

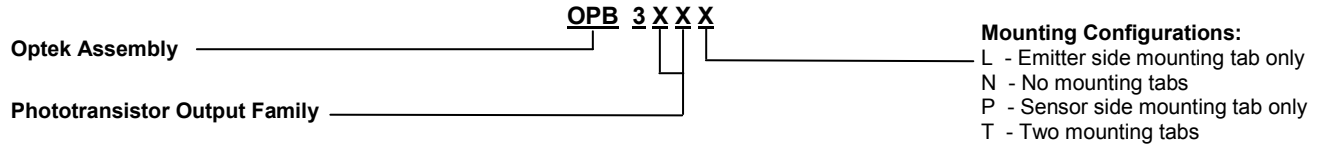
Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

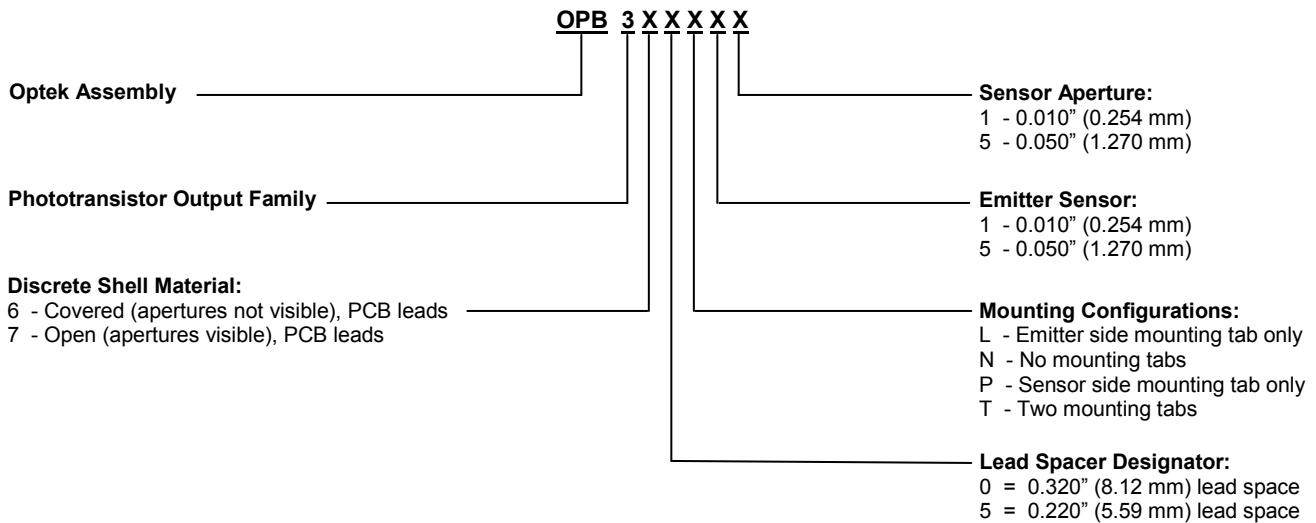
OPB859, OPB860, OPB870, OPB880, OPB890



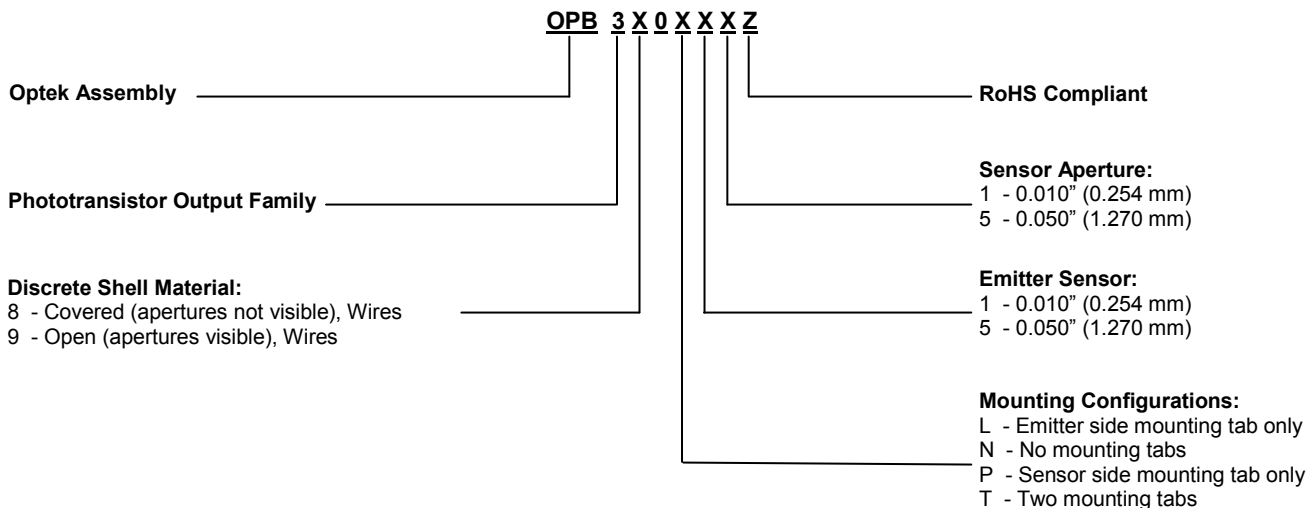
Part Number Guide — OPB355



Part Number Guide — OPB360 / OPB370



Part Number Guide — OPB380 / OPB390



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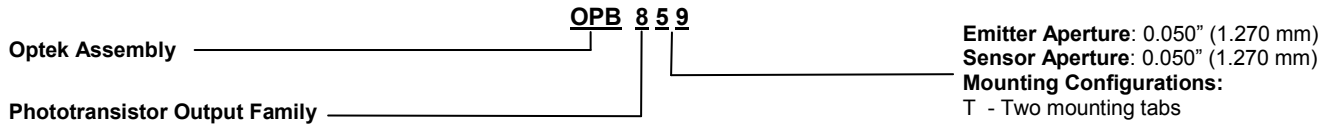
Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

