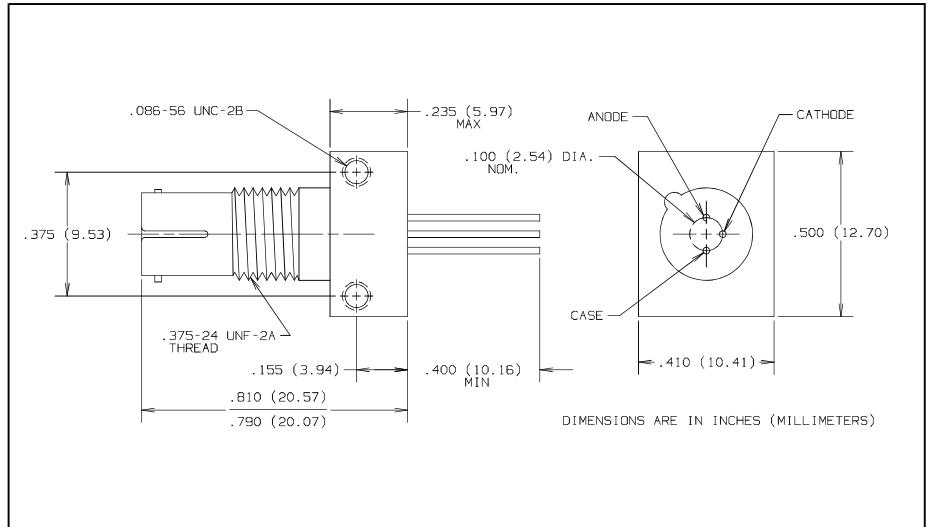
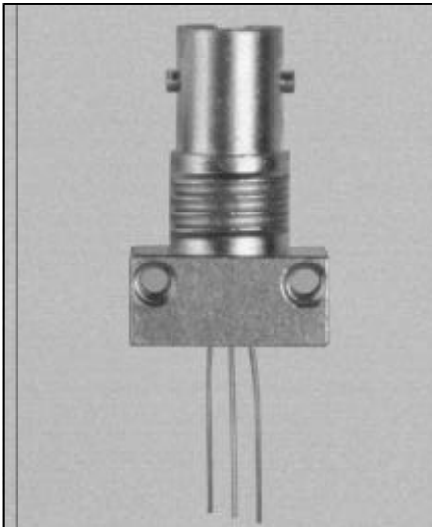


Fiber Optic GaAlAs LED in ST* Receptacle Types OPF322A, OPF322B, OPF322C



Features

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

Description

The OPF322 series LED consists of a hermetic 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 $+125^\circ\text{C}$ |
| Operating Temperature Range | -40°C to $+100^\circ\text{C}$ |
| 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/ $^\circ\text{C}$ 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. | OPF322C | OPF322B | OPF322A |
| 50/125 μm | Graded | 0.20 | 7.5 μW | 12.5 μW | 19 μW |
| 62.5/125 μm | Graded | 0.28 | 16 μW | 22 μW | 34 μW |
| 100/140 μm | Graded | 0.29 | 38 μW | 62 μW | 95 μW |
| 200/300 μm^* | Step | 0.41 | 140 μW | 235 μW | 360 μW |

*PCS - Plastic Clad Silica

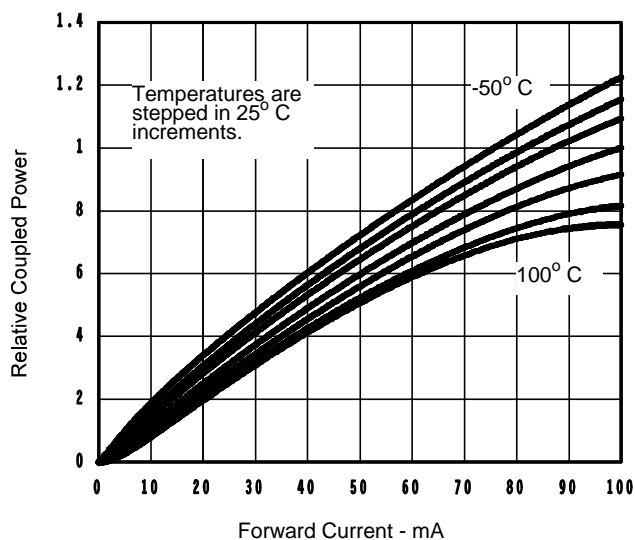
Types OPF322A, OPF322B, OPF322C

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

| SYMBOL | PARAMETER | | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|-------------|--|---------|------|------|------|---------------|--|
| P_O | Radiant Power Output | OPF322C | 5.0 | 7.5 | | μW | $I_F = 100\text{ mA}^{(2)}$ |
| | | OPF322B | 10.0 | 12.5 | | | |
| | | OPF322A | 15.0 | 19.0 | | | |
| 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 Bandwidth 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

Relative Coupled Power vs. Forward Current



Forward Voltage vs. Forward Current

