

Photologic® Slotted Optical Switch “Wide Gap” Series

OPB900 through OPB913 Series (L, W_Z)



Electrical Characteristics (T_A = -40°C to + 70° Unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
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Input Diode (See OP240B for more information — for reference only)

V _F	Forward Voltage	-	-	1.7	V	I _F = 20 mA, T _A = 25° C
I _R	Reverse Current	-	-	100	μA	V _R = 2 V, T _A = 25° C

Output Photologic® Sensor (See OPL560 for more information — for reference only)

V _{CC}	Operating D.C. Supply Voltage	4.75	-	5.25	V	
I _{CCL}	Low Level Supply Current: Buffered Totem-Pole Output Buffered Open-Collector Output	-	-	15	mA	V _{CC} = 5.25 V, I _F = 0 mA ⁽¹⁾
	Inverted Totem-Pole Output Inverted Open-Collector Output	-	-	15	mA	V _{CC} = 5.25 V, I _F = 20 mA ⁽¹⁾
I _{CCH}	High Level Supply Current: Buffered Totem-Pole Output Buffered Open-Collector Output	-	-	15	mA	V _{CC} = 5.25 V, I _F = 20 mA ⁽¹⁾
	Inverted Totem-Pole Output Inverted Open-Collector Output	-	-	15	mA	V _{CC} = 5.25 V, I _F = 0 mA ⁽¹⁾
V _{OL}	Low Level Output Voltage: Buffered Totem-Pole Output Buffered Open-Collector Output	-	-	0.4	V	V _{CC} = 4.75 V, I _{OL} = 12.8 mA, I _F = 0 mA ⁽¹⁾
	Inverted Totem-Pole Output Inverted Open-Collector Output	-	-	0.4	V	V _{CC} = 4.75 V, I _{OL} = 12.8 mA, I _F = 20 mA ⁽¹⁾
V _{OH}	High Level Output Voltage: Buffered Totem-Pole Output	2.4	-	-	V	V _{CC} = 4.75 V, I _{OH} = -800 μA, I _F = 20 mA ⁽¹⁾
	Inverted Totem-Pole Output	2.4	-	-	V	V _{CC} = 4.75 V, I _{OH} = -800 μA, I _F = 0 mA ⁽¹⁾
I _{OH}	High Level Output Current: Buffered Open-Collector Output	-	-	100	μA	V _{CC} = 4.75 V, V _{OH} = 30 V, T _A = 25° C
	Inverted Open-Collector Output	-	-	100	μA	V _{CC} = 4.75 V, V _{OH} = 30 V, T _A = 25° C
I _F (+)	LED Positive-Going Threshold Current	-	-	20	mA	V _{CC} = 5 V, T _A = 25° C
I _F (+)/I _F (-)	Hysteresis	-	2	-	-	V _{CC} = 5 V
I _{OS}	Short Circuit Output Current: Buffered Totem-Pole Output	-30	-	-100	mA	V _{CC} = 5.25 V, I _F = 20 mA Output = GND
	Inverted Totem-Pole Output	-30	-	-100	mA	V _{CC} = 5.25 V, I _F = 0 mA Output = GND
t _r , t _f	Output Rise Time, Output Fall Time	-	70	-	ns	V _{CC} = 5 V, T _A = 25° C I _F = 0 or 20 mA
t _{PLH} , t _{PHL}	Propagation Delay Low-High and High-Low	-	5	-	μs	R _L = 8 TTL Loads (Totem-Pole) R _L = 360 Ω (Open-Collector)

Notes:

(1) Normal application would be with light source blocked, simulated by I_F = 0 mA.