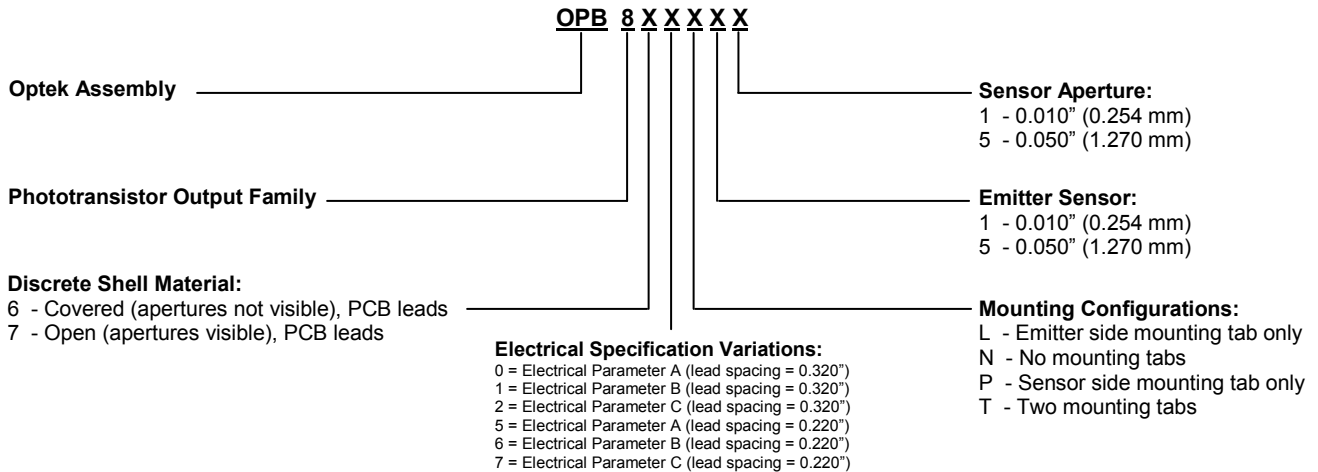
OPB859, OPB860, OPB870, OPB880, OPB890



Part Number Guide — OPB859

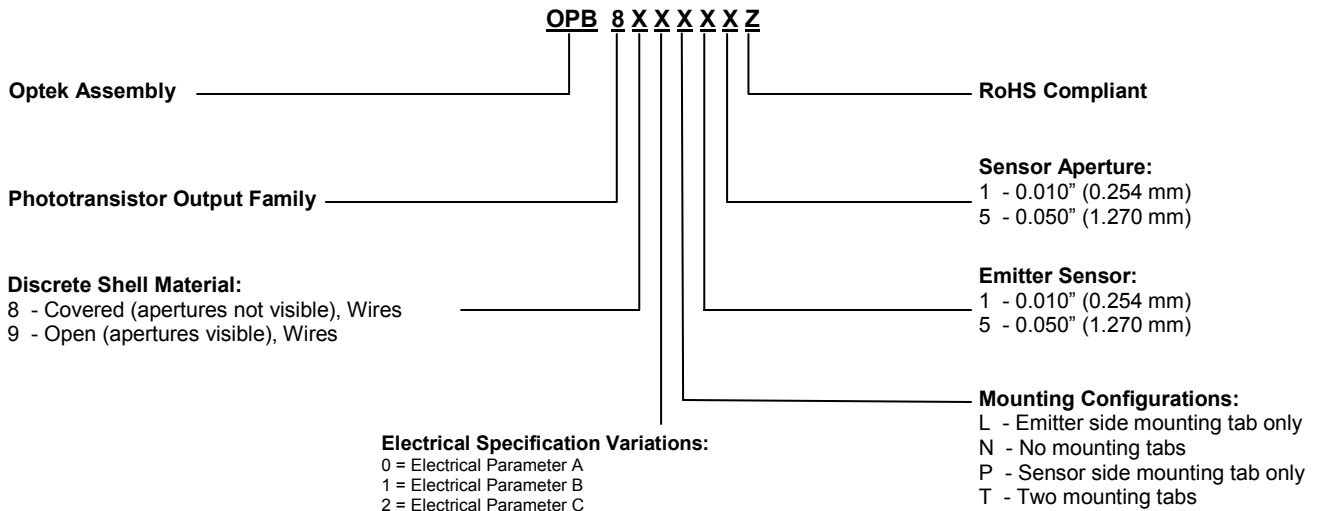


Part Number Guide — OPB860 / OPB870



Note: Assemblies with dual 0.010" apertures are currently available with electrical parameter "A" only.

Part Number Guide — OPB880 / OPB890



NOTE: Assemblies with dual 0.010" apertures are currently available with electrical parameter "A" only. Wires = 26AWG - 24" long. UL approved.

