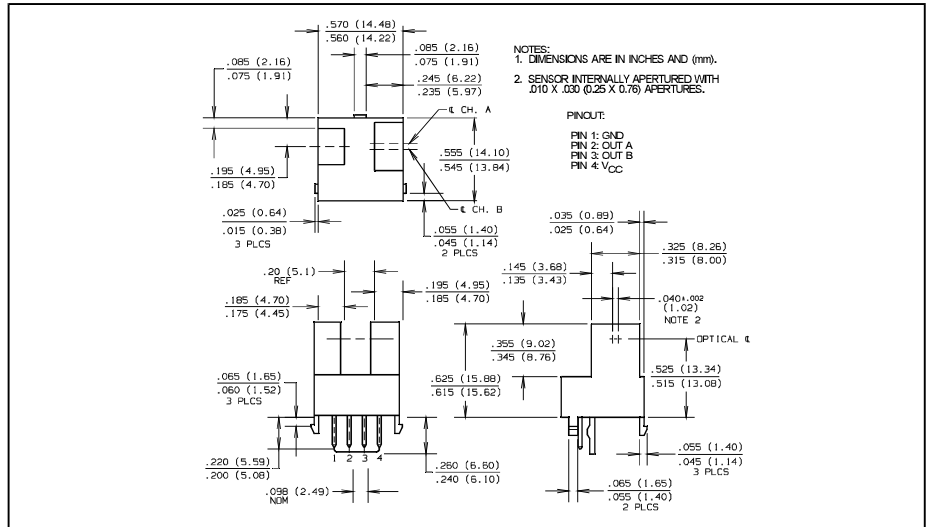
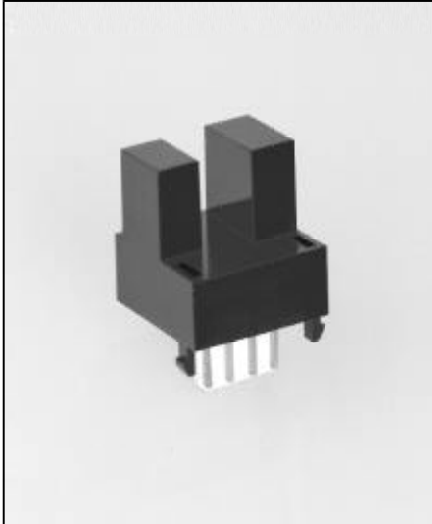


# Dual Channel Encoder

## Type OPB950



### Features

- Dual channel outputs
- 0.010" (0.254 mm) sensor apertures for high resolution
- Open collector inverter outputs
- Snap mount
- 4-pin connector
- 0.98" (2.5 mm) Mates with Molex 22-01-1042 and terminal # 08-70-0069

### Description

The OPB950 consists of an infrared emitting diode and a monolithic integrated circuit which incorporates two independent photodiodes, linear amplifiers, Schmitt trigger circuits and output transistors. The outputs are TTL/LSTTL compatible and can drive 8 TTL loads.

Applications include linear and rotary encoders with high resolution provided by internal 0.010" (0.254 mm) apertures located in front of Photologic® sensor on 0.040" (1.02 mm) center line spacing.



For RoHS compliant devices add "Z" to the end of the part number: OPB950Z

RoHS

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

Storage Temperature Range . . . . . -40° C to +85° C  
 Operating Temperature Range . . . . . -40° C to +85° C

#### Input Diode

Forward DC Current . . . . . 50 mA  
 Peak Forward Current (1µs Pulse Width, 300 pps) . . . . . 3.0 A  
 Reverse D. C. Voltage . . . . . 2.0 V  
 Power Dissipation . . . . . 100 mW<sup>(1)</sup>

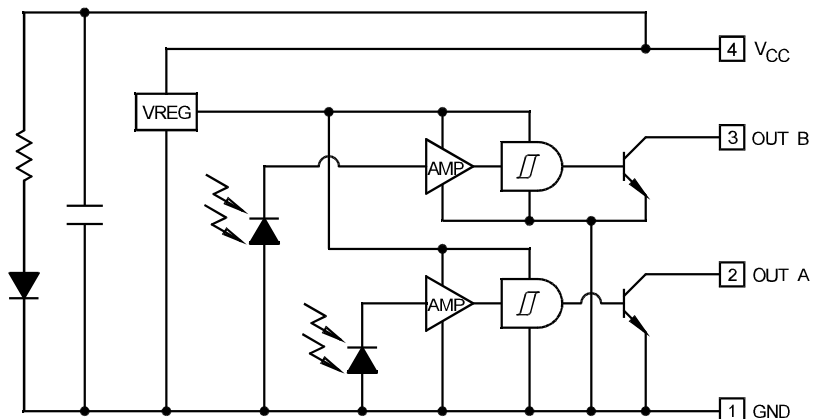
#### Output Photologic®

Supply Voltage, VCC . . . . . 5 V  
 Voltage at Output . . . . . 18 V  
 Power Dissipation . . . . . 200 mW<sup>(2)</sup>  
 Low Level Output Current (Sinking) . . . . . 40 mA

#### Notes:

- (1) Derate linearly 1.67 mW/° C above 25° C.  
 (2) Derate linearly 3.33 mW/° C above 25° C.

### Schematic



# Type OPB950

Electrical Characteristics ( $T_A = 25^{\circ}\text{C}$  unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$V_{CC}$	Operating D.C. Supply Voltage	4.75	5.0	5.25	V	
$V_{OH}$	High Level Output Voltage (per channel)	2.4			V	$V_{CC} = 5.0\text{ V}$ , Blocked Condition
$V_{OL}$	Low Level Output Voltage (per channel)			0.4	V	$V_{CC} = 5.0\text{ V}$ , Unblocked Condition

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

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