



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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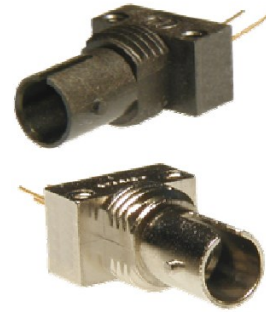
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# Fiber Optic Transmitter

OPF693-2



## Features:

- Low Cost 850 nm LED technology
- Popular ST<sup>®</sup> style receptacle
- Pre-tested with fiber to assure performance
- Component pre-mounted and ready to use
- 55MHz operation

## Description:

The OPF693-2 fiber optic transmitter is a high performance device 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 products' combination of features including high speed and efficient coupled power makes it ideal transmitters for integration into all types of data communications equipment.

The mechanical design of this package 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

Package Material		
Part Number	Body Material	Body Style
OPF693	Zinc, Die Cast	ST-LP <sup>®</sup>

Typical Coupled Power I <sub>f</sub> = 100mA, 25°C			
Fiber Size	Type	N.A.	OPF693-2
50/125 µm	Graded Index	0.20	25µW
62.5/125 µm	Graded Index	0.28	65µW
100/140 µm	Graded Index	0.29	160µW
200/300 µm	Step Index	0.41	630µW

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.



RoHS



ESD Class 2

ST<sup>®</sup> is a registered trademark of AT&T.

## General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

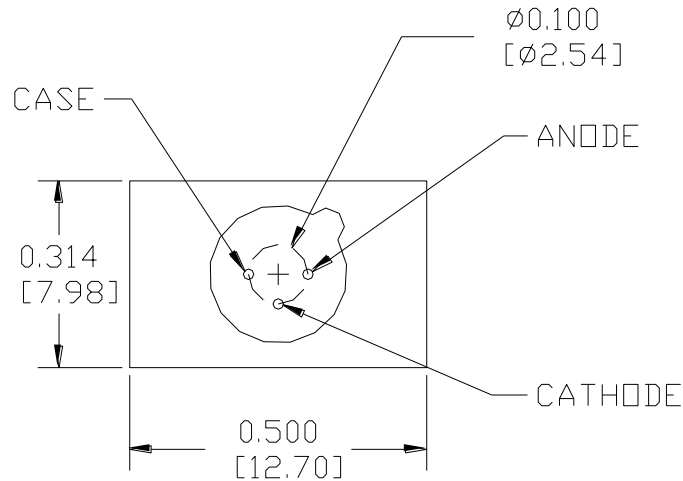
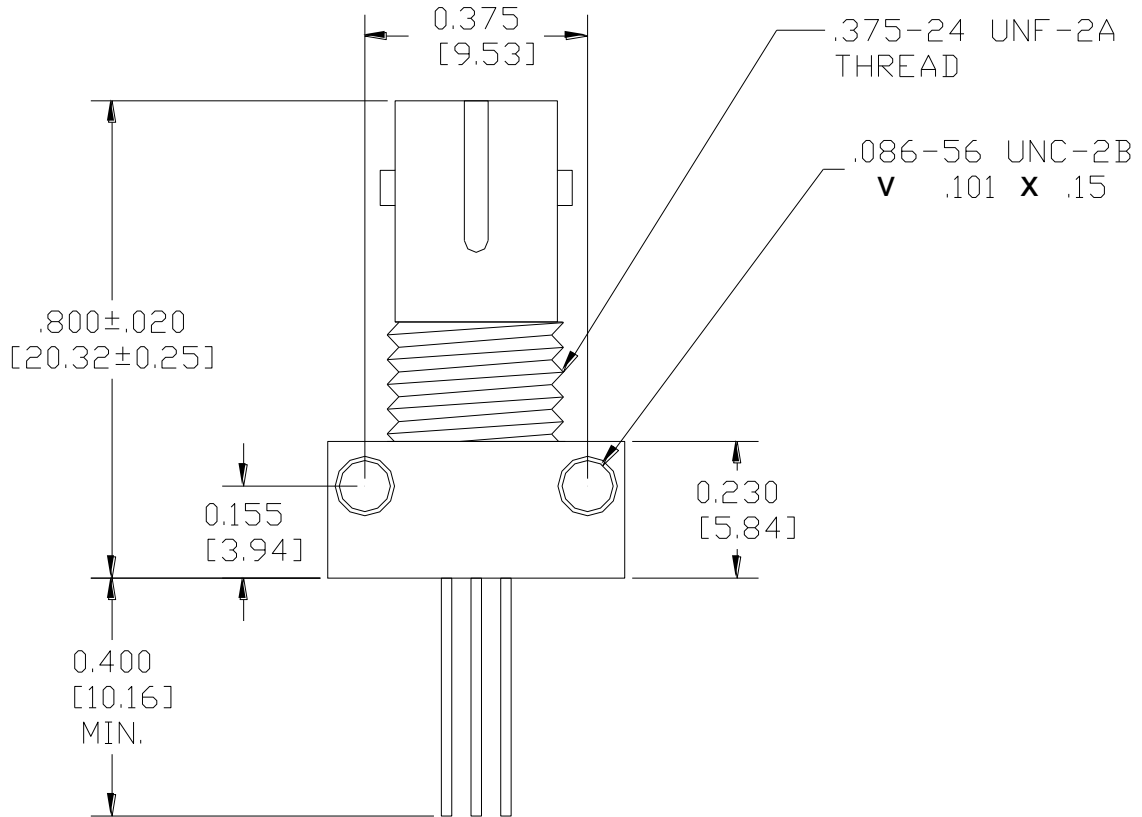
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## Mechanical Data