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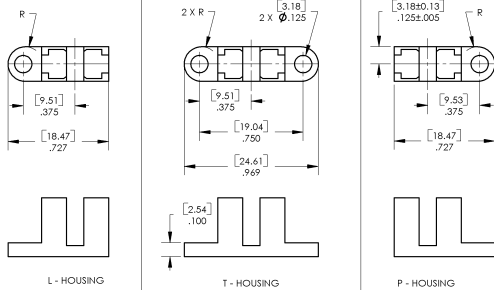
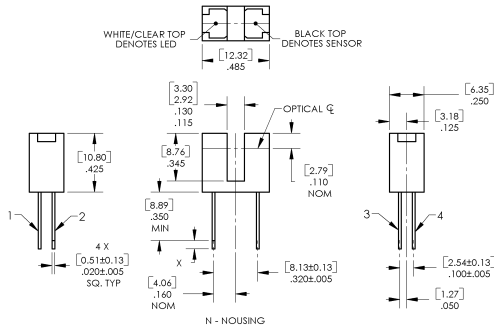
Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

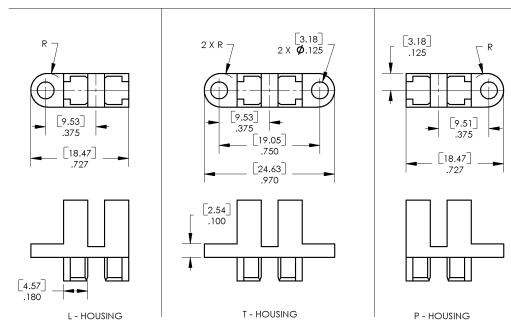
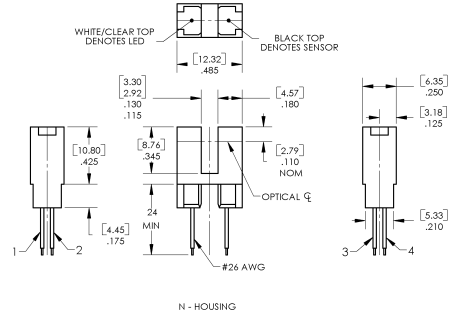
OPB859, OPB860, OPB870, OPB880, OPB890



OPB355, OPB360, OPB370

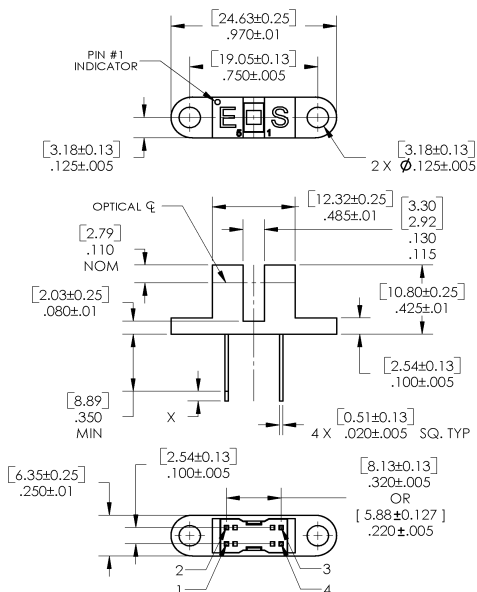


OPB380, OPB390

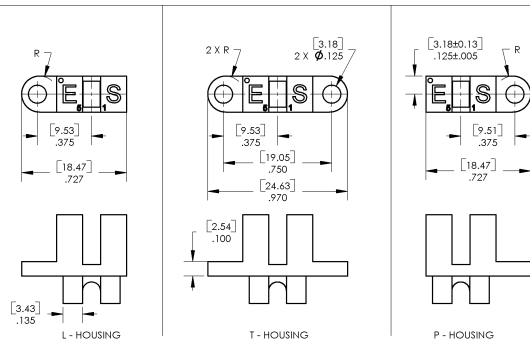
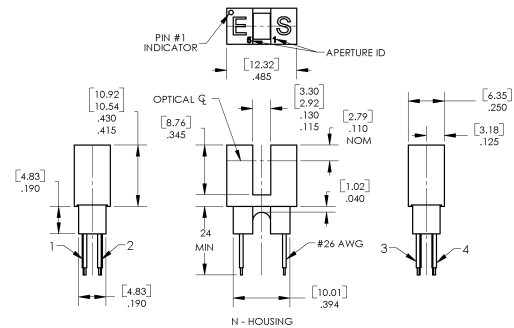


DIMENSIONS ARE IN INCHES AND MILLIMETERS
TOLERANCES ARE ± .010" [.25]

OPB859



OPB880, OPB890



DIMENSIONS ARE IN: [MILLIMETERS]
INCHES

Pin #	Emitter	Pin #	Transistor/Diode
1	Anode	3	Collector / Anode
2	Cathode	4	Emitter / Cathode

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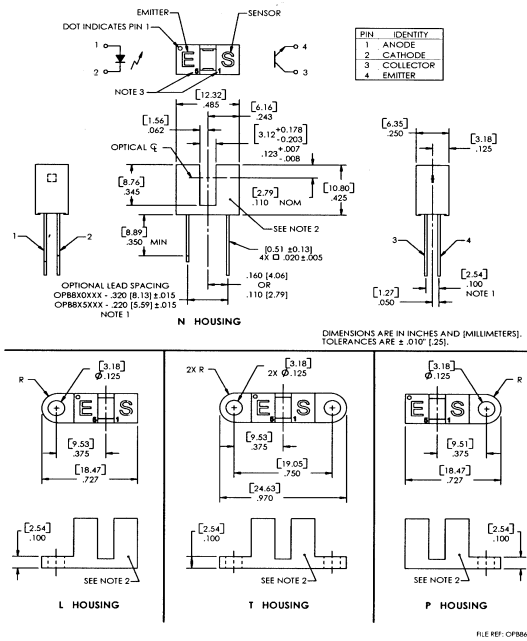
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OPB860, OPB870



