\frac{3}{4}$  package.

#### FEATURES

- Tight production  $E_{\theta}$  distribution.
- Steel lead frames for improved reliability in solder mounting.
- Good optical-to-mechanical alignment.
- Wide emission angle.
- Mechanical and wavelength matched to QSD12X series phototransistor.
- Plastic package color allows easy recognition from phototransistor.
- Medium and high irradiance level.

#### NOTES:

1. DIMENSIONS ARE IN INCHES (mm).
2. TOLERANCE IS  $\pm .010$  (.25) UNLESS OTHERWISE SPECIFIED.
3. FLAT DENOTES CATHODE.



## GaAs INFRARED EMITTING DIODE

<b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A = 25^\circ\text{C}$ Unless Otherwise Specified)	
Storage Temperature .....	$-40^\circ\text{C}$ to $+100^\circ\text{C}$
Operating Temperature .....	$-40^\circ\text{C}$ to $+100^\circ\text{C}$
Soldering:	
Lead Temperature (Iron) .....	$240^\circ\text{C}$ for 5 sec. <sup>(2,3,4,5)</sup>
Lead Temperature (Flow) .....	$260^\circ\text{C}$ for 10 sec. <sup>(2,3,5)</sup>
Continuous Forward Current .....	100 mA
Reverse Voltage .....	5.0 Volts
Power Dissipation .....	200 mW <sup>(1)</sup>

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25^\circ\text{C}$ Unless Otherwise Specified) (All measurements made under pulse conditions.)						
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Forward Voltage	$V_F$	—		1.50	V	$I_F = 20\text{ mA}$
Reverse Leakage Current	$I_R$	—		10	$\mu\text{A}$	$V_R = 5.0\text{ V}$
Peak Emission Wavelength	$\lambda_P$	—	940	—	nm	$I_F = 20\text{ mA}$
Emission Angle at 1/2 Power	$\theta$	—	$\pm 20$	—	Degrees	
Radiant Incidence QED233	$E_0$	0.05		0.25	mW/10° Cone	$I_F = 20\text{ mA}$ <sup>(6,7)</sup>
Radiant Incidence QED234	$E_0$	0.13		—	mW/10° Cone	$I_F = 20\text{ mA}$ <sup>(6,7)</sup>

<b>NOTES</b>
<ol style="list-style-type: none"> <li>1. Derate power dissipation linearly 2.67 mW/°C above 25°C.</li> <li>2. RMA flux is recommended.</li> <li>3. Methanol or Isopropyl alcohols are recommended as cleaning agents.</li> <li>4. Soldering iron tip 1/16" (1.6 mm) minimum from housing.</li> <li>5. As long as leads are not under any stress or spring tension.</li> <li>6. Measurement is taken at the end of a single 100 <math>\mu\text{sec}</math> pulse.</li> <li>7. <math>E_0</math> is a measurement of the average apertured radiant energy incident upon a sensing area 0.444" (11.3 mm) in diameter, perpendicular to and centered on the mechanical axis of the lens, and 2.54" (64.4 mm) from the measurement surface. <math>E_0</math> is not necessarily uniform within the measurement area.</li> </ol>