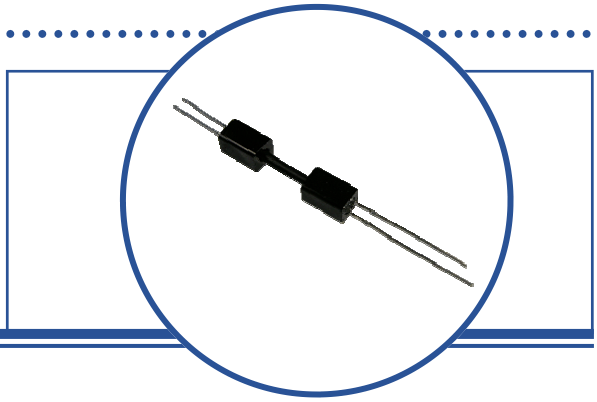
Axial Fiber Optic Isolator

OP1270 Series

TT electronics
OPTEK Technology

Features:

- Opaque plastic housings
- High noise immunity
- Visible Red LED with Phototranisitor Output
- 0.05" (1.27 mm) lead spacing
- Data Transfer through plastic fiber optic cable



Description:
Each **OPI1270** consists of a visible Red LED and a Phototransistor sensor, which are housed in separate opaque molded plastic housings and coupled by plastic fiber optic cable. The heavy-duty opaque housing shields the optical signal from dust, making this series of devices ideal for dust contaminated environments.

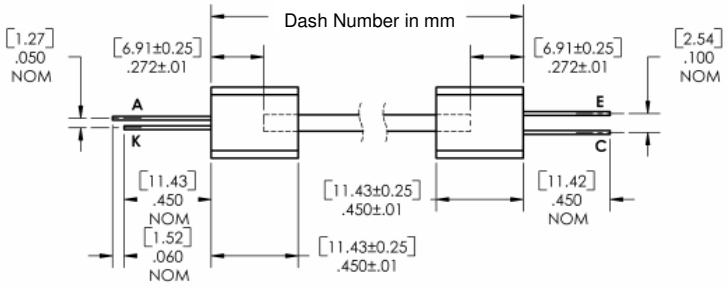
The OPI1270 series are designed for applications that require high voltage isolation between input and output. Depending on the length of the fiber optic cable, the emitter does not have to be optically in-line with the sensor.

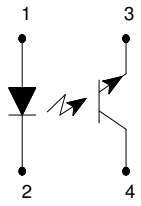
Custom electrical, wire and cabling and connectors are available. Contact your local representative or OPTEK for more information.

Applications:

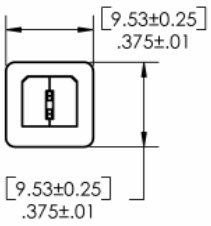
- Requiring High Voltage isolation between input and output
- Electrical isolation in dirty environments
- Industrial equipment
- Medical equipment
- Office equipment

Ordering Information			
Part Number	**Device Length**	**LED Peak Wavelength**	**Lead Length**
OPI1270-032	**32mm (1.26")**	645 nm	0.45" (11.4 mm)
OPI1270-040	**40mm (1.57")**		
OPI1270-080	**80mm (3.15")**		





Pin #	LED	Pin #	Transistor
1	Anode	3	Emitter
2	Cathode	4	Collector



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

RoHS

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

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

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

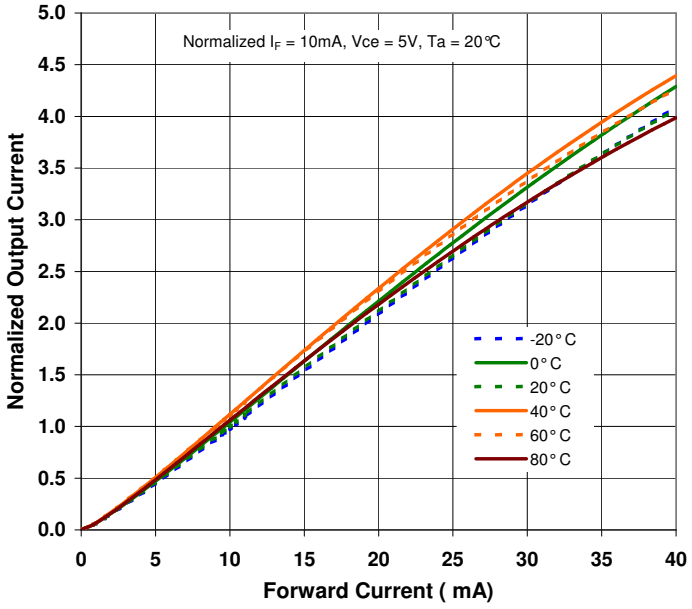
Storage Temperature Range	-40° C to +100° C
Operating Temperature Range	-20° C to +85° C
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 seconds with soldering iron]	260° C(1)
Power Dissipation (2)	100 mW

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
LED (see OVLAS6CB8 for additional information)						
V_F	On-State Collector Current	0.9	-	1.5	V	I_F = 20 mA
I_R	Collector-Dark Current	-	-	80	µA	V_R = 3.0 V
SENSOR—Phototransistor (See OP506 for additional information)						
I_{CEO}	Collector Dark Current	-	-	50	nA	V_{CE} = 10 V, E_E = 0
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	33	-	-	V	I_C = 100 µA, E_E = 0
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5.5	-	-	V	I_E = 100 µA, E_E = 0
COUPLED						
$I_{C(ON)}$		0.36	-	-	mA	V_{CE} = 5 V, I_F = 10 mA
I_{ISO} (3)		-	-	1.0	µA	I @ 7 KV RMS, 25° C, Test Duration = 2 sec.

Notes:
1. RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering. A maximum 20 grams force may be applied to the leads when soldering.
2. Derate linearly 1.33 mW/° C above 25° C.
3. Isolation voltage testing is required.

Output Current vs Forward Current vs Temperature



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