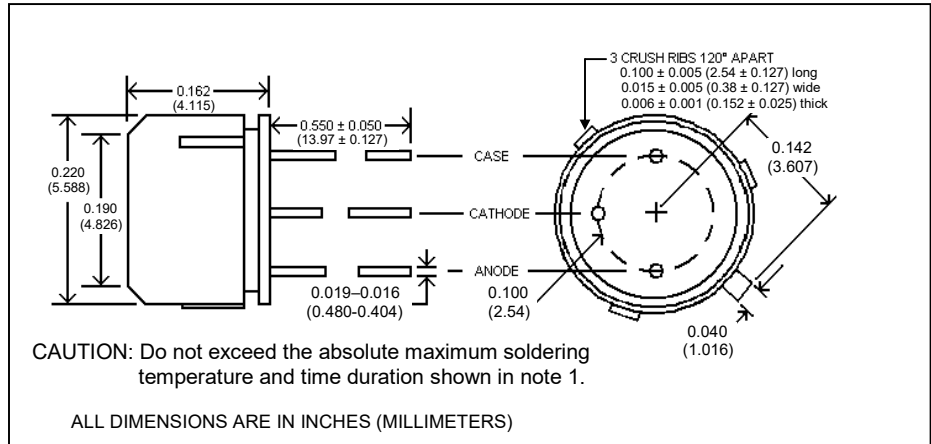
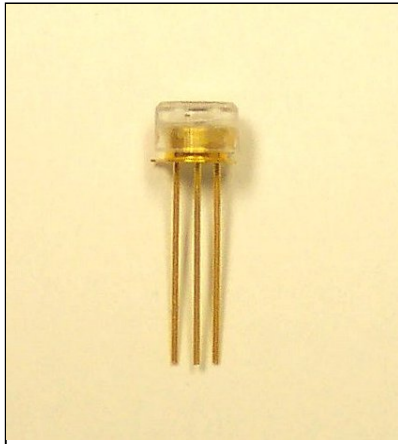


# CFD470A

## Fiber Optic High Speed Photodiode



### features

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

### description

The CFD470A contains a PIN silicon photodiode mounted on a TO-18 header. The device is 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 CFD470A is designed to interface with multimode optical fibers from 50/125 to 200/300 microns.

### absolute maximum ratings (T<sub>A</sub> = 25°C unless otherwise stated)

storage temperature.....	-55°C to +115°C
operating temperature.....	-40°C to +100°C
lead soldering temperature <sup>(1)</sup> .....	260°C
reverse voltage.....	30V
peak DC current <sup>(2)</sup> .....	10mA

### notes:

1. 1/16" (1.6mm) from case for 5 seconds maximum.
2. Derate linearly 0.11mA/°C from 25°C free air temperature to T<sub>A</sub> = +100°C.
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.

### electrical characteristics (T<sub>A</sub> = 25°C, V<sub>CC</sub> = 5VDC unless otherwise noted)

symbol	parameter	min	typ	max	units	test conditions
R <sub>0</sub>	Flux responsivity	-	0.40	-	A/W	V <sub>R</sub> = 0 V, λ = 632 nm
		-	0.52	-	A/W	V <sub>R</sub> = 0 V, λ = 800 nm
I <sub>L</sub>	Light current <sup>(3)</sup>	3.4	4.5	-	μA	P <sub>in</sub> = 10 μW, λ = 850 nm
I <sub>D</sub>	Dark current	-	0.05	0.3	nA	V <sub>R</sub> = 20 V
λ <sub>P</sub>	Peak response wavelength	-	800	-	nm	V <sub>R</sub> = 0 V
t <sub>r</sub>	Output rise time	-	0.4	-	ns	V <sub>R</sub> = 20 V, λ = 850 nm, R <sub>L</sub> = 50 Ω
C <sub>J</sub>	Junction capacitance	-	1.8	-	pF	V <sub>R</sub> = 20 V
V <sub>BR</sub>	Breakdown voltage	30	50	-	V	I <sub>R</sub> = 10 μA
FoV	Field of view	-	80	-	deg.	

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