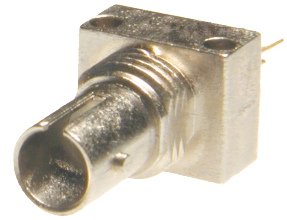


Fiber Optic Transmitter

OPF694-2



Features:

- Low Cost 850 nm LED Technology
- High Thermal Stability
- High optical coupling efficiency to multimode optical fiber
- Metal ST® style receptacle
- Industrial temperature range
- Subjected to 100% Burn-in for 96 hrs. at 25° C at 100 mA

Description:

The OPF694-2 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 either 50/125 μm or 62.5/125 μm diameter multimode fiber. Two power ranges with upper and lower limits are offered, which allows the designer to select a device best suited for the application.

The mechanical design of this package is intended for printed circuit 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 to media conversion
- Intra-system fiber optic links

Typical Coupled Power $I_f = 100 \text{ mA}, 25^\circ \text{ C}$			
Fiber Size	Type	N.A.	OPF694-2
50/125 μm	Graded Index	0.20	-16 dBm
62.5/125 μm	Graded Index	0.28	-12 dBm
100/140 μm	Graded Index	0.29	-8 dBm
200/300 μm	Step Index	0.41	-2 dBm



RoHS

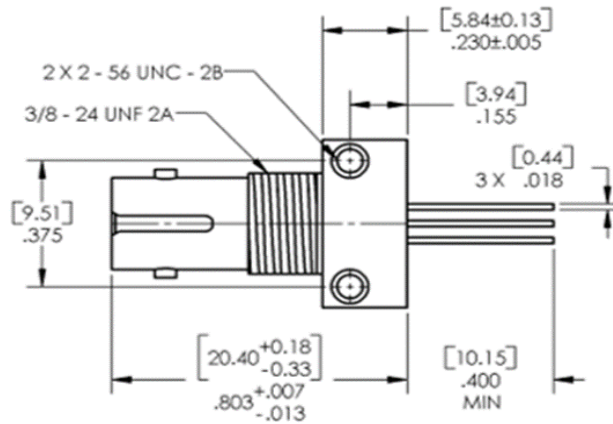
ST® is a registered trademark of Fitel USA Corp.

General Note

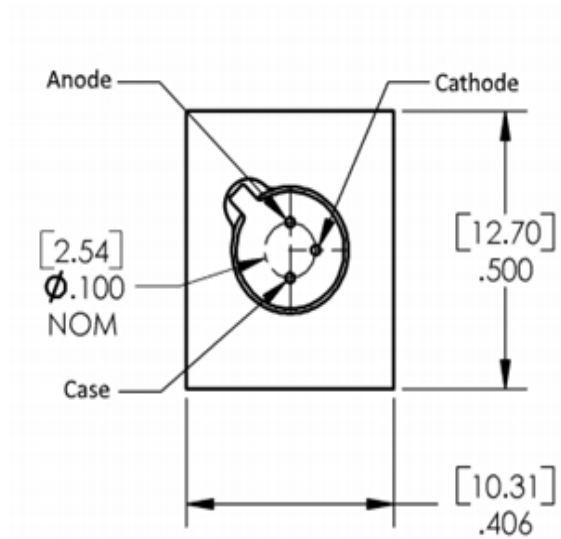
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Mechanical Data



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].



The case lead is isolated from the ST® receptacle

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Electrical Specifications

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

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
P_{T50}	50/125 mm Fiber, NA = 0.20	-16.0	-	-11.0	dBm	$I_F = 100 \text{ mA}$
V_F	Forward Voltage	1.5	-	2.1	V	$I_F = 100 \text{ mA}$
V_R	Reverse Voltage	1.8	-	-	V	$I_R = 100 \mu\text{A}$
λ	Wavelength	830	850	870	nm	$I_F = 50 \text{ mA}$
$D\lambda$	Optical Bandwidth	-	35	-	nm	$I_F = 50 \text{ mA}$
t_r, t_f ⁽³⁾	Rise and Fall Time	-	4.5	6.5	ns	$I_F = 100 \text{ mA}$, 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 1.0 mW/° C above 25° C.
- (3) No Pre-bias.
- (4) 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.

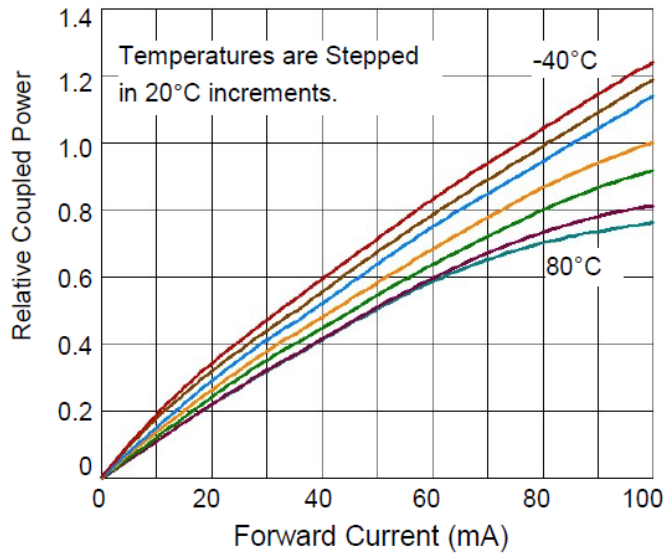
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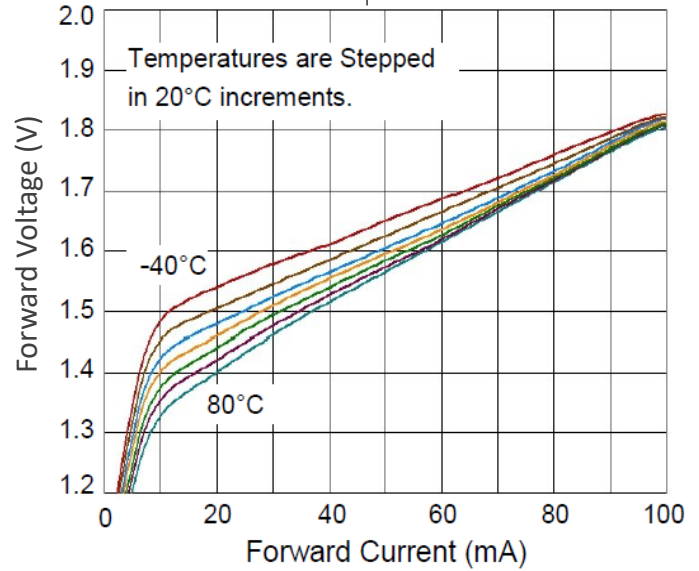
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Typical Performance

Relative Coupled Power vs. Forward Current



Typical Forward Voltage vs. Forward Current



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