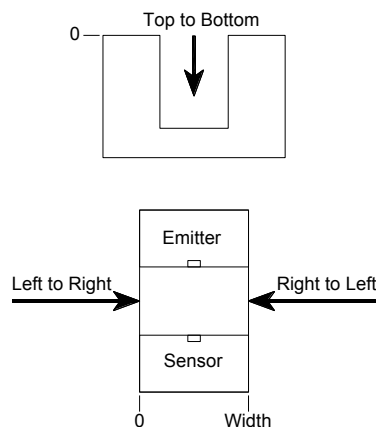
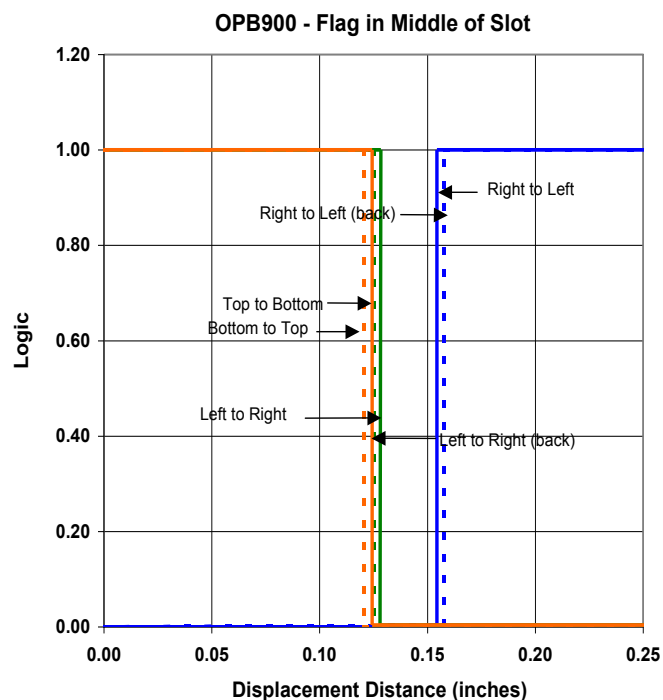
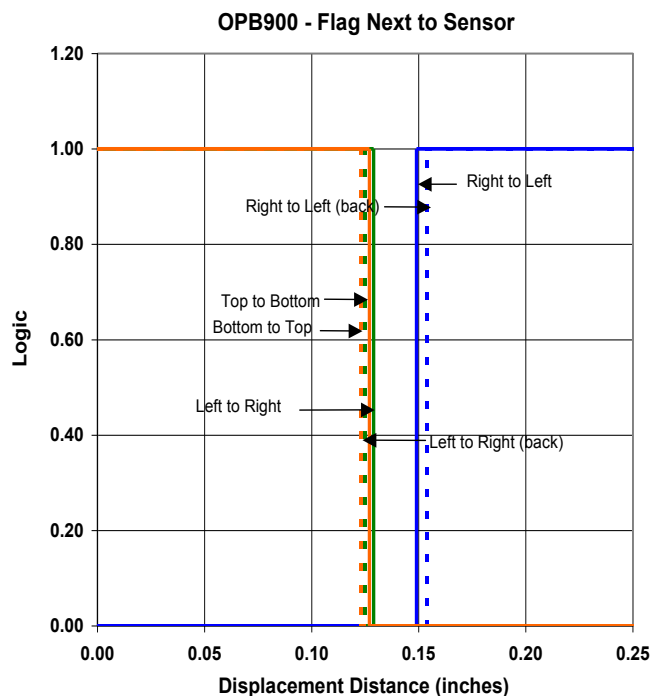
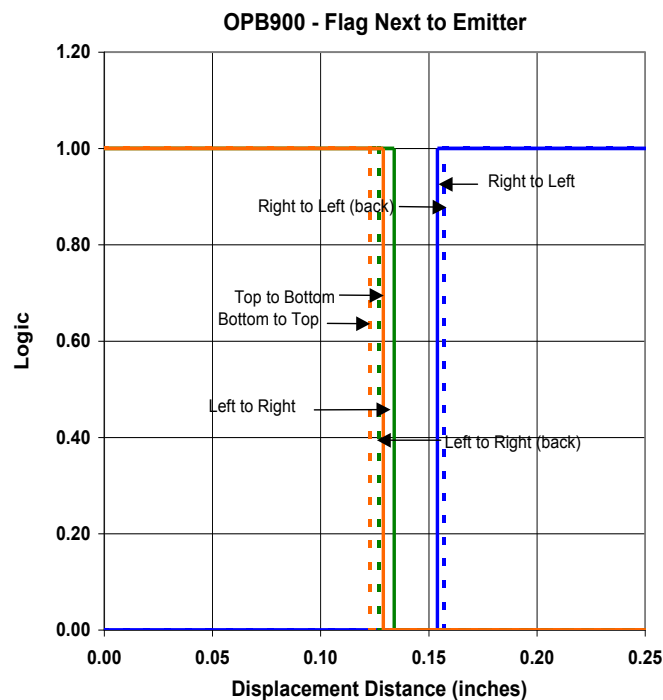
General Note

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TT Electronics | OPTEK Technology
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.ttelectronics.com | sensors@ttelectronics.com

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