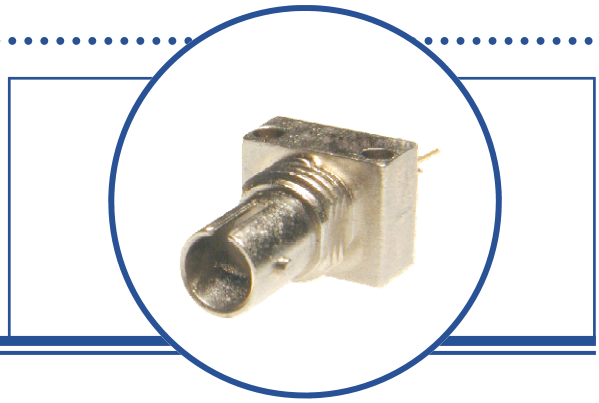
Fiber Optic Transmitter

OPF372 Family

TT electronics
OPTEK Technology

OPF372 Family

- Low Cost 850 nm LED technology
- Popular ST® style receptacle
- Pre-tested with fiber to assure performance
- Component pre-mounted and ready to use
- 35MHz operation



The OPF372 family fiber optic transmitters are high performance devices packaged for data communication links. This transmitter is an 850nm GaAlAs LED and is specifically designed to efficiently launch optical power into fibers ranging in size from 50/125µm up to 200/300µm 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.

The mechanical design of this packaged is intended for PC Board or panel mounting. It is shipped with a lock washer, jam nut, 2 #2-56 screws, and a protective dust cap.

Applications

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

Typical Coupled Power I_F = 100mA, 25°C						
Fiber Size	**Type**	**N.A.**	**OPF372A**	**OPF372B**	**OPF372C**	**OPF372D**
50/125 µm	Graded Index	0.20	29µW	19µW	12.5µW	7.5µW
62.5/125 µm	Graded Index	0.28	89µW	51µW	35µW	27µW
100/140 µm	Graded Index	0.29	200µW	129µW	87µW	60µW
200/300 µm	Step Index	0.41	750µW	606µW	463µW	320µW

RoHS

ESD Class 2

All Optek OPF LED emitters are AEL Class I as defined by IEC 60825-1 and are Risk Group 1 (Low-Risk) as defined by IEC 62471.

ST® is a registered trademark of AT&T.

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Absolute Maximum Ratings
T_A = 25° C unless otherwise noted

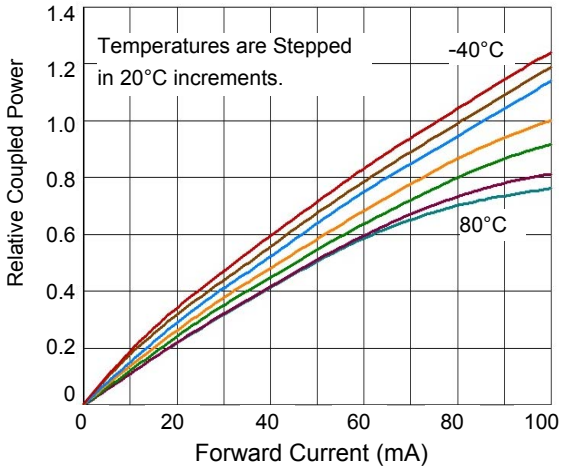
Storage Temperature Range	-55° C to +100° C
Operating Temperature Range	-40° C to +85° C
Lead Soldering Temperature[1]	260° C
Continuous Forward Current[2]	100 mA
Maximum Reverse Voltage	1.0 V

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

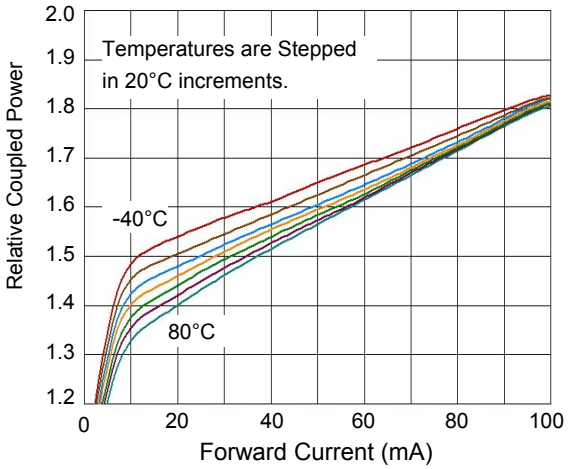
SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	CONDITIONS
P_{OC}	Total Coupled Power 50/125 mm Fiber, NA = 0.20	OPF372A	25.0	29.0		µW	I_F = 100 mA
		OPF372B	15.0	19.0			
		OPF372C	10.0	12.5			
		OPF372D	5.0	7.5			
V_F	Forward Voltage			1.8	2.2	V	I_F = 100 mA
V_R	Reverse Voltage		1.8			V	I_R = 100 µA
λ	Wavelength		830	850	870	nm	I_F = 50 mA
Δλ	Optical Bandwidth			45	60	nm	I_F = 50 mA
t_r, t_f	Rise and Fall Time			6.0	10.0	ns	I_F = 100 mA; 10% to 90%[3]

