CFD470

Fiber Optic PIN Photodiode

Clairex® Technologies, Inc.

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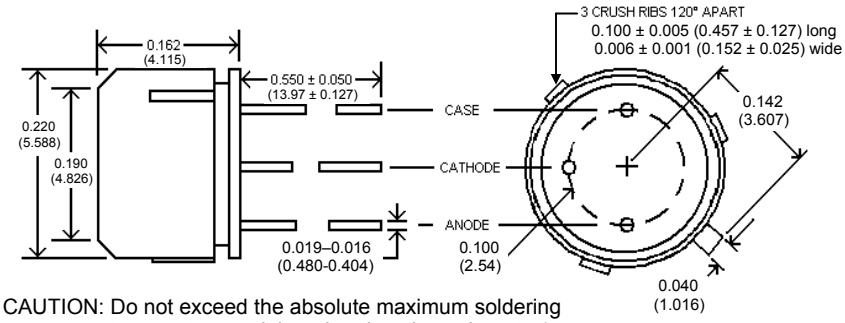

CAUTION: Do not exceed the absolute maximum soldering temperature and time duration shown in note 1.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

features

- High speed, low capacitance
- Optimized for fiber-optic applications
- TO-18 header with plastic lens

description

The CFD470 contains a PIN silicon photodiode mounted on a TO-18 header. The devices are designed to self-align in the 0.228" (5.79mm) bore of a standard fiber-optic receptacle. Three crush ribs on the outside of the case provide press-fit installation and precise alignment. The CFD470 is designed to interface with multimode optical fibers from 50/125 to 200/300 microns.

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

storage temperature	-55°C to +115°C
operating temperature	-40°C to +100°C
lead soldering temperature(1)	240°C
reverse voltage	100VDC
continuous power dissipation	200mW(2)

notes:

1. 1/16" (1.6mm) from case for 5 seconds maximum.
2. Derate linearly 2.13mW/°C from 25°C free air temperature to T_A = +100°C.

electrical characteristics (T_A = 25°C, V_{CC} = 5VDC unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
R	Flux responsivity(3)	0.33	0.55	-	A/W	V_R = 5V
I_D	Dark current	-	1.0	5.0	nA	V_R = 5V
λ_P	Peak response wavelength	-	880	-	nm	
t_r	Output rise time(4)	-	6.0	-	ns	V_R = 15V
C_T	Total capacitance	-	3.0		pF	V_R = 20V
FoV	Field of view	-	80		deg.	

notes: 3. Tested with 50/125 µm, 0.20 N. A. fiber @ 10 µW optical power with 850nm source. Responsivity levels apply to 50 µm, 62.5 µm and 100 µm core optical fibers.

4. R_L = 50Ω, 10% - 90%.

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