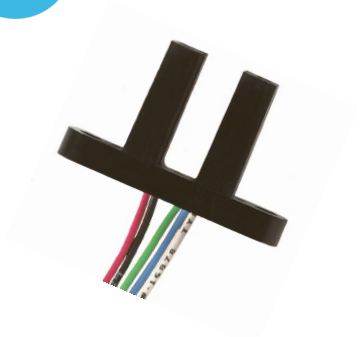
Photologic® Slotted Optical Switch

OPB916 Series



Features:

- Low power consumption
- Data rates to 250 kBaud
- Choice of two logic states and two electrical outputs
- 24” (610 mm) minimum 26 AWG UL listed wires
- Slot width 0.20” (5.08 mm)
- Slot Depth 0.635” (16.13 mm)

Description:

The **OPB916** series of Photologic® photo integrated circuit switches provide optimum flexibility. Each switch consists of an infrared Light Emitting Diode (LED) and a Photologic® photo integrated circuit, mounted in an opaque housing with clear windows for dust protection. The deep slot allows for a longer reach of the optical path from the 0.650” (16.5 mm) mounting plane. Internal apertures are 0.010” x .060” (.25 mm x 1.52 mm) for the Photologic’s “S” side and 0.05” x 0.06” (1.27 mm x 1.52 mm) for the LED “E” side.

Devices in this series exhibit stable performance over supply voltages ranging from 4.5 V to 16.0 V, and may be specified as buffered or inverted with an internal 10 kΩ pull-up resistor or open collector output. Devices are TTL/LSTTL compatible and can drive up to 10 TTL loads.

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

Applications:

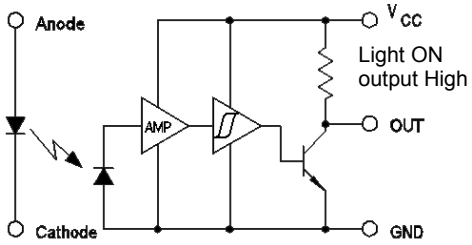
- Mechanical switch replacement
- Speed indication (tachometer)
- Mechanical limit indication
- Edge sensing

Ordering Information

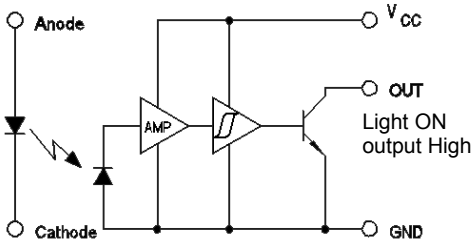
Part Number	LED Peak Wavelength	Sensor Photologic®	Slot Width / Depth	Aperture Emitter / Sensor	Lead Length / Wire
OPB916BZ	880 nm	10K Pull-Up	0.200” / 0.635”	0.05" / 0.01"	24" / 26 AWG Wire
OPB916IZ		Inv-10K Pull-Up			
OPB916BOCZ		Open-Collector			

Color	Description
Red	Anode
Black	Cathode
White	Vcc
Blue	Output
Green	Ground

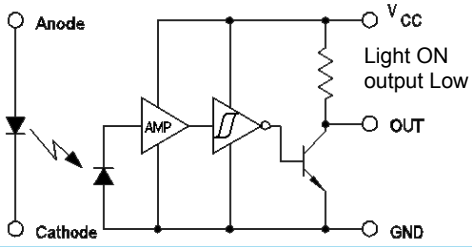
OPB916B 10K Pull-Up



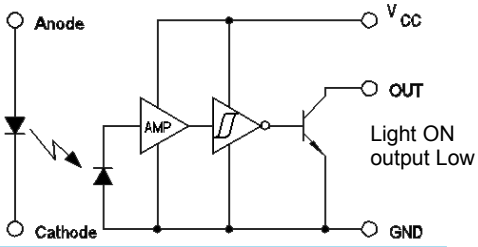
OPB916BOC Open-Collector



OPB916I Inverted 10K Pull-Up



OPB916IOC Inverted Open-Collector



RoHS

General Note

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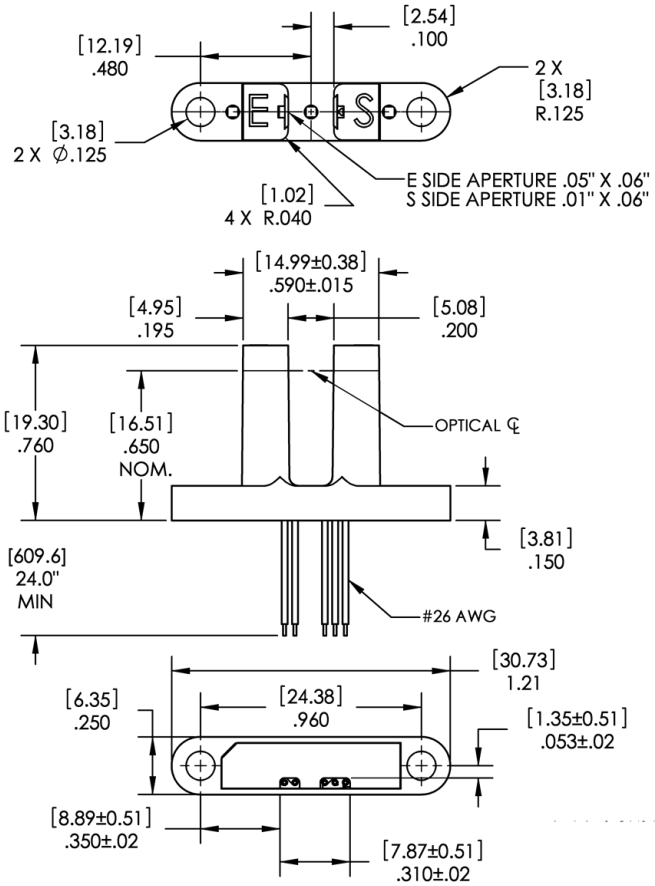

Color-Pin #	Description
Red	Anode
Black	Cathode
Green	Ground
Blue	Output
White	V_{CC}

Tolerence ±0.010 [0.254]

DIMENSIONS ARE IN: [MILLIMETERS] INCHES

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)	
Storage & Operating Temperature Range	-40°C to +80°C
Input Infrared LED	
Diode Reverse DC Voltage	2 V
Input Diode Power Dissipation(2)	75 mW
Forward DC Current	50 mA
Output Photologic®	
Supply Voltage, V_{CC} (not to exceed 3 seconds)	18 V
Voltage at Output Lead (Open Collector Output)	30 V
Output Photologic® Power Dissipation(3)	90 mW

Notes:
(1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
(2) Derate linearly 1.67 mW/°C above 25°.
(3) Derate linearly 2.67 mW/°C above 25°.
(4) Normal application would be with light source blocked, simulated by I_F = 0 mA.
(5) All parameters tested using pulse technique.

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