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Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature ^{(1) (2)} OPB355, OPB360, OPB370, OPB859, OPB860, OPB870 Series OPB380, OPB390, OPB880, OPB890 Series	-40° C to +100° C -40° C to +85° C
Operating Temperature ^{(1) (2)}	-40° C to +85° C
Lead Soldering Temperature ⁽⁷⁾	260° C
Input LED	
Forward DC Current OPB355, OPB360, OPB370, OPB380, OPB390, OPB859, OPB860, OPB870, OPB880, OPB890	50 mA
Peak Forward Current (1 μs pulse width, 300 pps)	1 A
Reverse DC Voltage	2 V
Power Dissipation ⁽²⁾	75 mW
Output Phototransistor/Diode	
Cathode-Anode Reverse Voltage -OPB355	60 V
Collector-Emitter Voltage OPB360, OPB370, OPB380, OPB390, OPB859, OPB860, OPB870, OPB880, OPB890 Series	30 V
Emitter-Collector Voltage	5 V
Collector DC Current	30 mA
Power Dissipation ⁽¹⁾	100 mW

Notes:

- (1) For wire series (OPB380, OPB390, OPB880 and OPB890), maximum storage and operating temperature is limited by the temperature rating of the lead wires.
- (2) Derate linearly 1.67 mW/° C above 25° C.
- (3) For OPB355, OPB360 and OPB370, polarity is denoted by color of housing top: LED (clear); sensor (black).
- (4) Cleaning agents methanol and isopropanol are recommended. Spray or wipe; do not submerge.
- (5) OPB380 and OPB390 wire terminations have 24" of 7-strand 26 AWG UL approved insulated wire on each terminal. These devices incorporate a wire strain relief at the housing surface. The insulation colors and functions are: IRED anode (red); IRED cathode (black); phototransistor collector (white); phototransistor emitter (green).
- (6) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
- (7) All parameters were tested using pulse technique.

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Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

OPB859, OPB860, OPB870, OPB880, OPB890



Electrical Characteristics (T _A = 25° C unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Transistor/Diode (See OP240 for additional information—for reference only)						
V _F	Forward Voltage	-	1.3	1.8	V	I _F = 20 mA
I _R	Reverse Current	-	-	100	μA	V _R = 2 V
Output Diode — OPB355 (See OPB950 for additional information — for reference only)						
V _{BR}	Reverse Diode Breakdown Voltage	60	-	-	V	I _R = 100 μA, I _F = 0, E _E = 0
V _{FD}	Forward Voltage Photodiode	-	-	1.2	V	I _F = 1 mA, I _F = 0, E _E = 0
ID	Reverse Dark Current	-	-	60	nA	V _R = 30 V, E _E = 0, I _F = 0
Output Transistor (See OP550 for additional information—for reference only)						
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	30	-	-	V	I _C = 1 mA
V _{(BR)ECO}	Emitter-Collector Breakdown Voltage	5	-	-	V	I _E = 100 μA
I _{CEO}	Collector-Emitter Dark Current	-	-	100	nA	V _{CE} = 10 V, I _F = 0, E _E = 0
Coupled						
I _L	On-State Collector Current OPB355 (L, N, P, T)	10	-	200	μa	V _R = 5 V, I _F = 40 mA
V _{CE(SAT)}	Collector-Emitter Saturation Voltage OPB859 OPB860/870/865/875 (Para. A) OPB861/871/866/876 (Para. B) OPB862/872/867/877 (Para. C) OPB880/890/ (Para. A) OPB881/891 (Para. B) OPB882/892 (Para. C)	- - - - - - -	- - - - - - -	0.4 0.4 0.4 0.6 0.4 0.4 0.6	V	I _C = 125 μA, I _F = 20 mA I _C = 400 μA, I _F = 20 mA I _C = 800 μA, I _F = 20 mA I _C = 1800 μA, I _F = 20 mA I _C = 400 μA, I _F = 20 mA I _C = 800 μA, I _F = 10 mA I _C = 1800 μA, I _F = 20 mA
I _{C(ON)}	On-State Collector Current OPB36X, OPB37X (T, N, L, P 11) OPB36X, OPB37X (T, N, L, P 51) OPB36X, OPB37X (T, N, L, P 55) OPB38X, OPB39X (T, N, L, P 11) OPB38X, OPB39X (T, N, L, P 51) OPB38X, OPB39X (T, N, L, P 55)	1.0 2.5 3.5 1.0 2.5 3.5	- - - - - -	5 10 14 5 10 14	mA	V _{CE} = 0.4 V, I _F = 20 mA
	OPB859	250	-	-	μA	V _{CE} = 10 V, I _F = 20 mA
	OPB860/870/865/875 (Para. A) OPB861/871/866/876 (Para. B) OPB862/872/867/877 (Para. C) OPB880/890/ (Para. A) OPB881/891 (Para. B) OPB882/892 (Para. C)	0.5 1.0 1.8 0.5 1.0 1.8	- - - - - -	- - - - - -	mA	V _{CE} = 10 V, I _F = 20 mA V _{CE} = 5 V, I _F = 10 mA V _{CE} = 0.6 V, I _F = 20 mA V _{CE} = 10 V, I _F = 20 mA V _{CE} = 5 V, I _F = 10 mA V _{CE} = 0.6 V, I _F = 20 mA

