

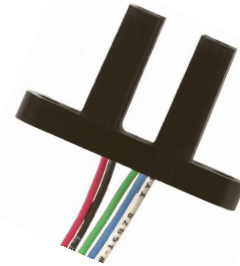
Photologic® Slotted Optical Switch



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:

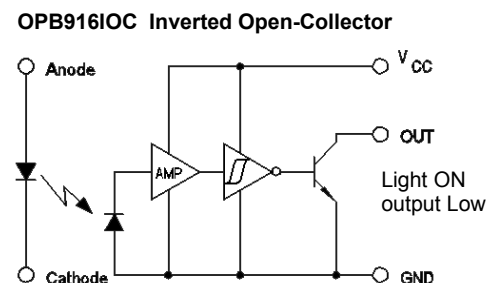
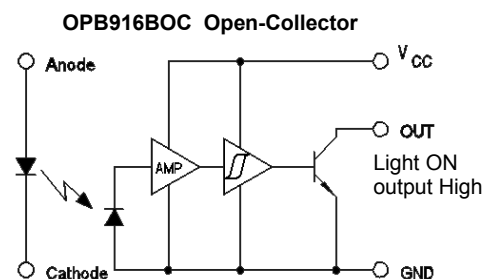
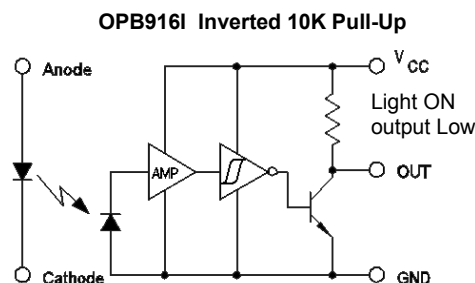
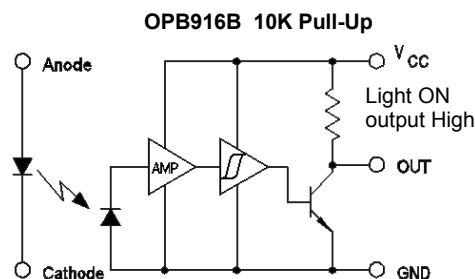
- Mechanical switch replacement
- Speed indication (tachometer)
- Mechanical limit indication
- Edge sensing

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



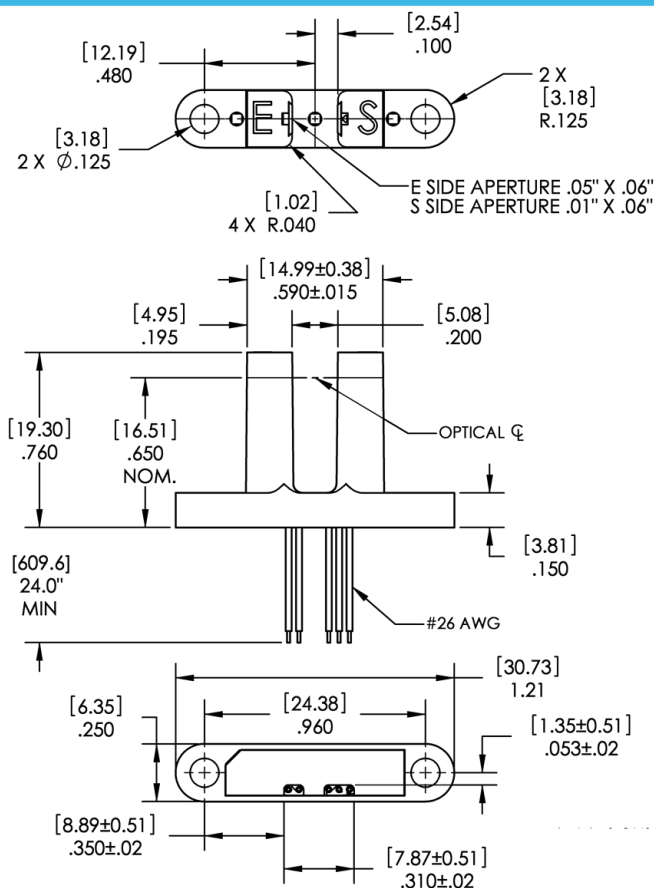
RoHS



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.optekinc.com | www.ttelectronics.com



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

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.

