



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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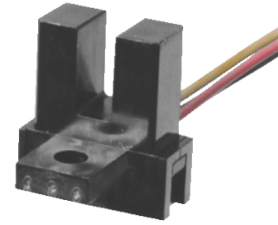
Slotted Optical Switch

OPB857Z



Features:

- Three wires for economy in electrical connection
- Water resistant, no optical openings in upper plastic body
- Internal narrow aperture for high motion resolution



Description:

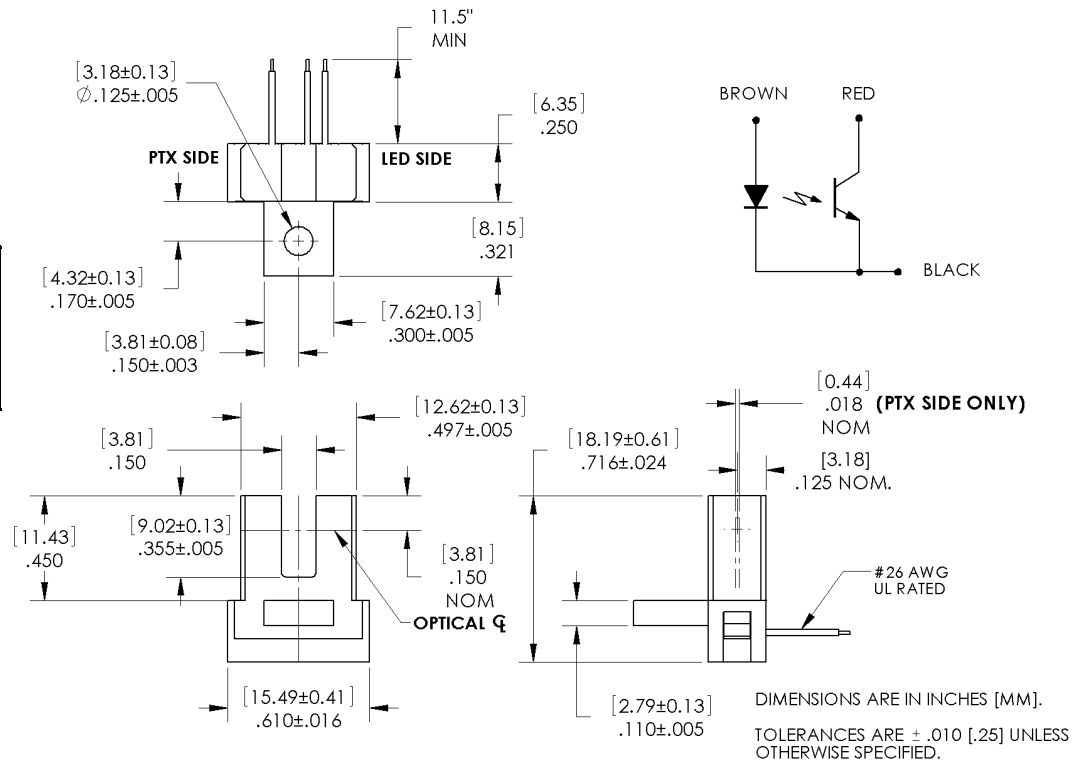
OPB857Z is a non-contact optical switch with a NPN silicon phototransistor and infrared Light Emitting Diode (LED) which are mounted on opposite sides of a 0.150" (3.8 mm) wide slot.

The device upper body is a single molded piece IR transparent plastic that is tinted to reduce ambient light interference and offers water resistance as well as dirt/dust protection. The phototransistor has a internal aperture that offers good optical resolution. LED emissions are near-infrared (850 – 940nm).

Applications:

- Non-contact object sensing
- Assembly line automation
- Machine automation
- Equipment security
- Machine safety

Wire Color	Description
Red	Collector
Brown	Anode
Black	Common



RoHS

Notes:

- (1) Wire is 26AWG, UL Rated PVC insulation.
- (2) Ideal torque for bolt or screw 0,45 to 0,68 Nm (4 to 6 Lb-in).
- (3) When using a thread lock compound, ND Industries "ND Vibra-Tite" Formula 3" will avoid stress cracking plastic.
- (4) Plastic is soluble in chlorinated hydrocarbons and ketones. Methanol or isopropanol are recommended as cleaning agents.

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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Electrical Specifications

Absolute Maximum Ratings

Storage & Operating Temperature Range	-40°C to +80° C
Input Diode	
Input Diode Power Dissipation	100 mW ⁽⁵⁾
Input Diode Forward D.C. Current, T _A = 25°C	50 mA ⁽⁵⁾
Input Diode Peak Forward Pulse Current, T _A = 25°C (1µs pulse width, 300pps)	1 A
Input Diode Reverse D.C. Voltage, T _A = 25°C	2 V
Phototransistor	
Power Dissipation	100 mW ⁽⁵⁾
Collector - Emitter Voltage	30V
Emitter - Collector Voltage	5.0V

Electrical Characteristics (T_A = 25°C)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
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Input Diode (see OP140 or OP240 for additional information)

V _F	Forward Voltage	-	-	1.70	V	I _F = 20 mA
I _R	Reverse Current	-	-	100	µA	V _R = 2 V

Output Phototransistor (see OP550 for additional information)

V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	30	-	-	V	I _C = 1 mA, E _E = 0
V _{(BR)ECO}	Emitter-Collector Breakdown Voltage	5.0	-	-	V	I _E = 100 µA, E _E = 0
I _{CEO}	Collector Dark Current	-	-	100	nA	V _{CE} = 10 V, I _F = 0, E _E = 0