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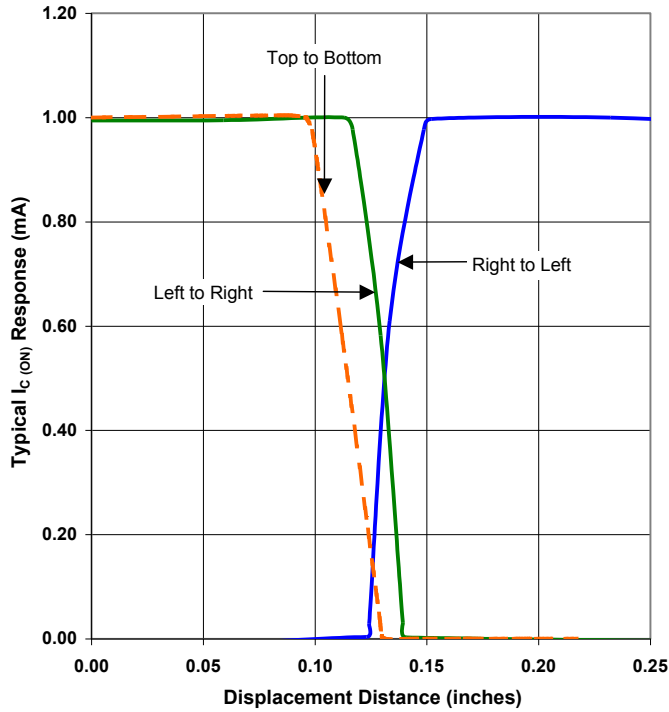
Slotted Optical Switch

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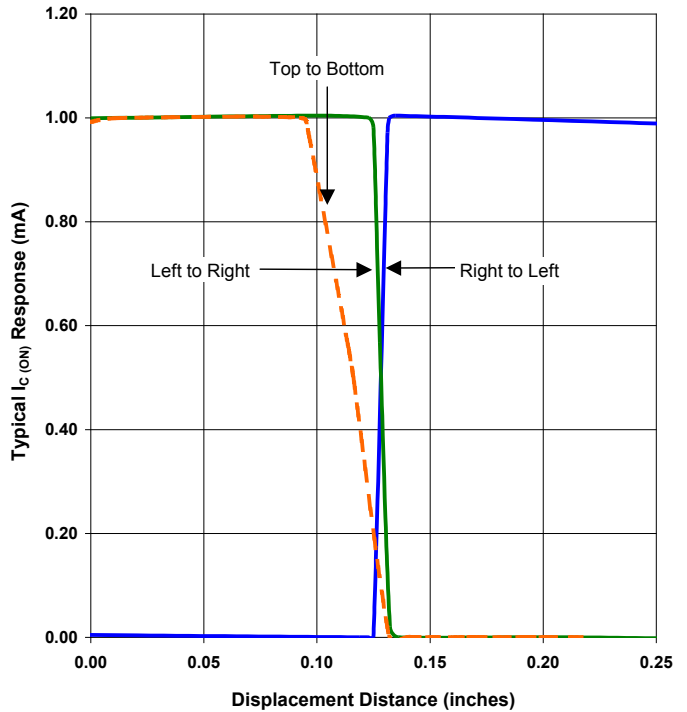
OPB859, OPB860, OPB870, OPB880, OPB890



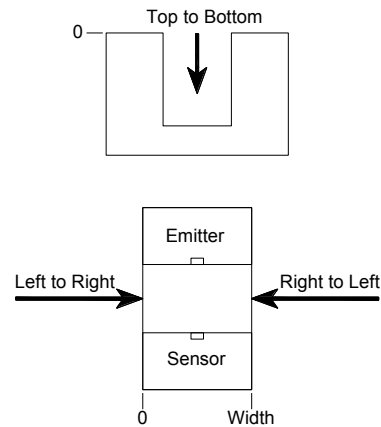
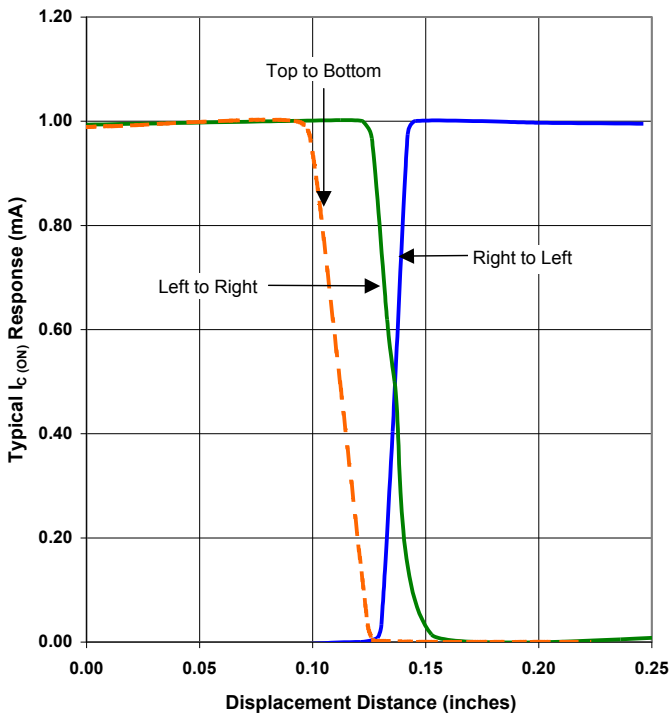
OPB355 - Flag Next to Emitter



