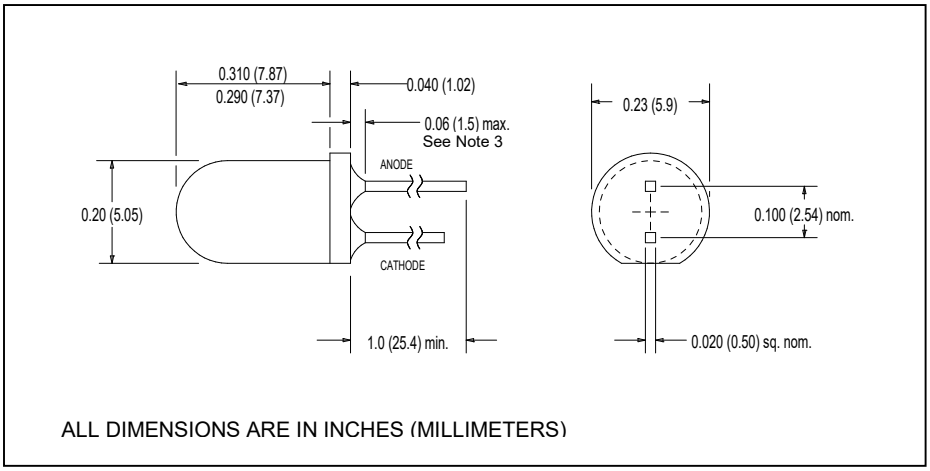
CLD370F
Plastic PIN Photodiode

CLAIREX® SEMICONDUCTOR

15-3700A



features

- fast switching speed
- low junction capacitance
- 850 nm peak response
- large photosensitive area
- sharp cutoff of visible wavelengths
- ± 30° acceptance angle

description

The CLD370F is a PIN silicon photodiode mounted in a T-1¾ (5mm) package. The chip has an active area of approximately 2 mm x 2 mm (4 square mm) and is intended for use as an infrared sensor. The dark tinting of the package effectively attenuates wavelengths shorter than 700nm eliminating most visible light interference.

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

storage temperature.....-55°C to +100°C
operating temperature..... -55°C to +100°C
lead soldering temperature[1].....260°C
continuous power dissipation[2] .....150 mW

notes:

1. 0.06" (1.5 mm) from the header for 5 seconds maximum. Maximum temperature can be 260°C if wave soldering.
2. Derate linearly 1.5 mW/°C from 25°C free air temperature to T_A = +100°C.
3. Protruding resin under flange is 0.06" (1.5 mm) max.
4. Radiation source is a GaAlAs IRED operating at a peak wavelength of 850nm.

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

symbol	parameter	min	typ	max	units	test conditions
I_{SC}	Light current[4]	5.0 -	10.0 60.0	- -	µA µA	V_R = 5 V, E_e = 0.1 mW/cm^2 V_R = 5 V, E_e = 1.0 mW/cm^2
I_D	Dark current	-	-	30	nA	V_R = 10V, E_e = 0
V_{BR}	Reverse breakdown	30	-	-	V	I_R = 100 µA, E_e = 0
C_J	Junction capacitance	-	25	-	pF	V_R = 3 V, E_e = 0. f = 1 MHz
V_O	Open circuit voltage	-	350	-	mV	E_e = 0.1 mW/cm^2
Θ_{HP}	Total angle at half sensitivity points	-	60	-	deg.	
t_r, t_f	Output rise and fall time[4]	-	30	-	ns	R_L = 1 kΩ, V_R = 10 V

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

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