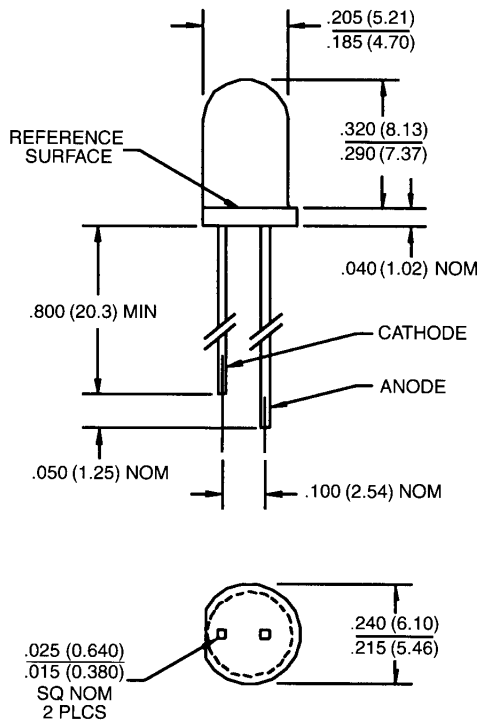


PACKAGE DIMENSIONS



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 E₀ 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°C |
| Operating Temperature | -40°C to + 100°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 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.