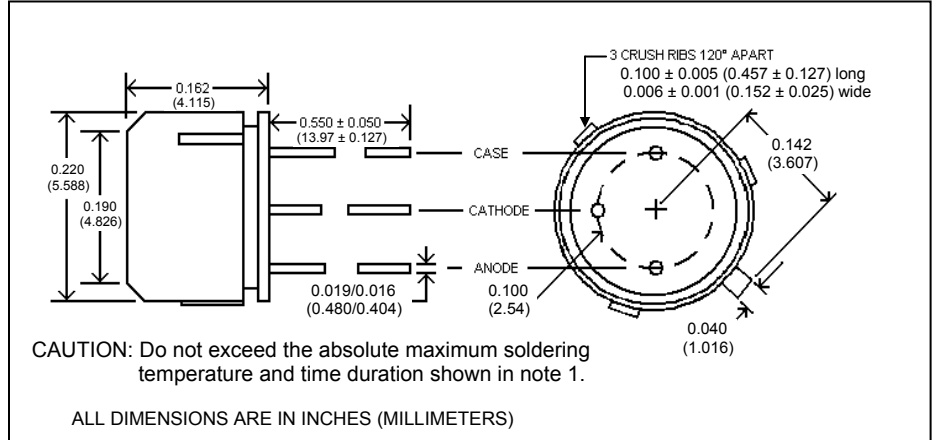
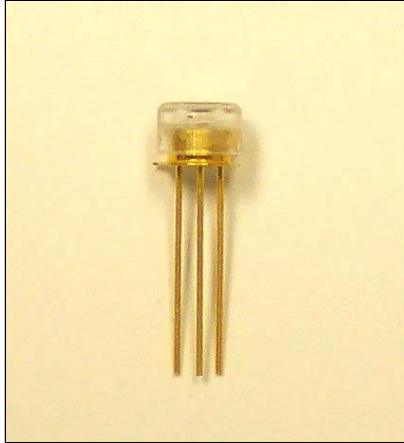


CFD470

Fiber Optic PIN Photodiode



April, 2004



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⁾ | 260°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, unless otherwise noted)

| symbol | parameter | min | typ | max | units | test conditions |
|----------------|----------------------------------|------|------|-----|-------|----------------------|
| R | Flux responsivity ⁽³⁾ | 0.33 | 0.50 | - | 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 _J | Junction 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%.

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

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