DIMENSIONS ARE IN INCHES (MILLIMETERS)

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### Electrical Specifications

Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature Range	-55° C to +100° C
Operating Temperature Range	-40° C to +85° C
Lead Soldering Temperature <sup>(1)</sup>	260° C
Continuous Forward Current <sup>(2)</sup>	100 mA
Maximum Reverse Voltage	1.0 V

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)							
SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
$P_{OC}$	Total Coupled Power 50/125 mm Fiber, NA = 0.20	OPF693-2	25.0	50.0	80.0	$\mu\text{W}$	$I_F = 100\text{ mA}$
$V_F$	Forward Voltage			1.8	2.2	V	$I_F = 100\text{ mA}$
$V_R$	Reverse Voltage		1.8			V	$I_R = 100\ \mu\text{A}$
$\lambda$	Wavelength		830	850	870	nm	$I_F = 50\text{ mA}$
$\Delta\lambda$	Optical Bandwidth			45	60	nm	$I_F = 50\text{ mA}$
$t_r, t_f$	Rise and Fall Time			4.5	6.0	ns	$I_F = 100\text{ mA}; 10\% \text{ to } 90\%^{(3)}$

#### Notes:

- Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.
- De-rate linearly at 1.33mA /°C above 25°C .
- No Pre-bias.
- 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.

#### General Note

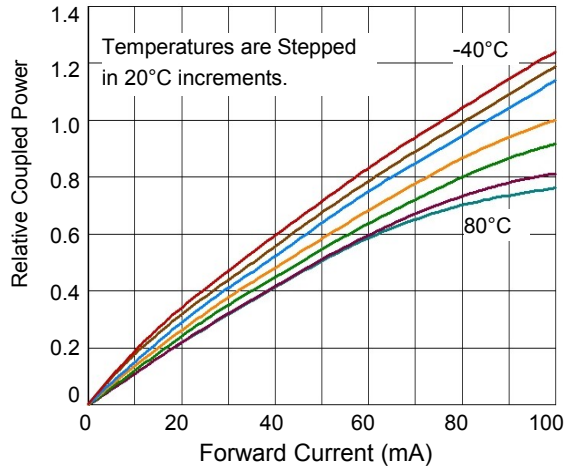
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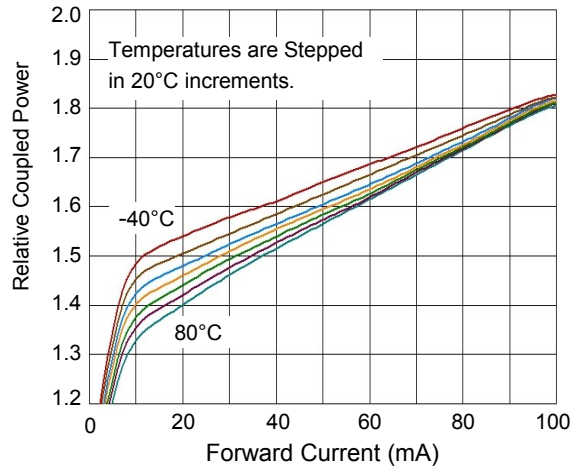


### Performance

#### Relative Coupled Power vs. Forward Current



#### Typical Forward Voltage vs. Forward Current



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