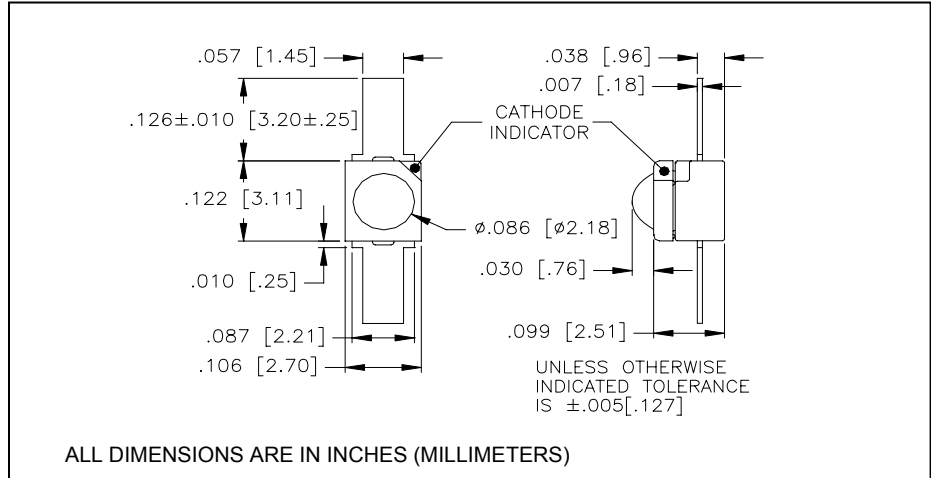


# CLE110F

## Gallium Arsenide IRED Flat Lead PLCC Package



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### features

- Flat lead PLCC package
- $\pm 5^\circ$  emission angle
- 940 nm peak wavelength
- Custom plastic lens
- Available with flat lens

### description

The CLE110F infrared emitting diode features 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 lensed to provide a narrow emission pattern. Contact Clairex for alternative wavelength emitter chips, different lenses and lead configurations.

### absolute maximum ratings ( $T_A = 25^\circ\text{C}$ unless otherwise stated)

storage temperature .....	-40°C to +125°C
operating temperature .....	-40°C to +125°C
lead soldering temperature <sup>(1)</sup> .....	240°C
maximum continuous current <sup>(2)</sup> .....	30mA
peak forward current (10 $\mu$ s pulse width, 100pps) .....	1A
maximum power dissipation <sup>(3)</sup> .....	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  $T_A = +125^\circ\text{C}$ .
3. Derate linearly 0.60mW/°C from 25°C free air temperature to  $T_A = +125^\circ\text{C}$ .

electrical characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
symbol	parameter	min	typ	max	units	test conditions
$P_O$	Total power output <sup>(4)</sup>	1.0	-	-	mW	$I_F = 20\text{mA}$
$V_F$	Forward voltage	-	-	1.5	V	$I_F = 20\text{mA}$
$I_R$	Reverse current	-	-	10	$\mu\text{A}$	$V_R = 5.0\text{V}$
$\lambda_p$	Peak emission wavelength	-	940	-	nm	$I_F = 20\text{mA}$
BW	Spectral bandwidth at half power points	-	50	-	nm	$I_F = 20\text{mA}$
$\theta_{HP}$	Emission angle at half power points	-	10	-	deg.	$I_F = 20\text{mA}$

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

Clairex reserves the right to make changes at any time to improve design and to provide the best possible product.

Revised 12/01/04