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.optekinc.com | www.ttelectronics.com

Electrical Characteristics (T _A = 25° C unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
V _F	Forward Voltage	-	1.3	1.8	V	I _F = 20 mA
I _R	Reverse Current	-	-	100	μA	V _R = 2 V, T _A = 25° C
Output Photologic® Sensor						
V _{CC}	Operating DC Supply Voltage	4.5	-	16	V	-
I _{CCL}	Low Level Supply Current: Buffered with 10k pull-up ⁽¹⁾ Buffered Open-Collector Output ⁽¹⁾	-	-	7	mA	V _{CC} = 16 V, I _F = 0 mA, No Output Load
	Inverted with 10k pull-up: Inverted Open-Collector Output	-	-	7	mA	V _{CC} = 16 V, I _F = 10 mA, No Output Load
I _{CCH}	High Level Supply Current: Buffered with 10k pull-up Buffered Open-Collector Output	-	-	6	mA	V _{CC} = 16 V, I _F = 10 mA, No Output Load
	Inverted with 10k pull-up: Inverted Open-Collector Output ⁽¹⁾	-	-	6	mA	V _{CC} = 16 V, I _F = 0 mA, No Output Load
V _{OL}	Low Level Output Voltage: Buffered with 10k pull-up Buffered Open-Collector Output	-	-	0.4	V	V _{CC} = 4.5 V, I _{OL} = 16 mA, I _F = 0 mA
	Inverted with 10k pull-up: Inverted Open-Collector Output	-	-	0.4	V	V _{CC} = 4.5 V, I _{OL} = 16 mA, I _F = 10 mA
V _{OH}	High Level Output Voltage: Buffered with 10k pull-up	V _{CC} - 2.0	-	-	V	V _{CC} = 4.5 V to 16 V, I _F = 10 mA, I _{OH} = 100 μA
	Inverted with 10k pull-up:	V _{CC} - 2.0	-	-	V	V _{CC} = 4.5 V to 16 V, I _F = 0 mA,
I _{OH}	High Level Output Current: Buffered with 10k pull-up Buffered Open-Collector Output	-	1.0	10	μA	V _{CC} = 4.5 V, I _F = 10 mA, V _{OH} = 30 V
	Inverted with 10k pull-up: Inverted Open-Collector Output ⁽¹⁾	-	1.0	10	μA	V _{CC} = 4.5 V, I _F = 0 mA, V _{OH} = 30 V

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.optekinc.com | www.ttelectronics.com

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Output Photologic® Sensor						
$I_{F(+)}$	LED Positive-Going Threshold Current Buffered with 10k pull-up Inverted with 10k pull-up	-	5	10	mA	$V_{CC} = 5 \text{ V}$, No Output Load
	Buffered Open-Collector Output Inverted Open-Collector Output ⁽¹⁾	-	5	10	mA	$V_{CC} = 4.5 \text{ V}$, $I_{OL} = 16 \text{ mA}$
$I_{F(+)} / I_{F(-)}$	Hysteresis	-	1.5	-	-	$V_{CC} = 5 \text{ V}$
t_r, t_f	Rise Time, Fall Time	-	50	-	ns	$V_{CC} = 5 \text{ V}$, $I_F = 0$ or 10 mA , $R_L = 300 \Omega$ to 5 V , $C_L = 50 \text{ pF}$
t_{PLH}, t_{PHL}	Propagation Delay	-	3	-	μs	

Notes:

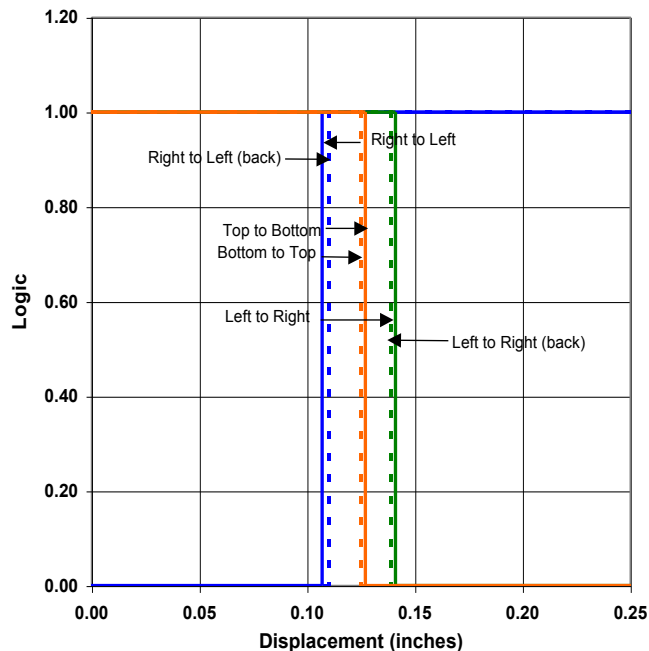
- (1) Normal application would be with light source blocked, simulated by $I_F = 0 \text{ mA}$.
- (2) All parameters tested using pulse technique.

