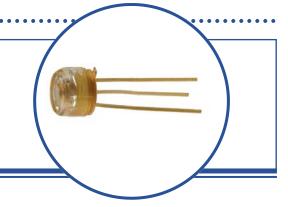
# Fiber Optic Transmitter

### **OPF395 Series**



#### **OPF395 Series**

- Low Cost 850 nm LED technology
- Electrically isolated plastic cap package
- High thermal stability
- · High optical coupling efficiency to multimode fiber
- Industrial temperature range
- 75 MHz Bandwidth



The OPF395 series fiber optic transmitters are high performance devices packaged for data communication links. This transmitter is an 850 nm 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.

#### **Applications**

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

Typical Coupled Power I <sub>F</sub> = 100mA, 25°C										
Fiber Size	Туре	N.A.	OPF395A	OPF395B	OPF395C	OPF395D				
50/125 μm	Graded Index	0.20	25µW	18µW	12.5µW	7.5µW				
62.5/125 µm	Graded Index	0.28	75µW	45µW	35µW	27μW				
100/140 μm	Graded Index	0.29	170µW	115µW	85µW	58µW				
200/300 μm	Step Index	0.41	650µW	545µW	450µW	290µW				



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

# Fiber Optic Transmitter

#### **OPF395 Series**



## **Absolute Maximum Ratings**

T<sub>A</sub> = 25° C unless otherwise noted

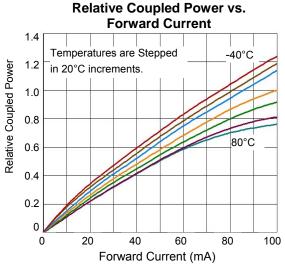
Storage Temperature Range	-55° C to +150° C
Operating Temperature Range	-40° C to +125° C
Lead Soldering Temperature <sup>(1)</sup>	260° C
Continuous Forward Current <sup>(2)</sup>	100 mA
Maximum Reverse Voltage	1.0 V

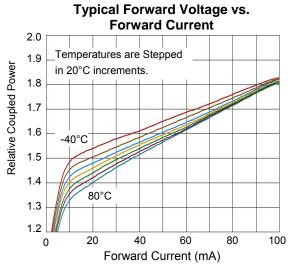
#### Electrical/Optical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

SYMBOL	PARAMETER		DOT	MIN	TYP	MAX	UNITS	CONDITIONS
P <sub>T50</sub> <sup>(3)</sup>	Total Coupled Davies	OPF395A	Orange	20.0	25.0		μW	I <sub>F</sub> = 100 mA
	Total Coupled Power	OPF395B	Green	15.0	18.0			
	50/125 mm Fiber NA = 0.20	OPF395C	Black	10.0	12.5			
		OPF395D	Silver	5.0	7.5			
V <sub>F</sub>	Forward Voltage				1.8	2.2	V	I <sub>F</sub> = 100 mA
$V_R$	Reverse Voltage			1.8			V	Ι <sub>R</sub> = 100 μΑ
λ	Wavelength			830	850	870	nm	I <sub>F</sub> = 50 mA
Δλ	Optical Bandwidth				35		nm	I <sub>F</sub> = 50 mA
$t_r, t_f$	Rise and Fall Time	·			3.5	4.5	ns	$I_F = 100 \text{ mA}; 10\% \text{ to } 90\%^{(4)}$

#### 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 1.0mA /°C above 25°C .
- 3. The component must be actively aligned into the mating fiber cable assembly to achieve optimal performance.
- 4. No Pre-bias.
- 5. 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.



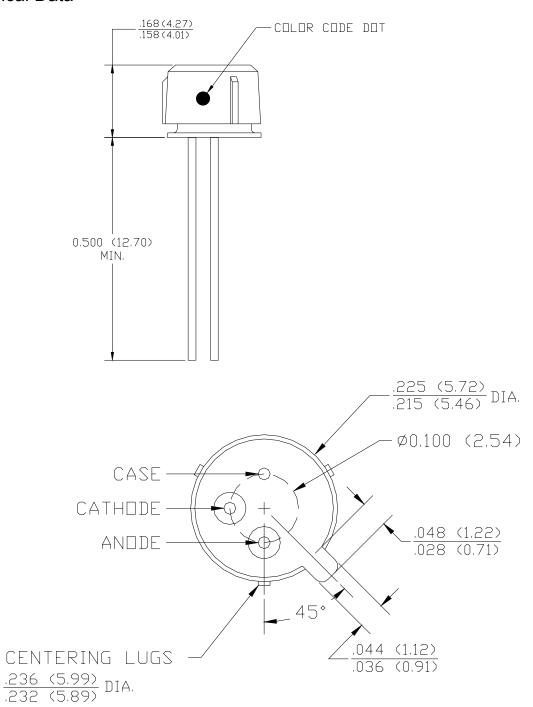


OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

# Fiber Optic Transmitter OPF395 Series



# **Mechanical Data**



DIMENSIONS ARE IN INCHES (MILLIMETERS)

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