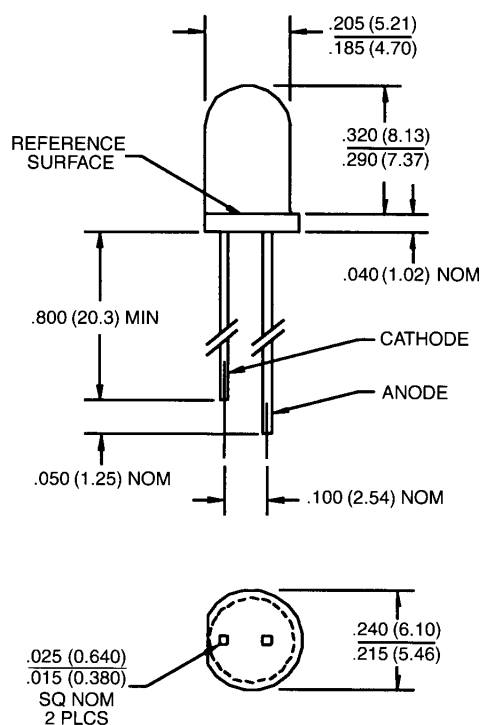




AlGaAs INFRARED EMITTING DIODE

QED221/222

PACKAGE DIMENSIONS



ST2133

DESCRIPTION

The QED22X is an 880nm AlGaAs LED encapsulated in a clear, purple tinted, plastic T-1 $\frac{1}{4}$ package.

FEATURES

- Tight production E_0 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.
- High irradiance level.

NOTES:

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



AIGaAs INFRARED EMITTING DIODE

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

Storage Temperature	-40°C to $+100^\circ\text{C}$
Operating Temperature	-40°C to $+100^\circ\text{C}$
Soldering:	
Lead Temperature (Iron)	240°C for 5 sec. ^(2,3,4,5)
Lead Temperature (Flow)	260°C for 10 sec. ^(2,3,5)
Continuous Forward Current	100 mA
Reverse Voltage	5.0 Volts
Power Dissipation	200 mW ⁽¹⁾

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	μA	$V_R = 5.0\text{ V}$
Peak Emission Wavelength	λ_p	—	880	—	nm	$I_F = 20\text{ mA}$
Emission Angle at 1/2 Power	θ	—	± 20	—	Degrees	
Radiant Incidence QED221	E_o	0.065		—	mW/10° Cone	$I_F = 20\text{ mA}$ ^(6,7)
Radiant Incidence QED222	E_o	0.085		0.24	mW/10° Cone	$I_F = 20\text{ mA}$ ^(6,7)

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 $\frac{1}{16}$ " (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 μsec 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.