

Electrical Specifications

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Storage & Operating Temperature Range	-40° C to +85° C
Lead Soldering Temperature [1/16 inch (1.6mm) from the case for 5 sec. with soldering iron] ⁽¹⁾	260° C

Input Diode

Forward DC Current	50 mA
Peak Forward Current (1 μs pulse width, 300 pps)	3 A
Reverse DC Voltage	2 V
Power Dissipation ⁽²⁾	100 mW

Output Phototransistor

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Collector DC Current	30 mA
Power Dissipation ⁽²⁾	100 mW

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
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Input Diode

V_F	Forward Voltage	-	-	1.8	V	$I_F = 20 \text{ mA}$
I_R	Reverse Current	-	-	100	μA	$V_R = 2.0 \text{ V}$

Output Phototransistor

$V_{(BR)(CEO)}$	Collector-Emitter Breakdown Voltage	30	-	-	V	$I_C = 100 \mu\text{A}, I_F = 0, E_E = 0$
$V_{(BR)(ECO)}$	Emitter-Collector Breakdown Voltage	5	-	-	V	$I_E = 100 \mu\text{A}, I_F = 0, E_E = 0$
I_{CEO}	Collector-Emitter Leakage Current	-	-	100	nA	$V_{CE} = 10 \text{ V}, I_F = 0, E_E = 0$

Coupled

$I_{C(ON)}$	On-State Collector Current	0.5	-	12.0	mA	$V_{CE} = 5 \text{ V}, I_F = 40 \text{ mA}$
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage	-	-	0.4	V	$I_C = 250 \mu\text{A}, I_F = 40 \text{ mA}$

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° C.
- (3) All parameters tested using pulse techniques.
- (4) Methanol or isopropanol are recommended as cleaning agents. Plastic housing is soluble in chlorinated hydrocarbons and ketones. Spray and wipe. Do not submerge.
- (5) Polarity is denoted by color the wires: LED (Anode—Red, Cathode—Black); Phototransistor (Collector—White, Emitter—Green).

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.

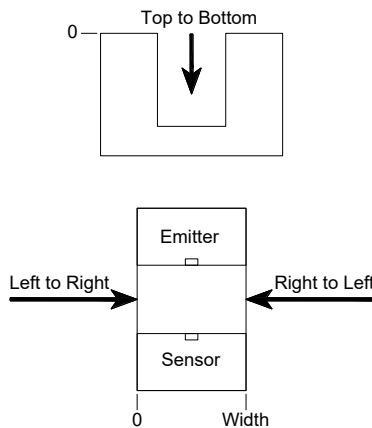
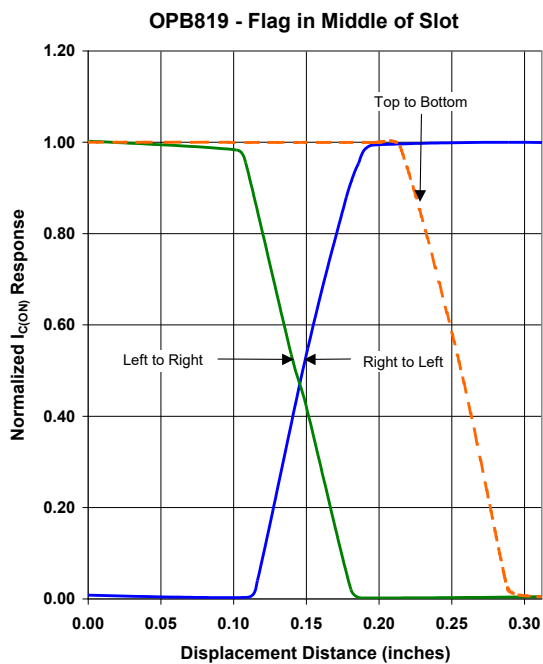
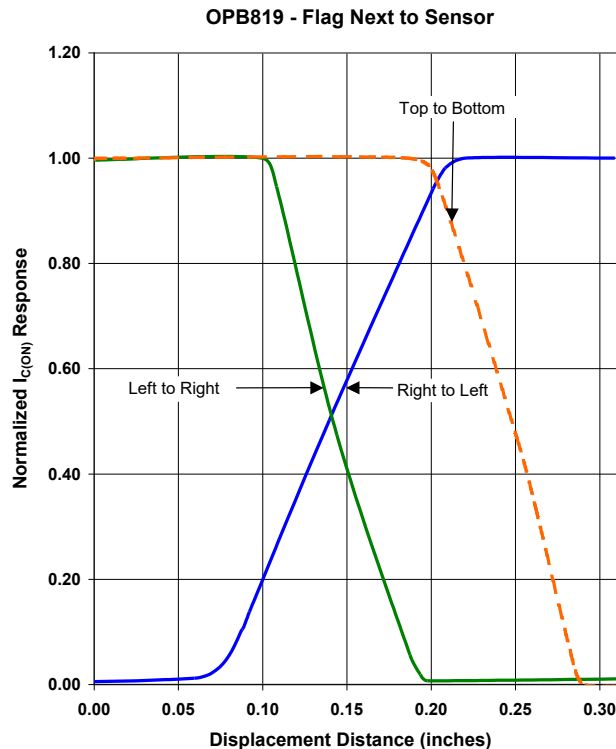
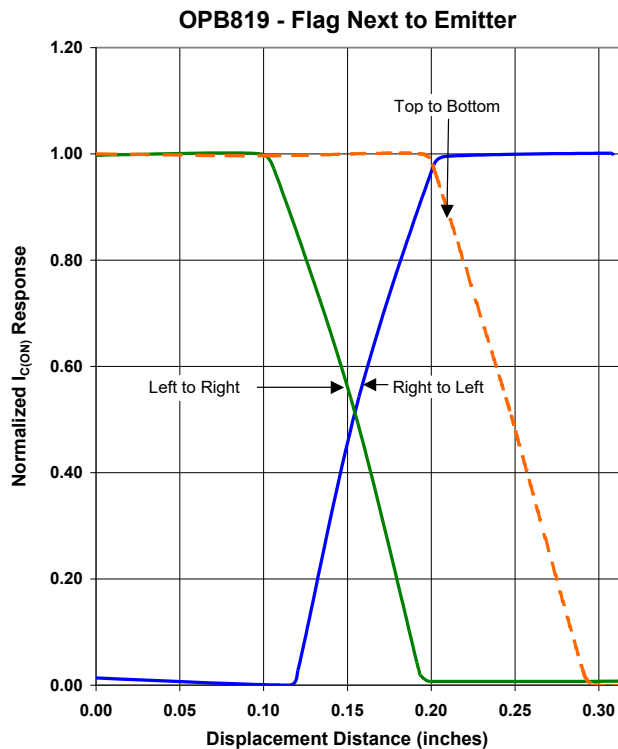
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Slotted Optical Switch

OPB819Z



Performance



Ordering Information					
Part Number	LED Peak Wavelength	Sensor	Slot Width / Depth	Aperture Emitter/Sensor	Lead Length / Spacing
OPB819Z	890 nm	Transistor	1.26" / 1.38"	None	24" / 26 AWG Wire

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