



Fiber Optic Data Link Series 500

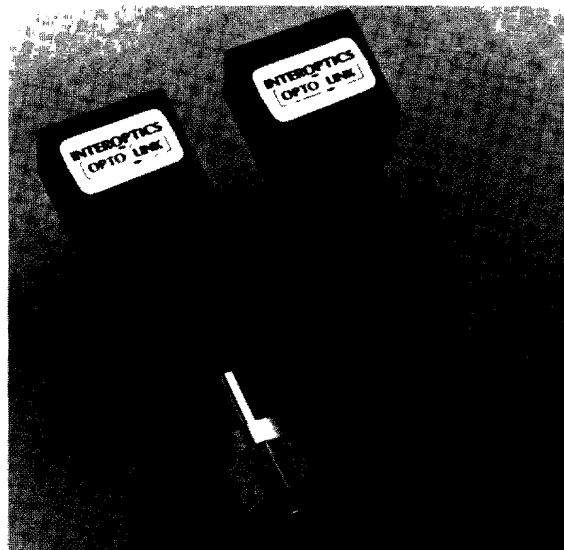
DATA SHEET NO. IO 013-0489

DESCRIPTION

Designed for optimum performance and versatility, the OPTO/LINK Series 500 can transmit data from DC to 10 Mb/s on glass fiber for distances up to 3000 meters. The LED transmitter and PIN photodiode TTL receiver are packaged for PC board mounting with standard SMA optical ports.

APPLICATIONS

- Instrumentation
- High EMI/RFI noise areas
- Electrical isolation
- Data transmission
- Medical



FEATURES

- SMA compatible
- DC to 10 Mb/s capability
- Transmission up to 3 km
- Small size
- PC board mountable
- TTL/STTL/LSTTL compatible receiver
- High reliability yet low cost
- Accommodates 50/125 and 100/140 μm fiber

ELECTRICAL AND OPTICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$)

OPTO-502 RECEIVER

Parameter	Test Condition	Sym.	Min.	Typ.	Max.	Units
Sensitivity	$V_{CC} = 5.0\text{ V}$ $I_{CC} = 15\text{ mA}$ $\lambda = 850\text{ nm}$ 10 Mb/s	Pin	-32			dBm
High Level Output Voltage	$V_{CC} = 5.0\text{ V}$ $P_{in} < 0.1\text{ }\mu\text{W}$ $I_O < 0.8\text{ mA}$	V_{OH}	2.4	3.3		Volts
Low Level Output Voltage	$V_{CC} = 5.0\text{ V}$ $P_{in} > 1.0\text{ }\mu\text{W}$ $I_O < 8\text{ mA}$	V_{OL}			0.4	Volts
Power Supply Current	$V_{CC} = 5.0\text{ V}$	I_{CC}		15	20	mA
Pulse Width Distortion	$V_{CC} = 5.0\text{ V}$ $f = 2.5\text{ MHz}$ $P_{in} = 1\text{ }\mu\text{W Pk}$ 50% duty cycle	PWD		5	10	%

OPTO501-12, OPTO501-13 TRANSMITTERS

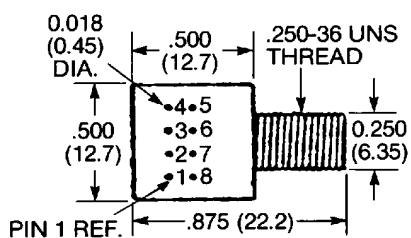
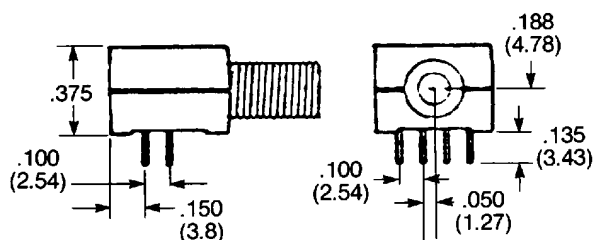
Parameter	Test Condition	Sym.	Min.	Typ.	Max.	Units
Forward voltage	$I_f = 50\text{ mA}$	V_f		1.60	2.00	Volts
Reverse voltage	$I_r = 10\text{ }\mu\text{A}$	BV_R	1.0	5.0		Volts
Fiber Coupled Optical Power	$I_f = 50\text{ mA}$ 50/125 micron Fiber	P_f	-12 -13	-22 -20	-21 -19	dBm dBm
Peak Wavelength	$I_f = 25\text{ mA}$	λ_p		850		nm
Spectral Bandwidth	$I_f = 100\text{ mA}$	$\Delta\lambda$		50		nm
Response Time	$I_{pk} = 100\text{ mA}$	t_r t_f		6 8	8 10	nS nS

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(415) 347-7727 • FAX (415) 340-1670 • TWX 910-374-2353 • MCI/TLX 677-1439 (PURDY UW)

ABSOLUTE MAXIMUM RATINGS

Storage & operating temperature	-40° C to +100° C
Lead solder temperature	260° C, 10 sec.
Forward current; OPTO-501-XX	50 mA dc
Reverse voltage; OPTO-501-XX	1 Volt at 10 μ A
Supply voltage; OPTO-502	5.5 V

PACKAGE INFORMATION

All dimensions are in inches (millimeters)

PIN OUT									
1	2	3	4	5	6	7	8	PART NUMBER	TYPE
N	A	K	N	N	A	A	N	OPTO-501-XX	LED

A = Anode, K = Cathode, N = Not Connected

PIN OUT									
1	2	3	4	5	6	7	8	PART NUMBER	TYPE
N	V	G	N	N	O	G	N	OPTO-502	Digital

O = Output, G = Ground, N = Not Connected, V = V_{CC}

ORDERING INFORMATION

Description	Part Number
Transmitter 850 nm 10 Mb/s 5 μ W	OPTO-501-12
Transmitter 850 nm 10 Mb/s 10 μ W	OPTO-501-13
TTL Receiver 10 Mb/s	OPTO-502
SMA connector	OPTO-1003
Cable 50/125 micron	OPTO-1000M



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INTEROPTICS reserves the right to change these specifications as required to permit improvements in the design of its products.