Fiber Optic Transmitter

OPF350A

Features:

- 850 nm LED technology
- TO-18 plastic clear-cap package
- Electrically isolated plastic cap package
- High thermal stability
- High optical coupling efficiency to multimode fiber
- Industrial temperature range

Description:

The OPF350A 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 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:

- Power generation communication
- 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.**	**OPF350A**
50/125 µm	Graded Index	0.20	29 µW
62.5/125 µm	Graded Index	0.28	83 µW
100/140 µm	Graded Index	0.29	240 µW
200/300 µm	Step Index	0.41	810 µW

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

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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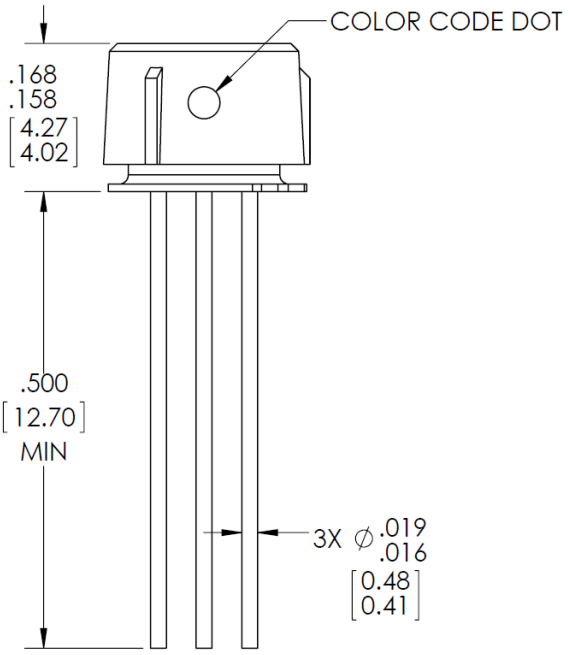
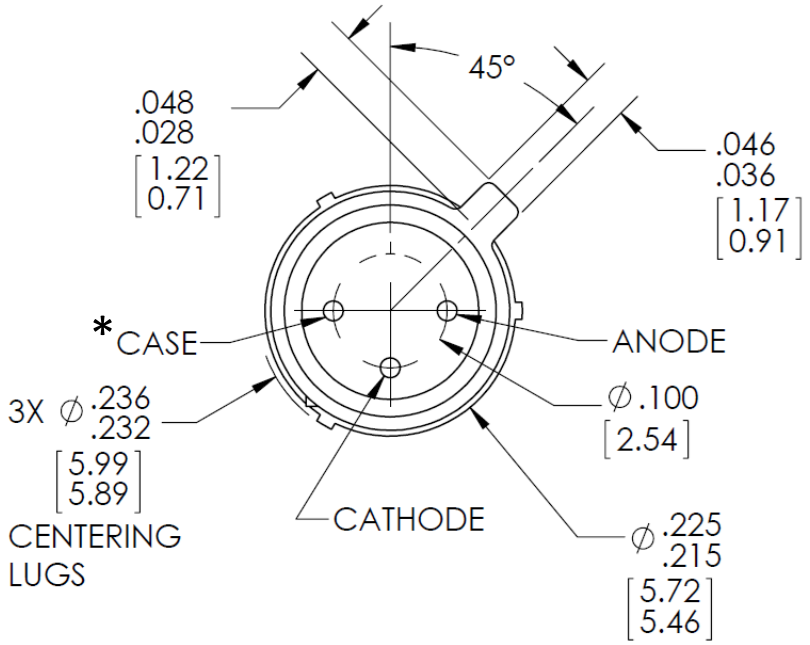
Mechanical Data





NOTE:

* Case is electrically isolated from cathode and anode.
(Case pin does not need to be physically or electrically connected in the circuit)

DIMENSIONS ARE IN INCHES (MILLIMETERS)

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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	OPF350A	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
Δλ	Optical Bandwidth			50	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%[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 1.0 mA /° 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 100 mA drive current and 25° C ambient temperature.

