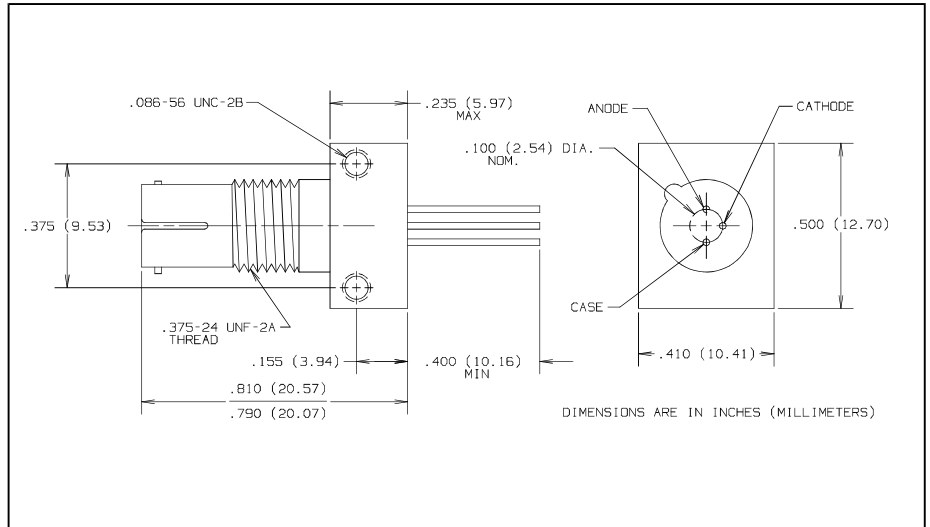
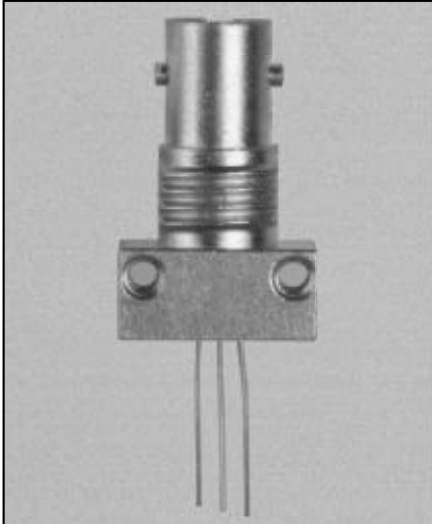


Fiber Optic GaAlAs LED in ST* Receptacle Types OPF372A, OPF372B, OPF372C, OPF372D



Features

- Component pre-mounted and ready to use
- Pre-tested with fiber to assure performance
- Popular ST* style receptacle

Description

The OPF372 series LED consists of a low cost plastic cap LED, pre-mounted and aligned in an ST* receptacle. This configuration is designed for PC board or panel mounting. Includes lock washer and jam nut, two 2-56 screws, and a dust cap.

The LED's are designed to interface with multimode optical fibers from 50/125 to 200/300 microns.

*ST is a registered trademark of AT&T.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| | |
|--|-----------------------|
| Reverse Voltage | 1.0 V |
| Continuous Forward Current | 100 mA ⁽⁴⁾ |
| Storage Temperature Range | -55° C to +100° C |
| Operating Temperature Range | -40° C to +85° C |
| Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 sec. with soldering iron] | 240° C ⁽¹⁾ |

Notes:

- (1) RMA flux is recommended. Duration can be extended to 10 sec. max when flow soldering.
- (2) Graded index fiber, 50 μm core, N.A. = 0.20.
- (3) To convert radiant power output to dBm, use the following expression $\text{dBm} = 10 \log (\mu\text{W}/1000)$.
- (4) Derate linearly @ 1.0 mA/° C above 25° C.
- (5) Prebias @ 5 mA current.

LED Burn-in

All LED's are subject to 100% burn-in testing. Test conditions are 96 hours at 100 mA continuous current in 25° C ambient.

TYPICAL COUPLED POWER into OPTICAL FIBER

| Typical Coupled Power $I_F = 100 \text{ mA @ } 25^\circ\text{C}$ | | | | | | |
|---|------------------|------|-------------------|--------------------|-------------------|-------------------|
| Fiber | Refractive Index | N.A. | OPF372D | OPF372C | OPF372B | OPF372A |
| 50/125 μm | Graded | 0.20 | 7.5 μW | 12.5 μW | 19 μW | 29 μW |
| 62.5/125 μm | Graded | 0.28 | 27 μW | 35 μW | 51 μW | 89 μW |
| 100/140 μm | Graded | 0.29 | 60 μW | 87 μW | 129 μW | 200 μW |
| 200/300 μm^* | Step | 0.41 | 320 μW | 463 μW | 606 μW | 750 μW |

*PCS - Plastic Clad Silica

Types OPF372A, OPF372B, OPF372C, OPF372D

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS | |
|-------------|---|---------|------|------|-------|--|-----------------------------|
| P_O | Radiant Power Output | OPF372D | 5.0 | 7.5 | | μW | $I_F = 100\text{ mA}^{(2)}$ |
| | | OPF372C | 10.0 | 12.5 | | | |
| | | OPF372B | 15.0 | 19.0 | | | |
| | | OPF372A | 25.0 | 29.0 | | | |
| V_F | Forward Voltage | | 1.8 | 2.0 | V | $I_F = 100\text{ mA}$ | |
| λ_p | Peak Output Wavelength | 830 | 850 | 870 | nm | $I_F = 50\text{ mA}$ | |
| B | Spectral Band Width Between Half Power Points | | 35 | | nm | $I_F = 50\text{ mA}$ | |
| t_r | Output Rise Time | | 6.0 | 8.0 | ns | $I_F = 100\text{ mA}$, 10%-90% ⁽⁵⁾ | |
| t_f | Output Fall Time | | 6.0 | 10.0 | ns | $I_F = 100\text{ mA}$, 90%-10% ⁽⁵⁾ | |

Typical Performance Curves

