

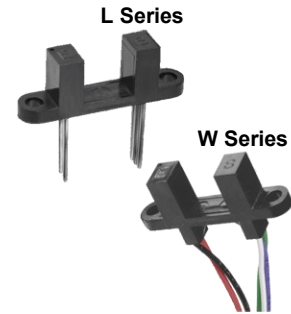
Photologic® Slotted Optical Switch “Wide Gap” Series



OPB900 through OPB913 Series (L, W_Z)

Features:

- 0.375" (9.5 mm) wide gap
- Choice of logical output configurations
- Choice of opaque or IR transmissive housing material
- Choice of PCBoard or 26 AWG, UL rated wire
- Data rates to 250 kBaud



Description:

The **OPB900** - **OPB913** series of Photologic® Integrated Circuit Switches provide optimum flexibility for the design engineer. Building from a standard housing with a 0.375" (9.5mm) wide slot, a user can specify the type and polarity of the TTL output and the type of shell material.

Electrical output can be specified as either TTL Totem Pole (buffered) or TTL Open Collector, either of which can be supplied with an inverted output polarity.

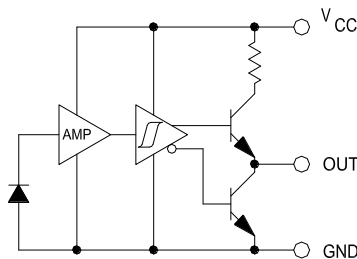
All versions have the added stability of hysteresis built into the amplification circuitry.

Applications:

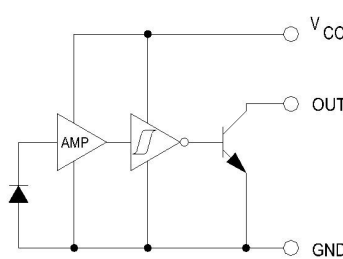
- Mechanical switch replacement
- Speed indication (tachometer)
- Mechanical limit indication
- Edge sensing
- Object sensing

Part Number Guide — OPB900 Series (L, W)			
OPB9			
0 = Dust protection with apertures	---	L55 = Solder lead termination (PCBoard mount)	
1 = Open apertured		or	
0 = Totem Pole		W5_Z = 26 AWG wire termination (24" [61cm] long)	
1 = Open Collector		Aperture sizes:	
2 = Inverted Totem Pole		1 = 0.010" (0.25 mm)	
3 = Inverted Open Collector		5 = 0.050" (1.27 mm)	

