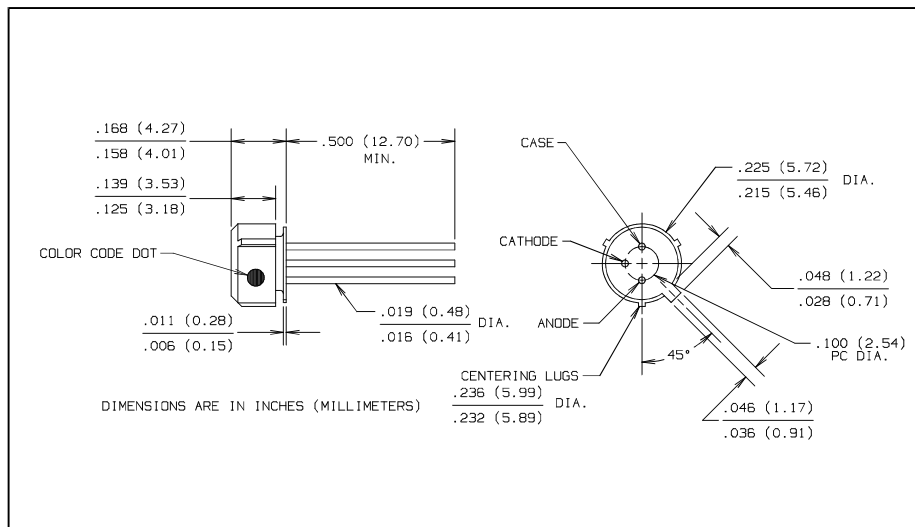
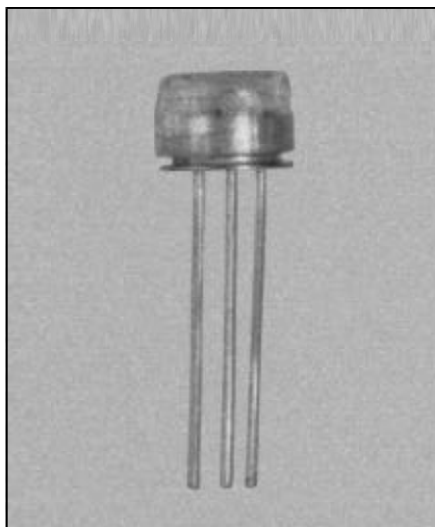


# Fiber Optic GaAlAs LED

## Types OPF370A, OPF370B, OPF370C, OPF370D



### Features

- Electrically isolated plastic cap package
- High radiant output for fiber optic applications
- High speed
- Designed to self align in the 0.228 inch diameter bore of standard fiber optic receptacles. Press fit simplifies component installation.

### Description

The OPF370 series LED provides fiber optic users with high coupled power and wide bandwidth in a low cost package.

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

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

Reverse Voltage	1.0 V
Continuous Forward Current	100 mA <sup>(4)</sup>
Storage Temperature Range	-55°C to +115°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 <sup>(1)</sup>

#### Notes:

- (1) RMA flux is recommended. Duration can be extended to 10 sec. max when flow soldering.
- (2) Graded index fiber, 50  $\mu\text{m}$  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.	OPF370D	OPF370C	OPF370B	OPF370A
50/125 $\mu\text{m}$	Graded	0.20	7.5 $\mu\text{W}$	12.5 $\mu\text{W}$	19 $\mu\text{W}$	29 $\mu\text{W}$
62.5/125 $\mu\text{m}$	Graded	0.28	27 $\mu\text{W}$	35 $\mu\text{W}$	51 $\mu\text{W}$	89 $\mu\text{W}$
100/140 $\mu\text{m}$	Graded	0.29	60 $\mu\text{W}$	87 $\mu\text{W}$	129 $\mu\text{W}$	200 $\mu\text{W}$
200/300 $\mu\text{m}^*$	Step	0.41	320 $\mu\text{W}$	463 $\mu\text{W}$	606 $\mu\text{W}$	750 $\mu\text{W}$

\*PCS - Plastic Clad Silica

# Types OPF370A, OPF370B, OPF370C, OPF370D

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

SYMBOL	PARAMETER	DOT	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$P_O$	Radiant Power Output	OPF370D (No Dot)	5.0	7.5		$\mu\text{W}$	$I_F = 100\text{ mA}^{(2)}$
		OPF370C (Blue)	10.0	12.5			
		OPF370B (Yellow)	15.0	19.0			
		OPF370A (Red)	25.0	29.0			
$V_F$	Forward Voltage			1.8	2.0	V	$I_F = 100\text{ mA}$
$\lambda_p$	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% <sup>(5)</sup>
$t_f$	Output Fall Time			6.0	10.0	ns	$I_F = 100\text{ mA}$ , 90%-10% <sup>(5)</sup>

## Typical Performance Curves

