Electrical Specifications

Electrical Characteristics (T_A = 25°C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode (See OP240 for additional information)						
V_F	Forward Voltage OPB610, OPB620 OPB621	 - 1.15	 - -	 1.6 1.45	 V V	 I_F = 10 mA I_F = 10 mA
I_R	Reverse Current	-	-	100	µA	V_R = 3 V
Output Phototransistor (OPB610, OPB620) (See OP505 for additional information)						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	24	-	-	V	I_C = 100 µA
BV_{ECO}	Emitter-Collector Breakdown Voltage	0.4	-	-	V	I_{CE} = 100 µA
I_{CEO}	Collector-Emitter Dark Current	-	-	100	nA	V_{CE} = 5 V
Output Photodiode (OPB611, OPB621) (See OP999 for additional information)						
I_D	Dark Current	-	-	65	nA	V_R = 30 V, E_E = 0 mW
$V_{(BR)R}$	Reverse Breakdown Voltage	60	-	-	V	IR = 100 µA, E_E = 0 mW
V_F	Forward Voltage	-	-	1.0	V	I_F = 1 mA, E_E = 0 mW
Combined						
V_{SAT}	Collector-Emitter Saturation Voltage OPB610, OPB620	 -	 -	 0.4	 V	 I_F = 5 mA, I_C = 100 µA
$I_{C(ON)}$	On-State Collector/Diode Current OPB610, OPB620 OPB611, OPB621	 1 9	 - -	 - 90	 mA µA	 I_F = 5 mA, V_{CE} = 5 V (gap unblocked) V_R = 5 V, I_F = 20 mA (gap unblocked)

Notes:
(1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering. A maximum of 20 grams force may be applied to leads when soldering.
(2) Derate linearly 1.33 mW/°C above 25 ° C.
(3) Derate linearly 2.0 mW/°C above 25 ° C.
(4) Plastic body is soluble in chlorinated hydrocarbons and keytones. It is recommended that a trial exposure to flux & cleaning chemicals is performed to ensure sensor is not damaged.

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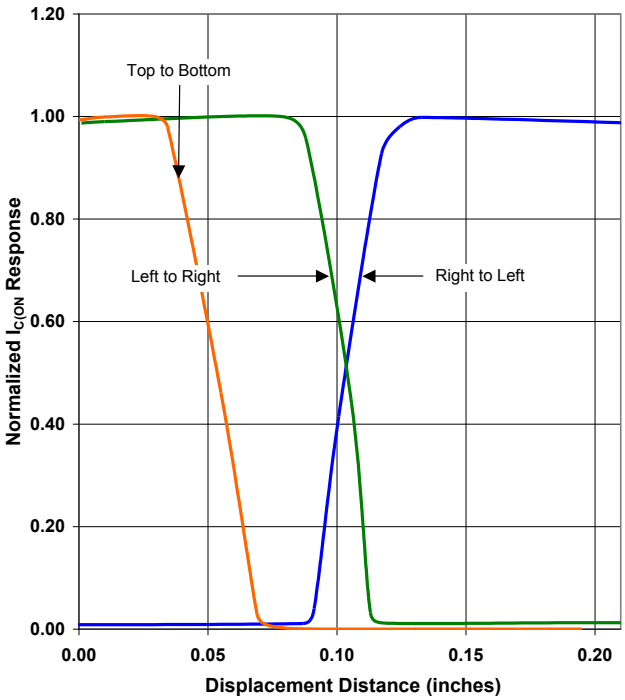
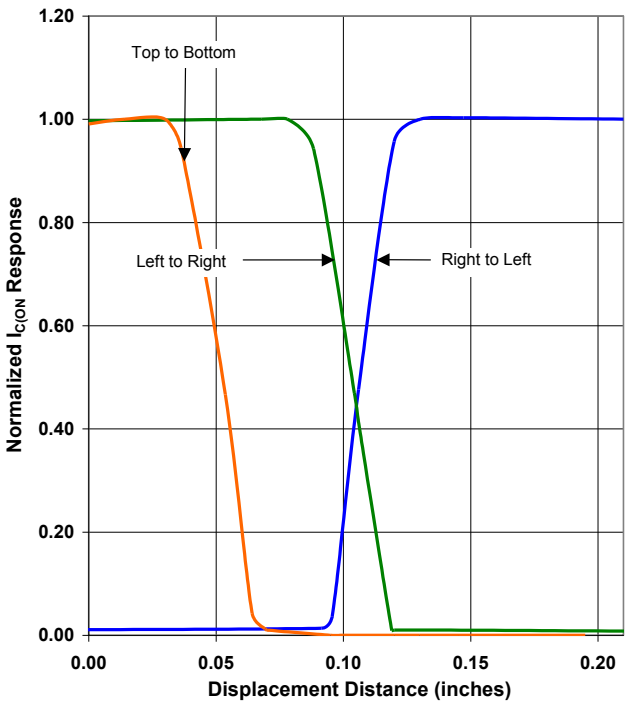
Performance

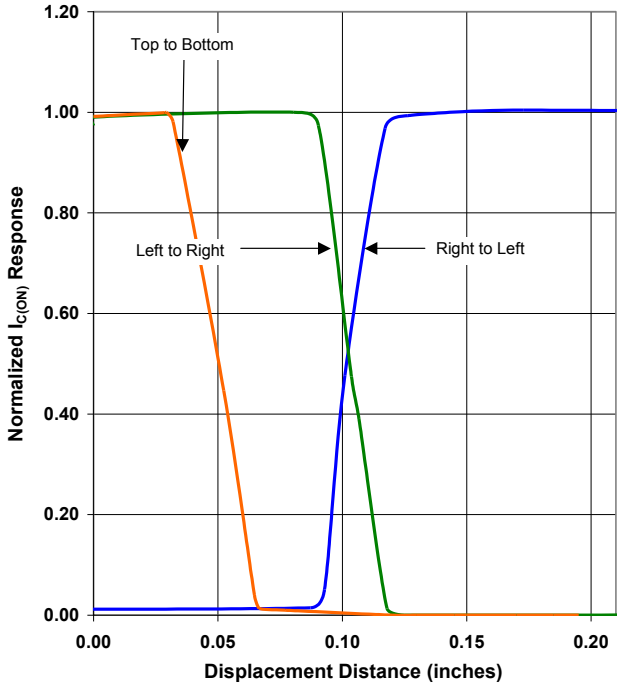
OPB610 - Flag Next to Emitter

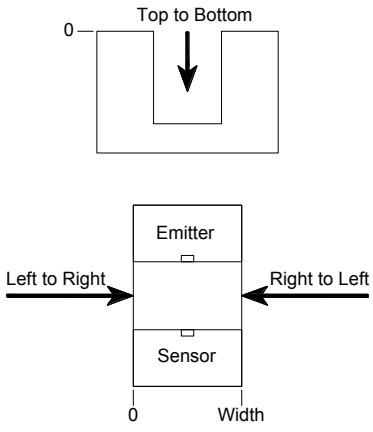


OPB610 - Flag Next to Sensor



OPB610 - Flag in Middle of Slot





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