OPB355 - Flag Next to Sensor



OPB355 - Flag in Middle of Slot



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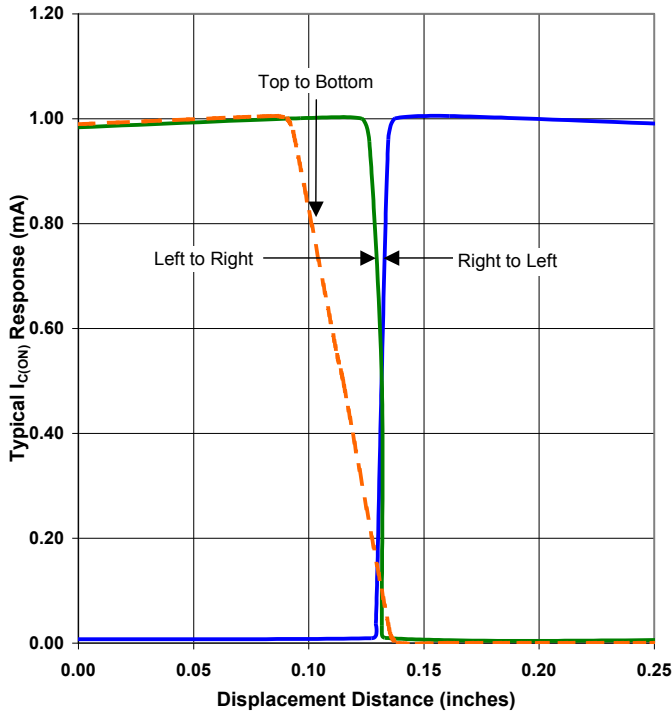
Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

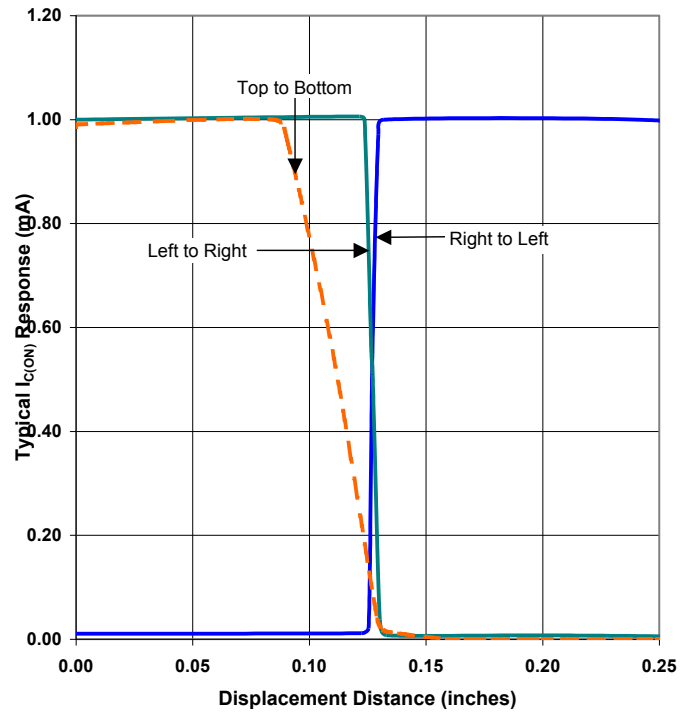
OPB859, OPB860, OPB870, OPB880, OPB890



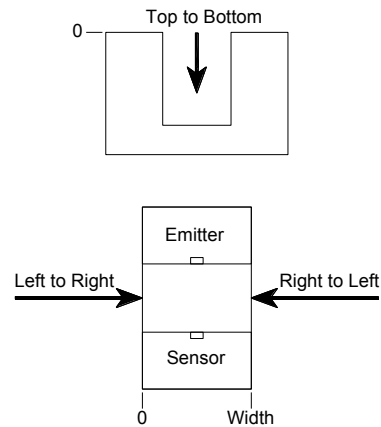
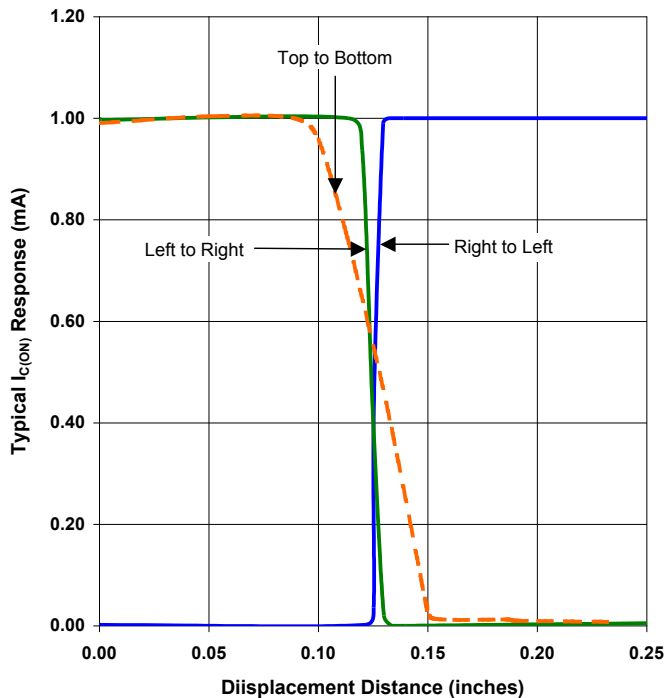
Aperture Configuration 11 - Flag Next to Emitter



