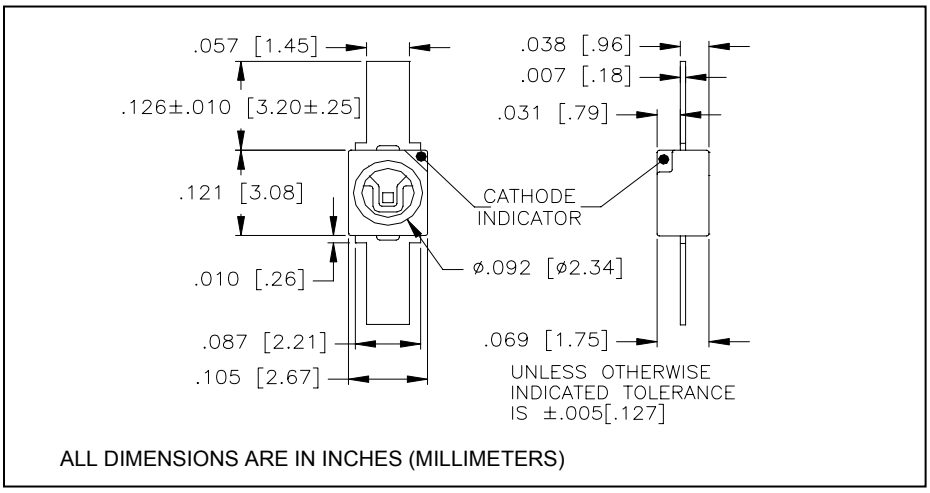
CLE100F

Gallium Arsenide IRED
Flat Lead PLCC Package

August, 2001



features

- Flat lead PLCC package
- ±50° emission angle
- 940 nm peak wavelength

description

The CLE100F is a 940nm infrared emitting diode featuring current GaAs/AlGaAs technology for increased quantum efficiency. The chip is mounted in a compact, embedded leadframe package with flying lead configuration and overcoated with clear epoxy to provide a wide emission pattern. Different wavelength chips, different lenses and different lead configurations are available. For additional information, call Clairex.

absolute maximum ratings (T_A = 25°C unless otherwise stated)

storage temperature	-40°C to +125°C
operating temperature	-40°C to +100°C
lead soldering temperature[1]	260°C
continuous forward current[2]	30mA
peak forward current (1.0ms pulse width, 10% duty cycle)	1A
reverse voltage	5V
continuous power dissipation[3]	75mW

notes:

1. 0.06" (1.5mm) from case for 5 seconds maximum.
2. Derate linearly 0.32mA/°C from 25°C free air temperature to T_A = +100°C.
3. Derate linearly 0.80mW/°C from 25°C free air temperature to T_A = +100°C.

electrical characteristics (T_A = 25°C unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
P_O	Total power output	2.0	2.5	-	mW	I_F = 20mA
V_F	Forward voltage	-	-	1.5	V	I_F = 20mA
I_R	Reverse current	-	-	10	µA	V_R = 5.0V
λp	Peak emission wavelength	-	940	-	nm	I_F = 20mA
BW	Spectral bandwidth at half power points	-	50	-	nm	I_F = 20mA
θ_{HP}	Emission angle at half power points	-	100	-	deg.	I_F = 20mA
t_r, t_f	Radiation rise and fall time	-	700	-	ns	$I_{F(PK)}$ = 20mA

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Revised 3/15/06

Clairex Technologies, Inc.
1301 East Plano Parkway
Plano, Texas 75074-8524
Phone: 972-265-4900
Fax: 972-265-4949
www.clairex.com