Fiber Optic Transmitter

OPF370A

Features:

- Low Cost 850 nm LED technology
- Electrically isolated plastic cap package
- High thermal stability
- High optical coupling efficiency to multimode fiber
- Industrial temperature range
- Subjected to 100% Burn-in for 96 hrs. at 25° C at 100 mA

Description:

The OPF370A fiber optic transmitter is a high-performance device packaged for data communication links. This transmitter is an 850 nm GaAlAs LED and is specifically designed to efficiently launch optical power into optical fibers ranging in size from 50/125 µm up to 200/230 µm diameter fiber. Multiple power ranges with upper and lower limits are offered, which allows the designer to select a device best suited for the application.

This product's combination of features including high speed and efficient coupled power makes it an ideal transmitter for integration into all types of data communications equipment.

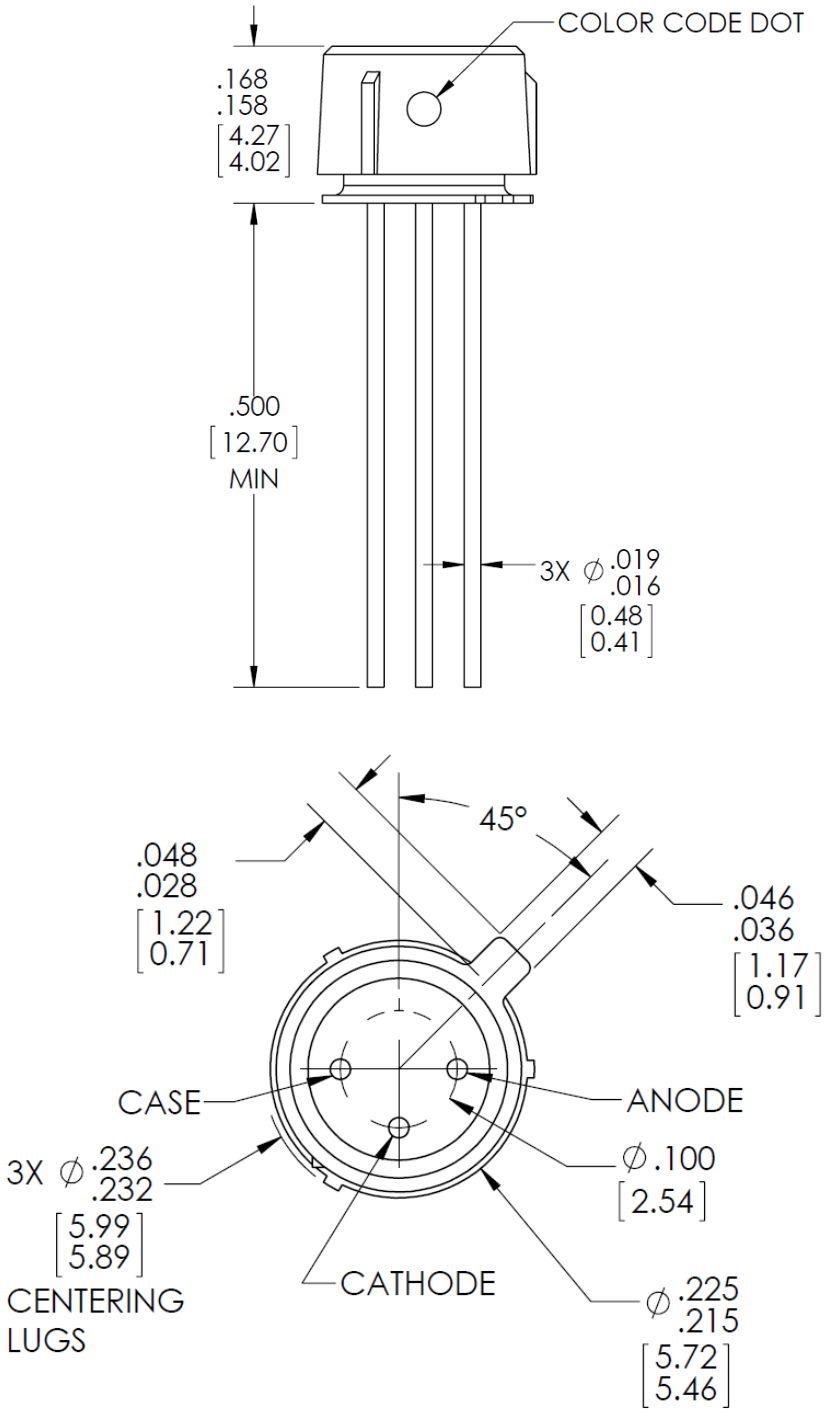
Applications:

- Industrial Ethernet equipment
- Copper-to-fiber media conversion
- Intra-system fiber optic links
- Video surveillance systems

Typical Coupled Power I_F = 100 mA, 25° C			
Fiber Size	**Type**	**N.A.**	**OPF370A**
50/125 µm	Graded Index	0.20	29 µW
62.5/125 µm	Graded Index	0.28	89 µW
100/140 µm	Graded Index	0.29	200 µW
200/230 µm	Step Index	0.41	750 µW

RoHS

Mechanical Data



DIMENSIONS ARE IN INCHES (MILLIMETERS)

Electrical Specifications

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Storage Temperature Range	-55° C to +115° C
Operating Temperature Range	-40° C to +100° C
Lead Soldering Temperature (1)	260° C
Continuous Forward Current (2)	100 mA
Maximum Reverse Voltage	1.0 V

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
P_{T50} (3)	Total Coupled Power	25.0	29.0	-	µW	I_F = 100 mA
V_F	Forward Voltage	-	1.8	2.2	V	I_F = 100 mA
V_R	Reverse Voltage	1.8	-	-	V	I_R = 100 µA
λ	Wavelength	830	850	870	nm	I_F = 50 mA
Dλ	Optical Bandwidth	-	50	60	nm	I_F = 50 mA
t_r, t_f (4)	Rise and Fall Time	-	6.0	10.0	ns	I_F = 100 mA, 10% to 90%

Notes:

(1) Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.
(2) Derate linearly at 0.80 mA /° C above 25° C.
(3) The component is tested using a 50/125 µm fiber cable assembly.
(4) No Pre-bias.
(5) All Optek fiber optic LED products are subjected to 100% burn-in as part of their quality control process. The burn-in conditions are 96 hours at 100 mA drive current and 25° C ambient temperature.

Typical Performance