Aperture Configuration 11 - Flag Next to Sensor



Aperture Configuration 11 - Flag in Middle of Slot



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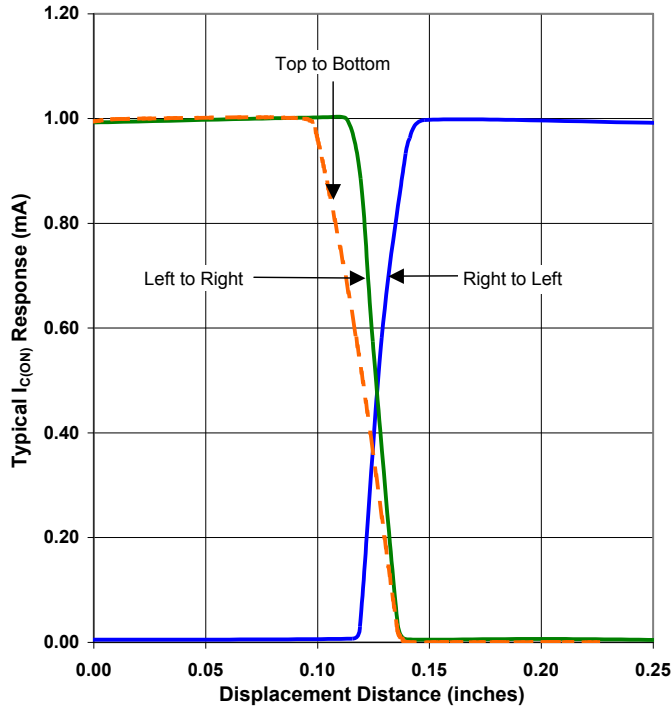
Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

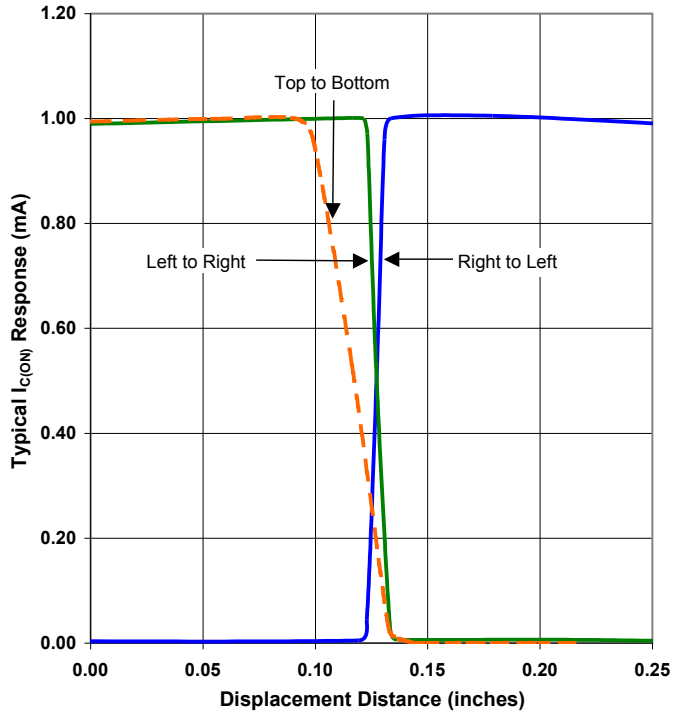
OPB859, OPB860, OPB870, OPB880, OPB890



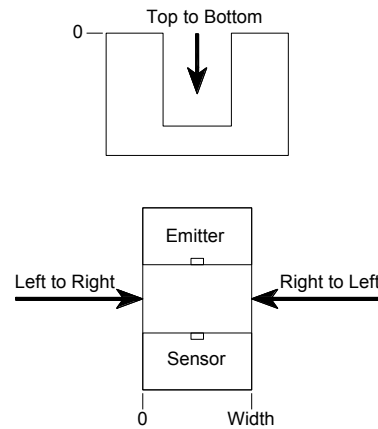
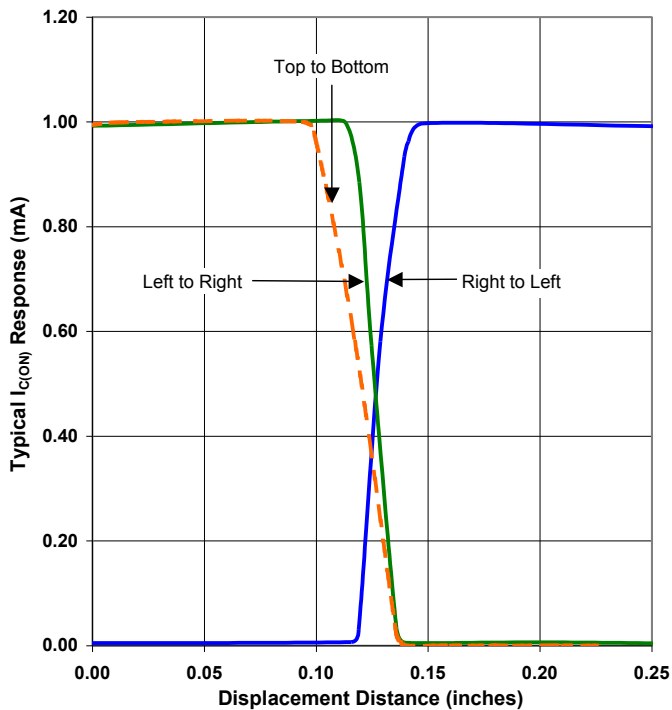
Aperture Configuration 51 - Flag Next to Emitter



