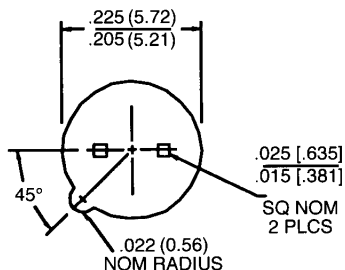
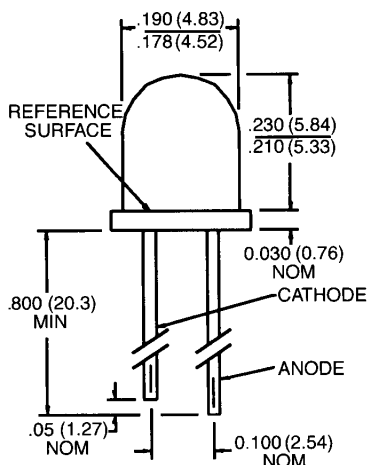


**PACKAGE DIMENSIONS**



ST2135

NOTES:

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

**DESCRIPTION**

The QED42X is an 880nm AlGaAs LED encapsulated in a clear, purple tinted, plastic TO-46 package.

**FEATURES**

- Tight production  $E_s$  distribution.
- Steel lead frames for improved reliability in solder mounting.
- Good optical-to-mechanical alignment.
- Wide emission angle.
- Mechanical and wavelength matched to QSD42X series phototransistor.
- Plastic package color allows easy recognition from phototransistor.
- High irradiance level.



## AIGaAs INFRARED EMITTING DIODE

### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

Storage Temperature	-40°C to +100°C
Operating Temperature	-40°C to +100°C
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. <sup>(2,3,4,5)</sup>
Lead Temperature (Flow)	260°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>

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

(All measurements made under pulse conditions.)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Forward Voltage	$V_F$	—		1.70	V	$I_F = 20\text{ mA}$
Reverse Leakage Current	$I_R$	—		10	$\mu\text{A}$	$V_R = 5.0\text{ V}$
Peak Emission Wavelength	$\lambda_p$	—	880	—	nm	$I_F = 20\text{ mA}$
Emission Angle at 1/2 Power	$\theta$	—	$\pm 35$	—	Degrees	
Radiant Incidence QED422	$E_o$	0.05		0.25	mW/10° Cone	$I_F = 20\text{ mA}$ <sup>(6,7)</sup>
Radiant Incidence QED234	$E_o$	0.10		—	mW/10° Cone	$I_F = 20\text{ mA}$ <sup>(6,7)</sup>

### NOTES

- Derate power dissipation linearly 2.67 mW/°C above 25°C.
- RMA flux is recommended.
- Methanol or Isopropyl alcohols are recommended as cleaning agents.
- Soldering iron tip 1/16" (1.6 mm) minimum from housing.
- As long as leads are not under any stress or spring tension.
- Measurement is taken at the end of a single 100  $\mu\text{sec}$  pulse.
- $E_o$  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.  $E_o$  is not necessarily uniform within the measurement area.