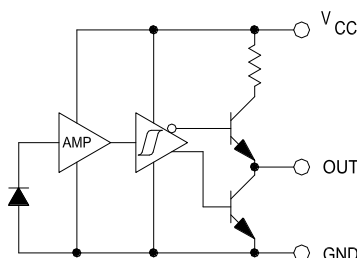
Totem-Pole-Output



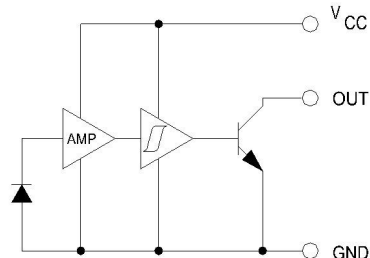
Open-Collector-Output



Inverted Totem-Pole



Inverted Open Collector



RoHS

General Note

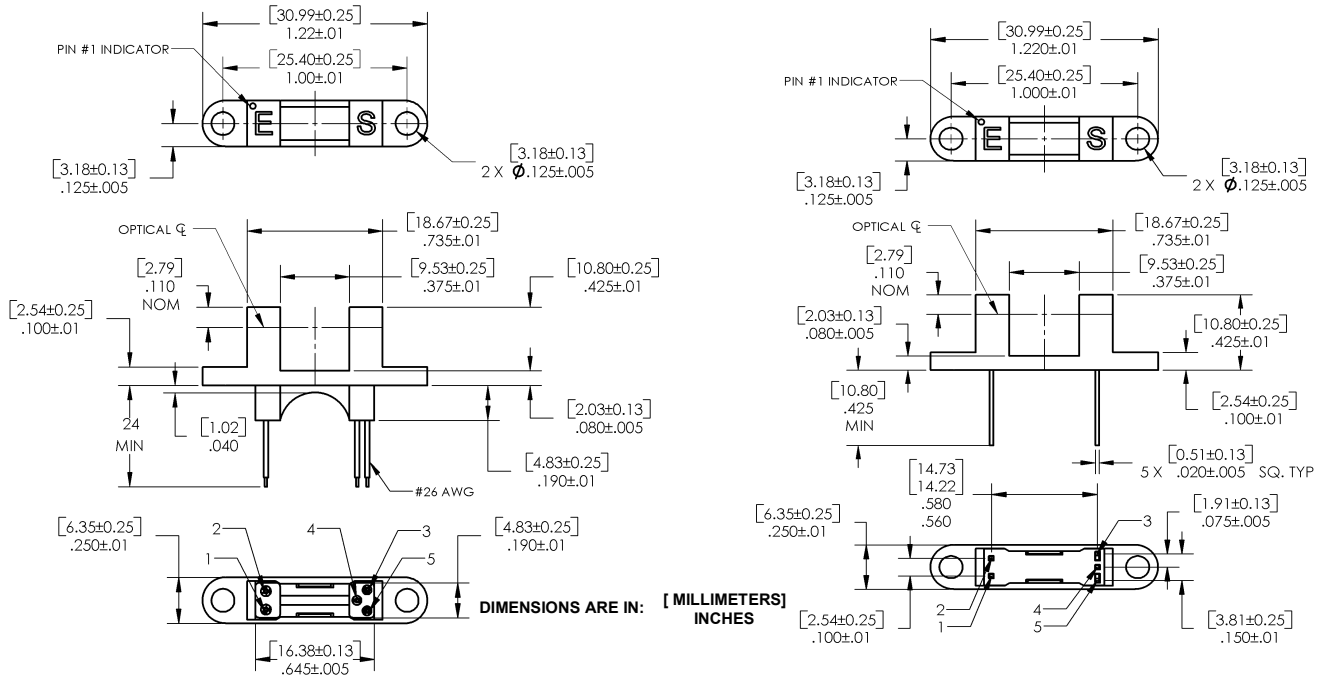
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Electrical Specifications



Color-Pin #	Description	Color-Pin #	Description	Color-Pin #	Description	Color-Pin #	Description	Color-Pin #	Description
Red-1	Anode	Black-2	Cathode	White-3	V _{CC}	Blue-4	Output	Green-5	Ground

Absolute Maximum Ratings (T_A = -40°C to + 70° Unless otherwise noted)

Storage Temperature	-40° C to +85° C
Operating Temperature	-40° C to +70° C
Lead Soldering Temperature (1/16" (1.6 mm) from case for 5 seconds with soldering iron) ⁽¹⁾	260° C

Input Infrared LED

DC Forward Diode (LED) Current	40 mA
DC Reverse Diode (LED) Voltage	2 V
Input Diode Power Dissipation ⁽¹⁾	100 mW

Output Photologic®

Supply Voltage, V _{CC} (not to exceed 3 seconds)	10V
Voltage at Output Lead (Open Collector Output version)	35 V
Output Photologic® Power Dissipation ⁽²⁾	200 mW
Total Device Power Dissipation ⁽³⁾	300 mW

Notes:

- (1) Derate linearly 2.22 mW/°C above 25°C
- (2) Derate linearly 4.44 mW/°C above 25°C
- (3) Derate linearly 6.66 mW/°C above 25°C
- (4) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
- (5) Methanol or isopropanol are recommended as cleaning agents. The plastic housing is soluble in chlorinated hydrocarbons and keytones.

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