Notes:
1. Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.
2. De-rate linearly at 1.33mA /°C above 25°C .
3. No Pre-bias.
4. All Optek fiber optic LED products are subjected to 100% burn-in as part of its quality control process. The burn-in conditions are 96 hours at 100mA drive current and 25°C ambient temperature.

Relative Coupled Power vs. Forward Current



Typical Forward Voltage vs. Forward Current



OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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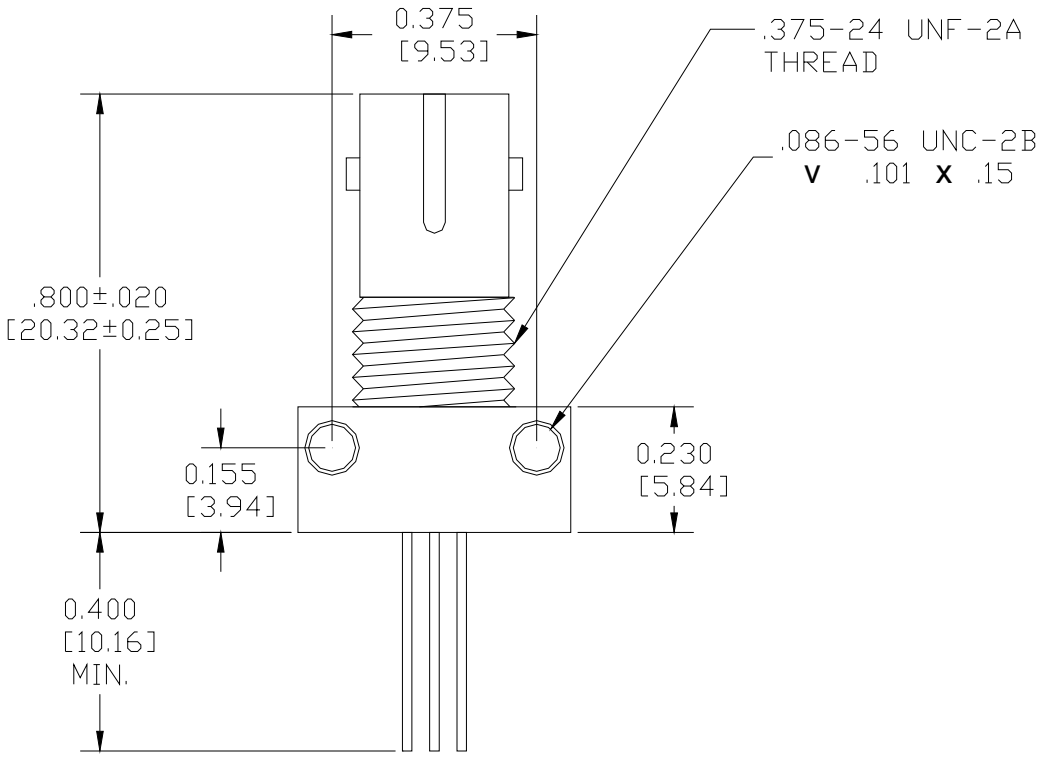
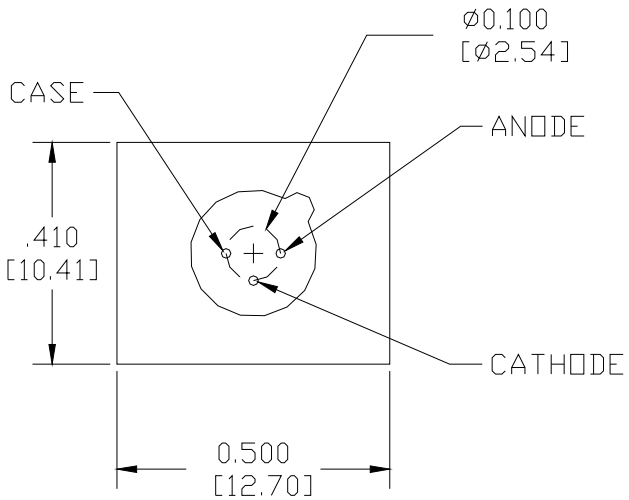
Mechanical Data





DIMENSIONS ARE IN INCHES (MILLIMETERS)