Fiber Optic Transmitter OPF670 Series



Features:

- Low cost 850 nm LED technology
- Low cost TO package with electrically isolated plastic cap
- High thermal stability
- · High optical coupling efficiency to multimode fiber
- Industrial temperature range



Description:

The **OPF670** series fiber optic transmitters are high performance devices packaged for data communication links. These transmitters are an 850 nm GaAlAs LED and are specifically designed to efficiently launch optical power into either 50/125µm or 62.5/125µm diameter multimode fiber. Three power ranges are offered, which allows the designer to select a device best suited for the application.

The **OPF670** is offered a low cost TO package with a plastic lens cap. The device is designed to be active aligned into a connector receptacle.

Applications:			Ordering Information				
Industrial Ethernet equipmentCopper-to-fiber media conversion			Part Number	LED Peak Wavelength	P _{⊤50} (dBm) Min	T _{r,} T _f (ns) Typ / Max	
 Intra-system fiber optic links 			OPF670-1	850nm	-17.5	8.0/10.0	
Video surveillance systems			OPF670-2	850nm	-16.0	8.0/10.0	
	[13.59] .535						
OPTICAL CONVERGENCE POINT		[5.59] Ø.220	<u></u>	3 (2.54] Ø.100			

Pin	Function
1	Anode
2	Cathode
3	Not Connected

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

[0.44] 3X Ø.018

OPTEK Technology Inc. — 1645 Wallace Drive, Carrollton, Texas 75006 Phone: (972) 323-2200 or (800) 341-4747 FAX: (972) 323-2396 sensors@optekinc.com www.optekinc.com

DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

Issue A.2 06/08 Page 1 of 2

RoHS

0.97



Absolute Maximum Ratings

 $T_A = 25^{\circ} C$ unless otherwise noted

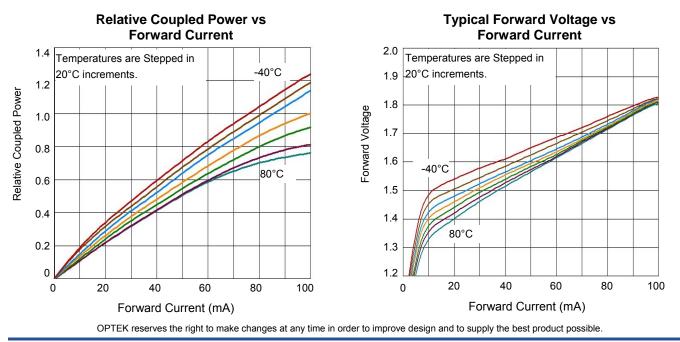
Storage Temperature Range	-55° C to +100° C
Operating Temperature Range	-40° C to +85° C
Lead Soldering Temperature ⁽¹⁾	260° C
Continuous Forward Current ⁽²⁾	100 mA
Maximum Reverse Voltage	1.0 V

Electrical/Optical Characteristics (T_A = 25°C unless otherwise noted)

SYMBOL	PARAMETER		MIN	ΤΥΡ	MAX	UNITS	CONDITIONS	
P _{T50} Total Coupled Power, 50/125 μm Fiber, NA = 0.20	Total Coupled Power,	OPF670-1	-17.5			dBm	l _∈ = 100 mA	
	50/125 µm Fiber, NA = 0.20	OPF670-2	-16.0			dBm	1 _F – 100 MA	
V _F	Forward Voltage		1.5		2.1	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			35		nm	I _F = 50 mA	
t _r ,t _f	Rise and Fall Time			8.0	10.0	ns	I _F = 100 mA; 10% to 90% ⁽³⁾	

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. No Pre-bias.
- 4. 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.



Issue A.2 06/08 Page 2 of 2
 OPTEK Technology Inc. —
 1645 Wallace Drive, Carrollton, Texas 75006

 Phone: (972) 323-2200 or (800) 341-4747
 FAX: (972) 323-2396
 sensors@optekinc.com
 www.optekinc.com