Fiber Optic GaAlAs LED

OPF320, OPF340 Series

Features:

- 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

Description:

The OPF320 and OPF340 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 50/125 µm up to 200/300 µm 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:

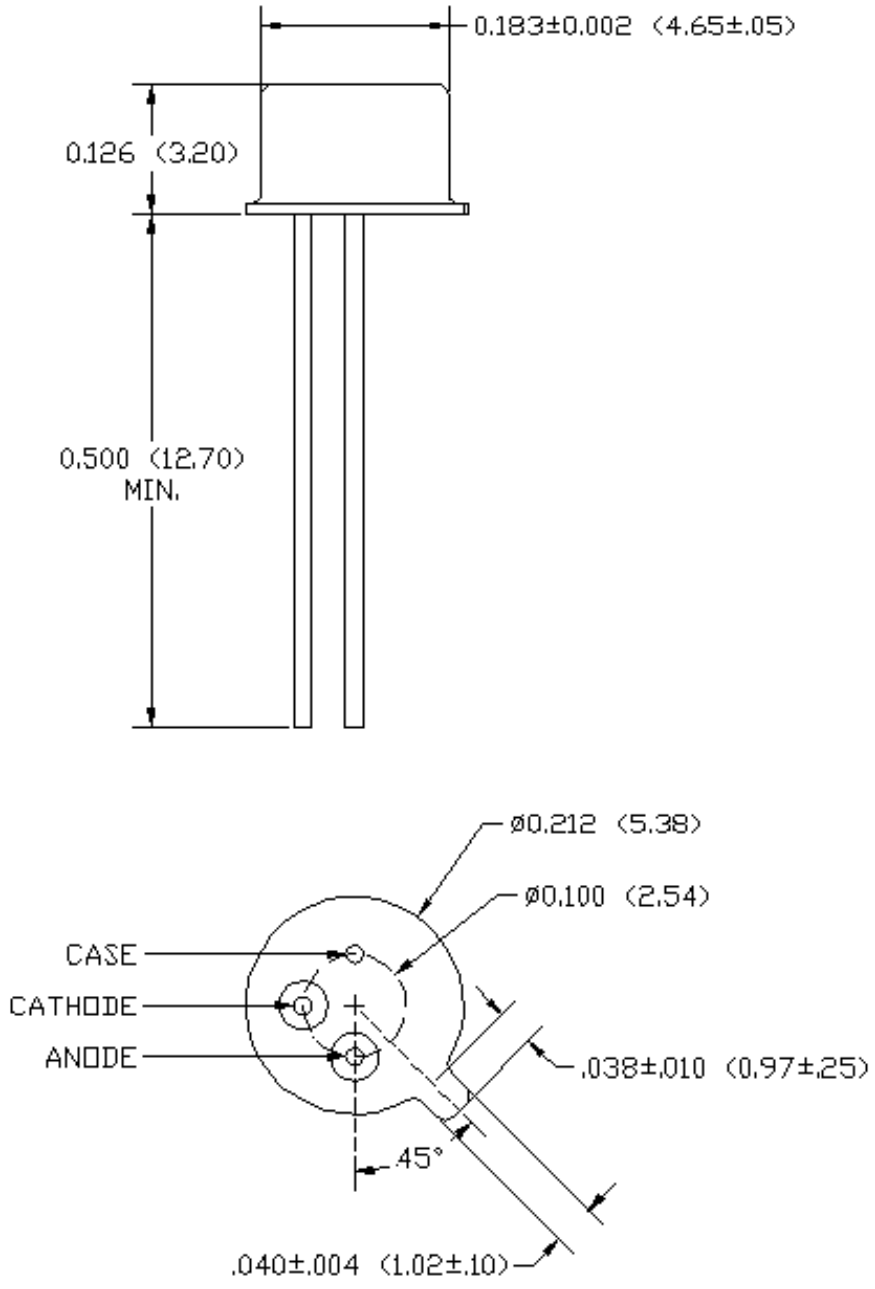
- Industrial Ethernet equipment
- Copper-to-fiber media conversion
- Intra-system fiber optic links
- Video surveillance systems

