Fiber Optic Transmitter

OPF672, OPF673 Series

OPF672

OPF673

Features:

- Low cost 850 nm LED technology
- High thermal stability
- High optical coupling efficiency to multimode fiber
- Standard and low profile metal ST* style receptacles
- Industrial temperature range

Description:

The **OPF672** and **OPF673** 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 with upper and lower limits are offered, which allows the designer to select a device best suited for the application.

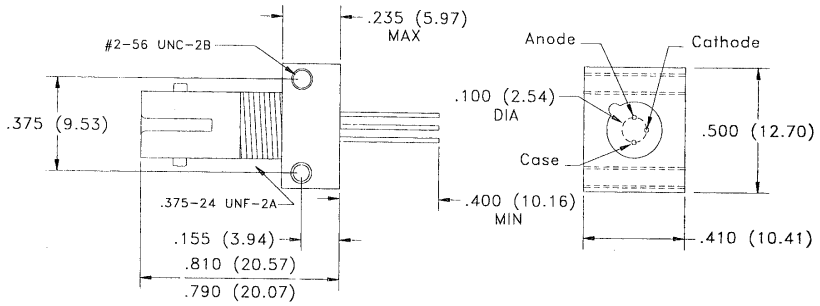
The **OPF672** is offered a standard profile, metal ST receptacle and the **OPF673** is offered in a low profile version. These products combination of features including high speed and efficient coupled power makes it an ideal transmitter for integration into all types of data communications equipment.

Applications:

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

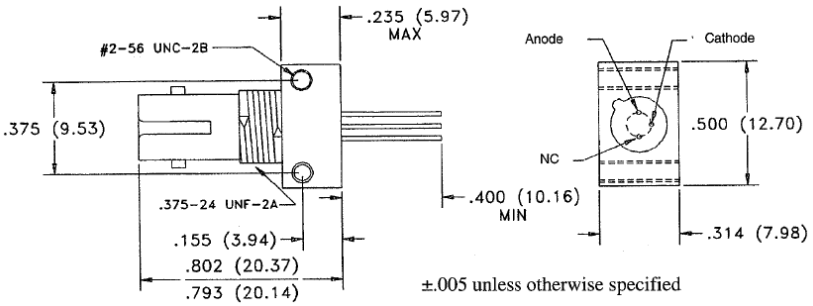
Ordering Information			
Part Number	**LED Peak Wavelength**	**P_{T50} (dBm) Min / Max**	**T_r, T_f (ns) Typ / Max**
OPF672-1; OPF673-1	850nm	-17.5/-15.2	8.0/10.0
OPF672-2; OPF673-2	850nm	-16.0/-13.0	8.0/10.0

OPF672-x



DIMENSIONS ARE IN INCHES (MILLIMETERS)

OPF673-x



±.005 unless otherwise specified

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.

OPTEK Technology, Inc.
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Electrical Specifications

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

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
P_{T50}	Total Coupled Power, 50/125 µm Fiber, NA = 0.20	OPF672-1, OPF673-1	-17.5		-15.2	dBm	I_F = 100 mA
		OPF672-2, OPF673-2	-16.0		-13.0	dBm	
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.

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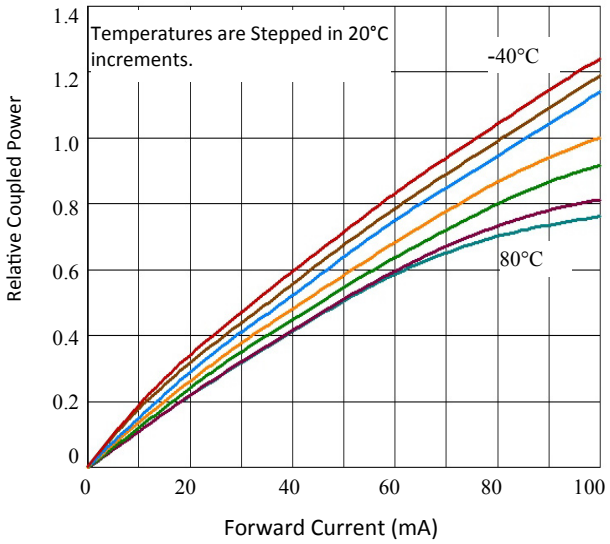
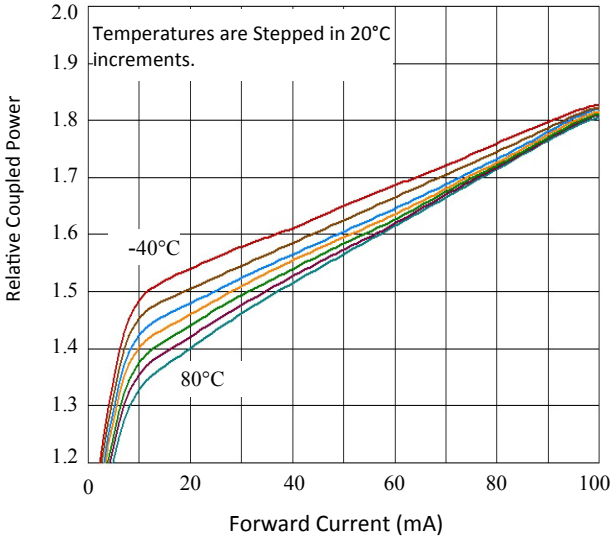
Performance

Relative Coupled Power vs Forward Current



Typical Forward Voltage vs Forward Current



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