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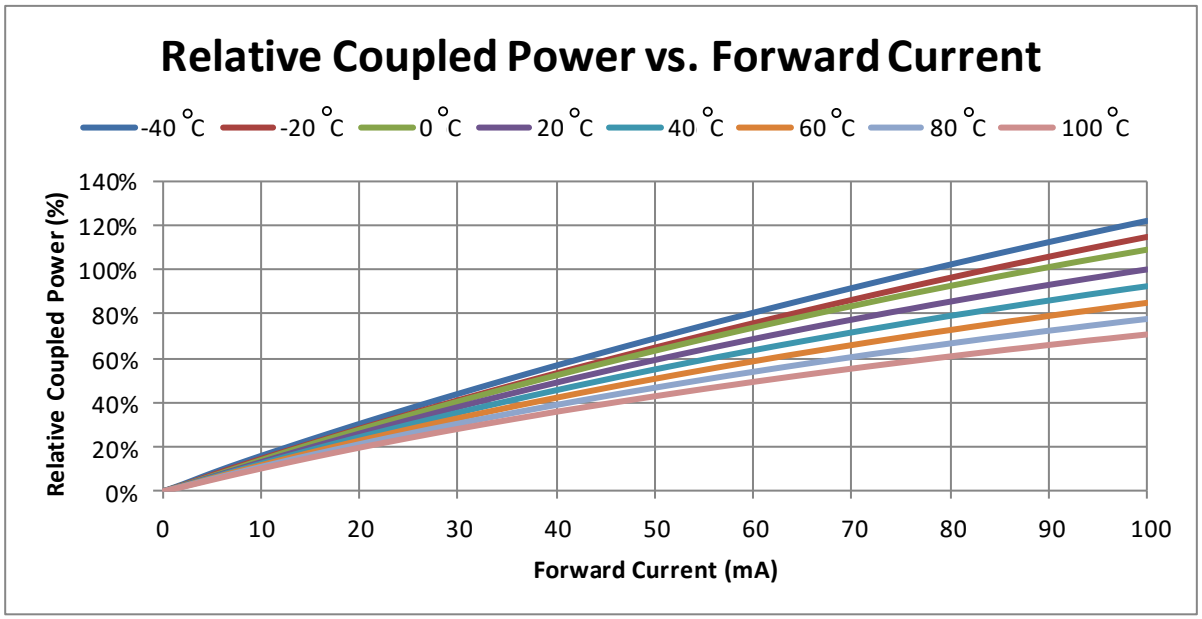
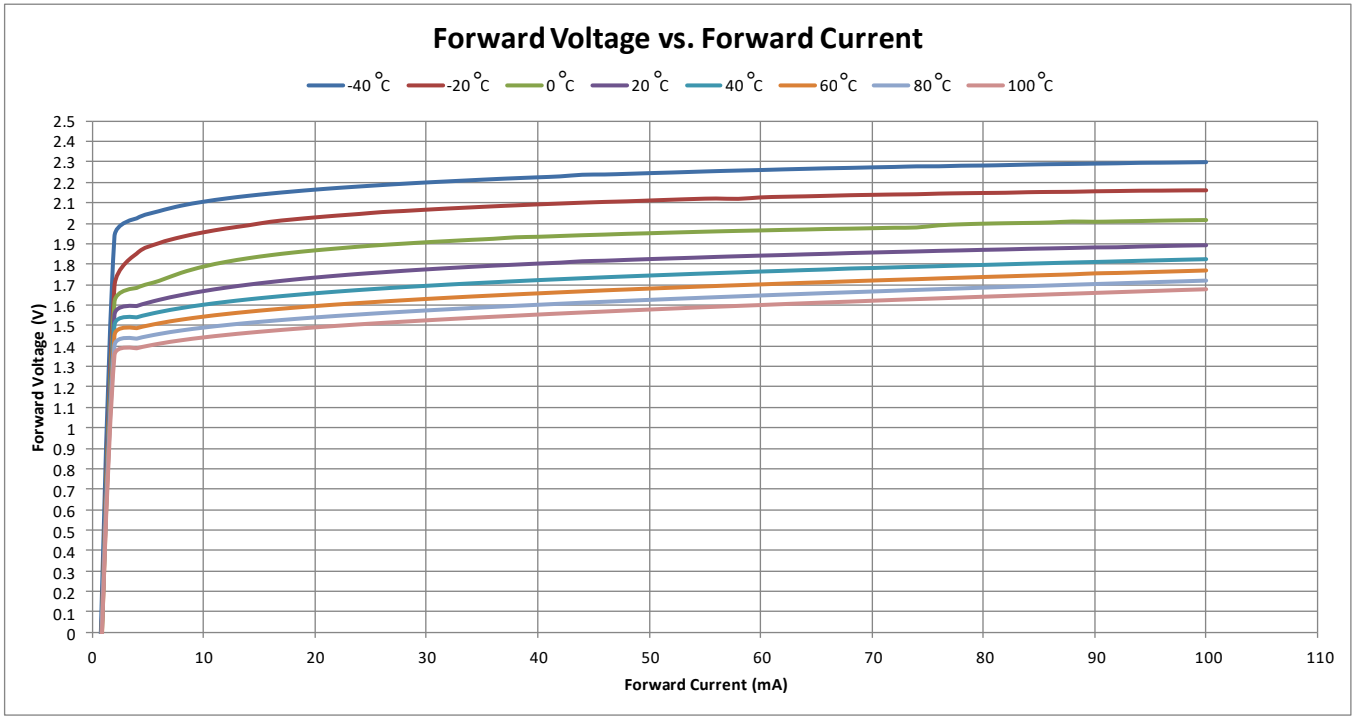
Performance





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