Coupled

V _{CE(SAT)}	Collector-Emitter Saturation Voltage	-	-	0.40	V	I _C = 1.50 mA, I _F = 20 mA
I _{C(ON)}	On-State Collector Current	1.5	-	17.0	mA	V _{CE} = 10 V, I _F = 20 mA

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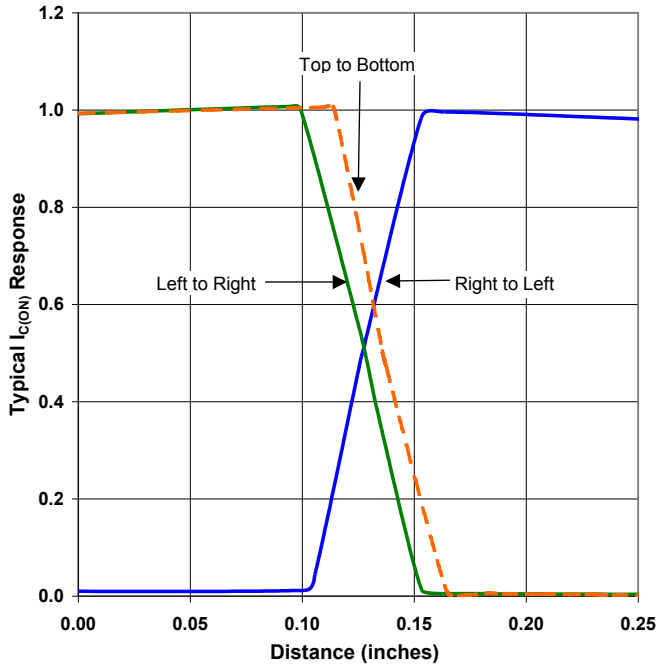
Slotted Optical Switch

OPB857Z

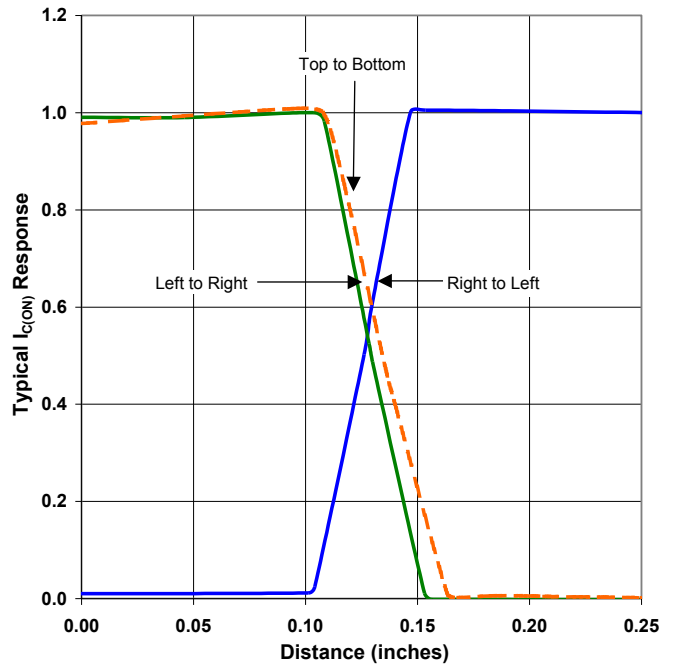


Performance

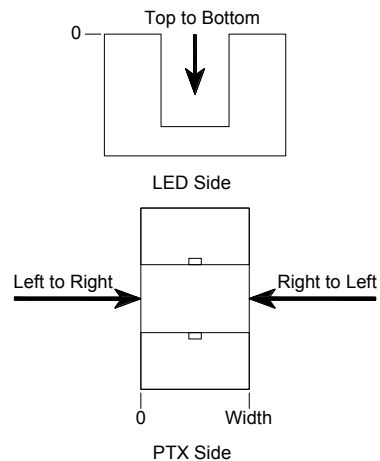
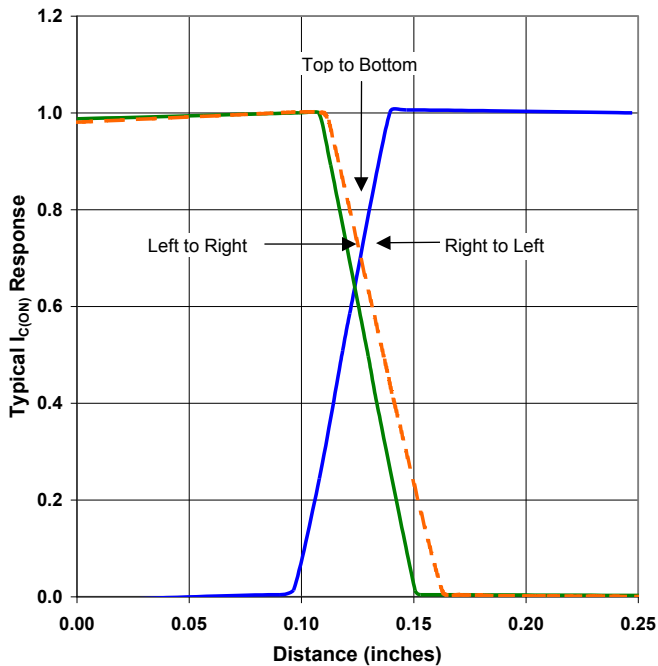
OPB857Z - Flag Next to LED



OPB857Z - Flag Next to PTX



OPB857Z - Flag in Middle of Slot



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