General Note

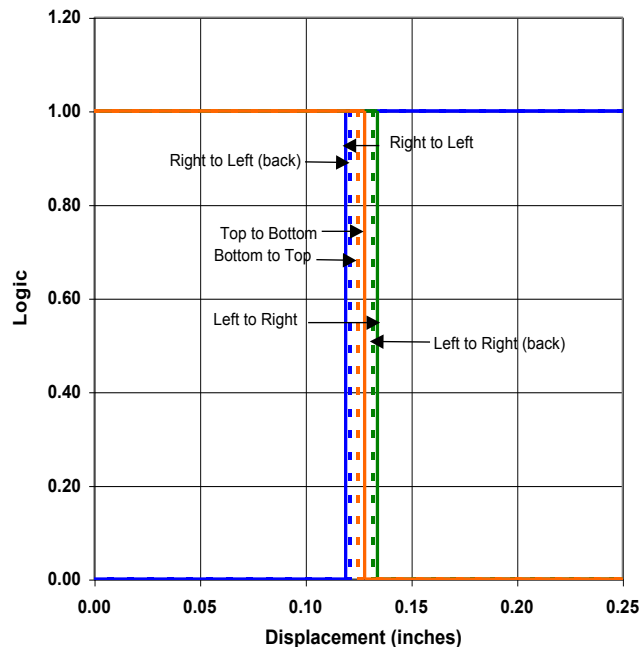
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.optekinc.com | www.ttelectronics.com

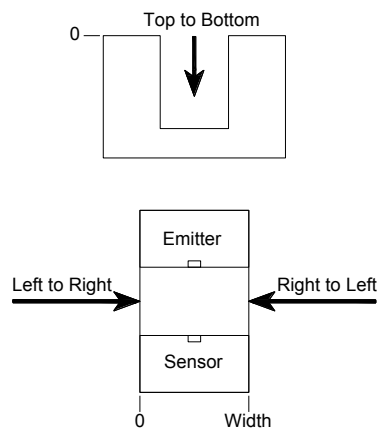
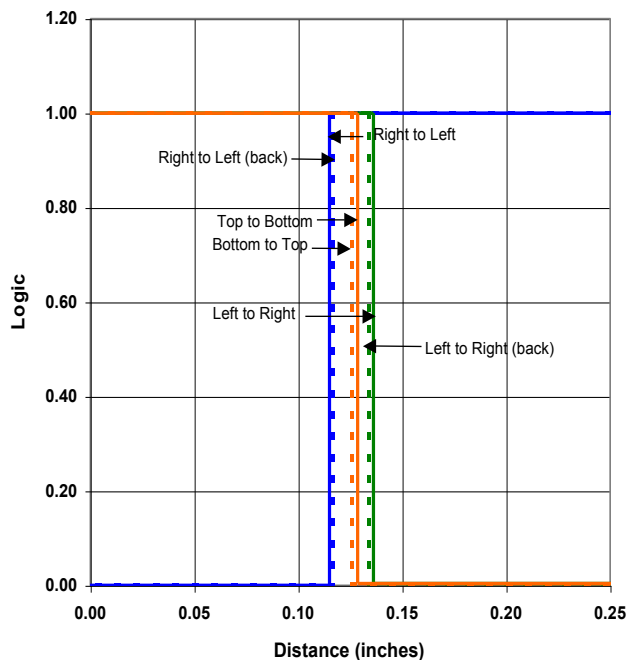
OPB916B - Flag Next to Emitter



OPB916B - Flag Next to Sensor



OPB916B - Flag in Middle of Slot



General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

General Note TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print. © TT electronics plc		OPTEK Technology, Inc. 1645 Wallace Drive, Carrollton, TX 75006 Ph: +1 972 323 2200 www.optekinc.com www.ttelectronics.com
	Issue B	10/2016 Page 6

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9