Aperture Configuration 51 - Flag Next to Sensor



Aperture Configuration 51 - Flag in Middle of Slot



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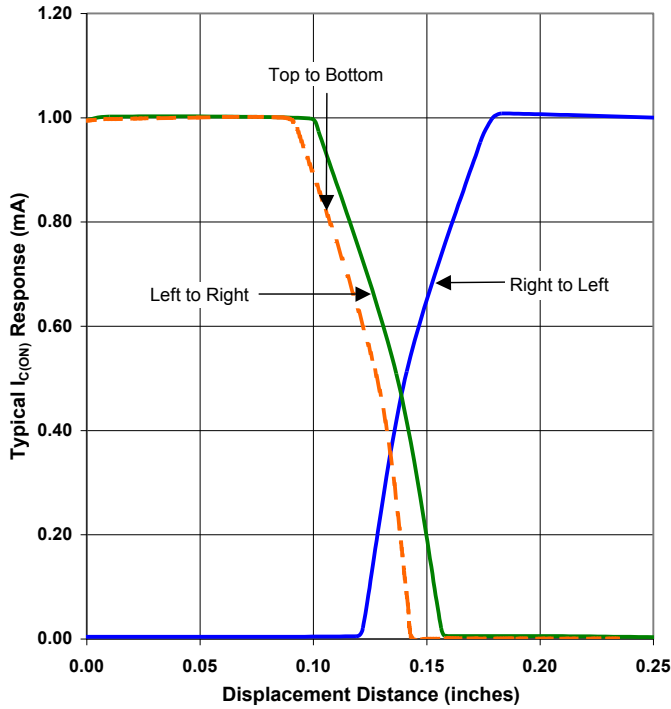
Slotted Optical Switch

Series: OPB355, OPB360, OPB370, OPB380

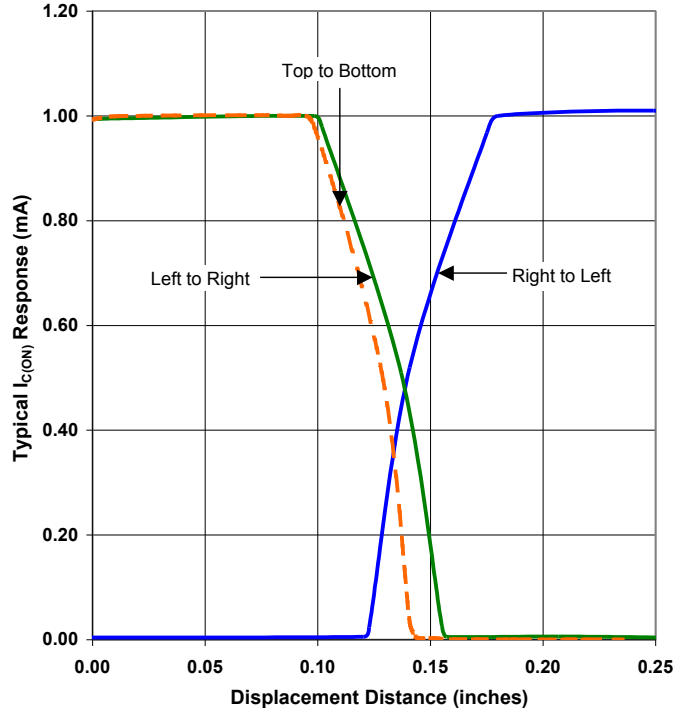
OPB859, OPB860, OPB870, OPB880, OPB890



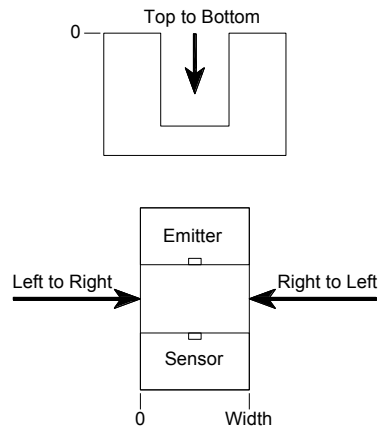
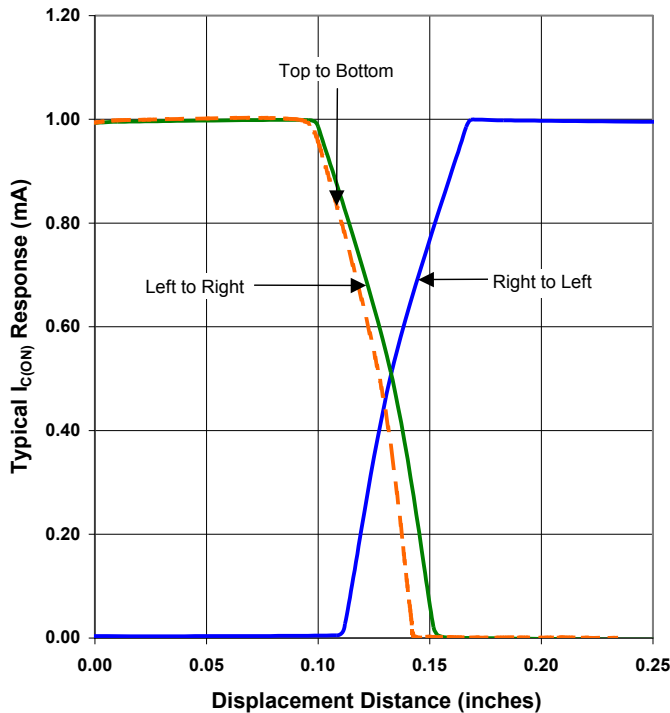
Aperture Configuration 55 - Flag Next to Emitter



Aperture Configuration 55 - Flag Next to Sensor



Aperture Configuration 55 - Flag in Middle of Slot



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