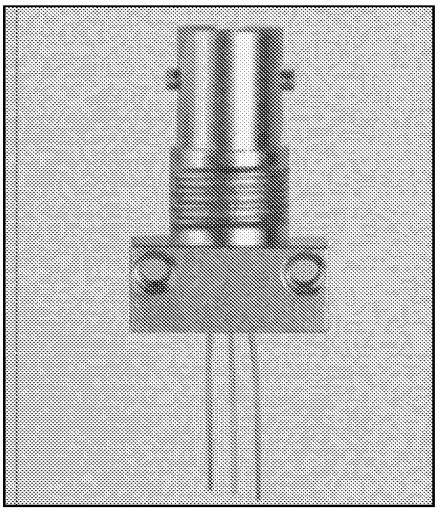
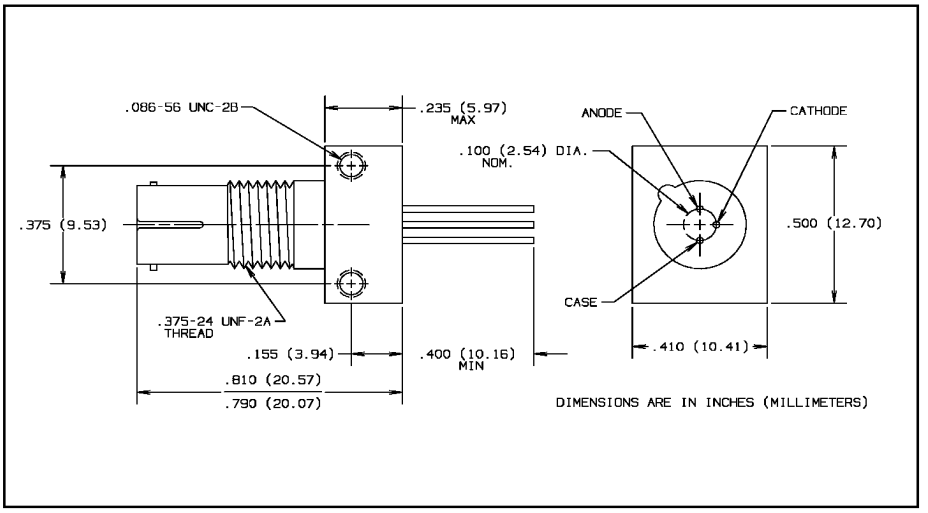
Fiber Optic GaAlAs LED in ST* Receptacle
Types OPF322A, OPF322B, OPF322C





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° C unless otherwise noted)

Reverse Voltage . . . . . 1.0 V
Continuous Forward Current . . . . . 100 mA(4)
Storage Temperature Range . . . . . -55° C to +125° C
Operating Temperature Range . . . . . -40° C to +100° 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 dBm = 10 log (µW/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 = 100mA @ 25°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

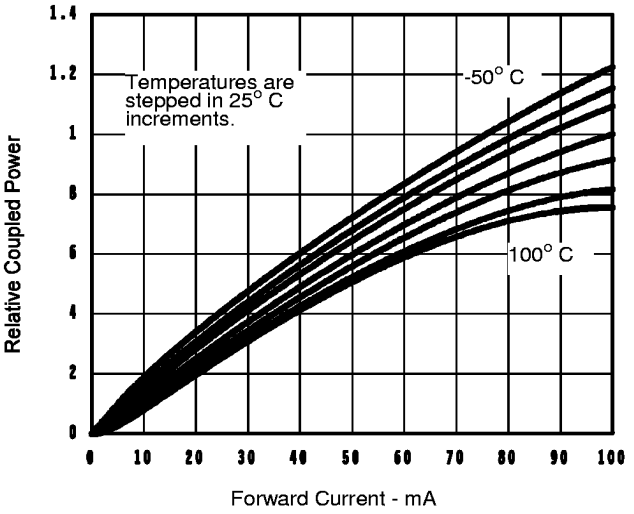
Types OPF322A, OPF322B, OPF322C

Electrical Characteristics (T_A = 25° C unless otherwise noted)

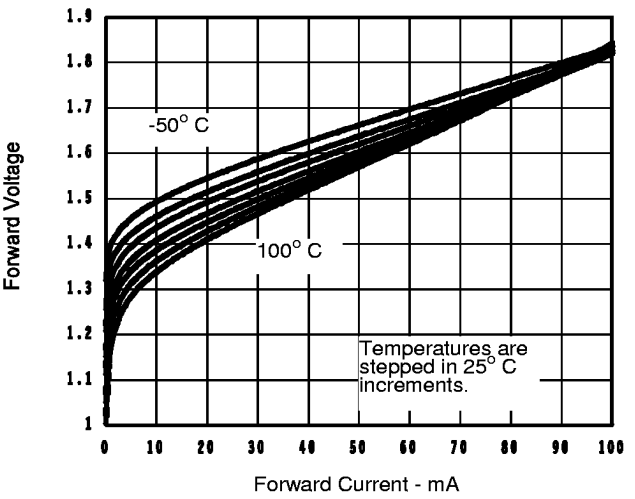
SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
P_O	Radiant Power Output	OPF322C OPF322B OPF322A	5.0 10.0 15.0	7.5 12.5 19.0		µW	I_F = 100 mA[2]
V_F	Forward Voltage			1.8	2.0	V	I_F = 100 mA
λp	Peak Output Wavelength		830	850	870	nm	I_F = 50 mA
B	Spectral Bandwidth Between Half Power Points			35		nm	I_F = 50 mA
t_r	Output Rise Time			6.0	8.0	ns	I_F = 100 mA, 10%-90%[5]
t_f	Output Fall Time			6.0	10.0	ns	I_F = 100 mA, 90%-10%[5]

Typical Performance Curves

Relative Coupled Power vs. Forward Current



Forward Voltage vs. Forward Current



FIBER OPTIC COMPONENTS