Typical Coupled Power I_F = 100 mA, 25° C					
Fiber Size	**Type**	**N.A.**	**OPF320A**	**OPF320B**	**OPF340A**
50/125 µm	Graded Index	0.20	19 µW	12.5 µW	25 µW
62.5/125 µm	Graded Index	0.28	34 µW	22 µW	45 µW
100/140 µm	Graded Index	0.29	95 µW	62 µW	125 µW
200/300 µm	Step Index	0.41	360 µW	235 µW	475 µW

RoHS

TT Electronics | OPTEK Technology
2900 E. Plano Pkwy, Plano, TX 75074 | Ph: +1 972 323 2200
www.ttelectronics.com | sensors@ttelectronics.com

Mechanical Data



DIMENSIONS ARE IN INCHES (MILLIMETERS)

Electrical Specifications

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Storage Temperature Range	-55°C to +150°C
Operating Temperature Range	-40°C to +125°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_O	Radiant Power Output:				µW	I_F = 100 mA, 50/125 µm cable, N.A. = 0.20
	OPF320A	15	19.0	-		
	OPF320B	10	12.5	-		
	OPF340A	20	25	-		
V_F	Forward Voltage	-	1.8	2.0	V	I_F = 100 mA
λ_P	Peak Output Wavelength	830	850	870	nm	I_F = 50 mA
B	Spectral Bandwidth Between Half Power Points	-	35	-	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, 1/16 inch (1.6 mm) from case. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.

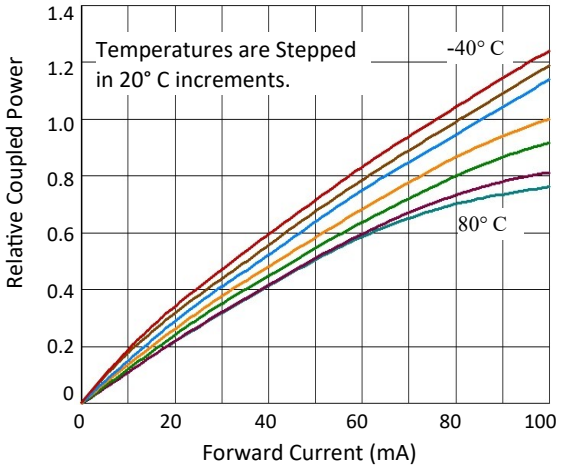
(2) Derate linearly 1.0 mA/°C above 25° C.

(3) To convert radiant power output to dBm, use the following expression dBm = 10 log (µW/1000).

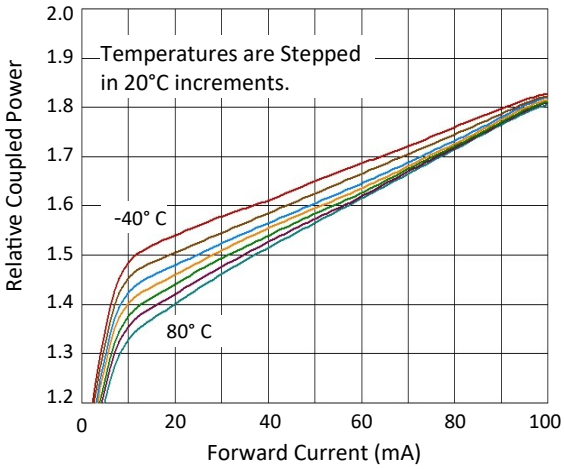
(4) No Pre-bias.

Performance

Relative Coupled Power vs. Forward Current



Typical Forward Voltage vs. Forward Current



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TT Electronics:

OPF320A OPF320B OPF340A