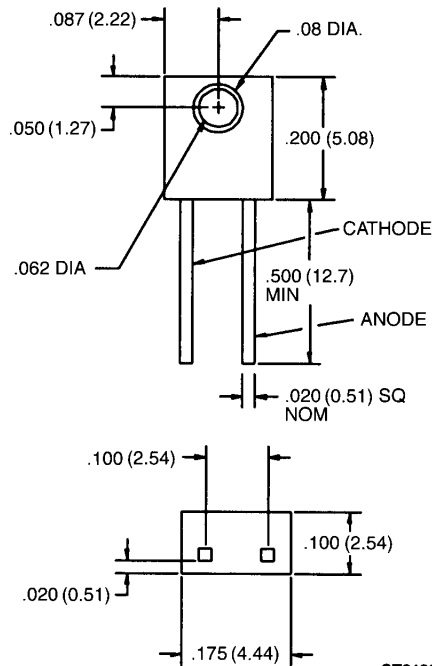




AlGaAs INFRARED EMITTING DIODE

QEE122/123

PACKAGE DIMENSIONS



ST2129

DESCRIPTION

The QEE12X is an 880 nm AlGaAs LED encapsulated in a wide angle, dark green, plastic sidelooker shell package.

FEATURES

- Tight production E_o distribution.
- Steel lead frames for improved reliability in solder mounting.
- Good optical-to-mechanical alignment.
- Mechanically and wavelength matched to QSE11X 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.



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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	50 mA
Reverse Voltage	5.0 Volts
Power Dissipation	100 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 ½ Power	θ	—	± 25	—	Degrees	
Radiant Incidence QEE122	E_0	0.02		0.08	mW/10° Cone	$I_f = 20 \text{ mA}$ ^(6,7)
Radiant Incidence QEE123	E_0	0.04		—	mW/10° Cone	$I_f = 20 \text{ mA}$ ^(6,7)

NOTES

- Derate power dissipation linearly 1.33 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_0 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_0 is not necessarily uniform within the measurement area.