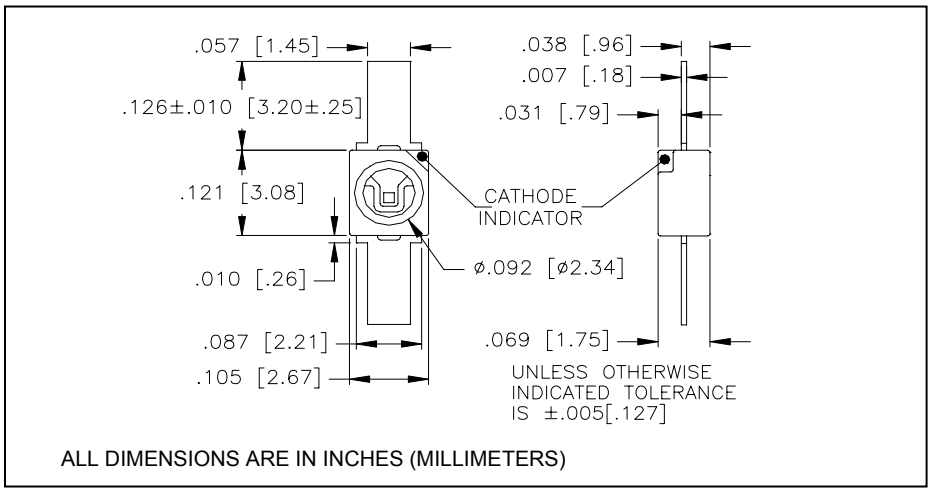
CLE100F

Gallium Arsenide IRED
Flat Lead PLCC Package

August, 2001



features

- Flat lead PLCC package
- ±60° emission angle
- 940 nm peak wavelength

description

The CLE100F is a 940nm infrared emitting diode featuring current GaAs technology with a AlGaAs window 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 +125°C
lead soldering temperature[1]	240°C
maximum continuous current[2]	30mA
peak forward current (10µs pulse width, 100pps)	1A
maximum power dissipation[3]	75mW
reverse voltage	5V

notes:

1. 0.06" (1.5mm) from case for 5 seconds maximum. Maximum temperature can be 260°C if reflow soldering.
2. Derate linearly 0.24mA/°C from 25°C free air temperature to T_A = +125°C.
3. Derate linearly 0.60mW/°C from 25°C free air temperature to T_A = +125°C.

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

symbol	parameter	min	typ	max	units	test conditions
P_O	Total power output[4]	2.0	-	-	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	-	120	-	deg.	I_F = 20mA

note: 4. Power output is measured in an integrating sphere.

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