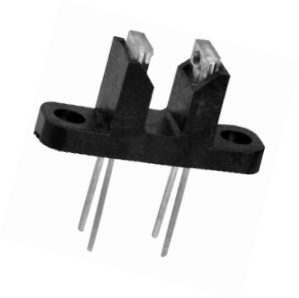
Slotted Optical Switch

OPB825, OPB825A

Obsolete (OPB825B, OPB825R)



Features:

- Non-contact switching
- Fast switching speed
- 0.160” (4.06 mm) wide slot
- 0.300” (7.62 mm) lead spacing

Description:

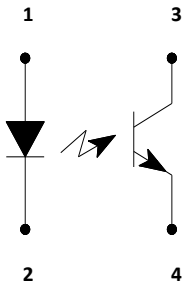
Each OPB825 and OPB825A have an infrared LED. All devices have a NPN silicon phototransistor mounted in a low-cost black plastic housing on opposite sides of a 0.160” (4.064 mm) wide slot.
OPB825 have no mounting tabs and is intended for direct insertion into PCBoards or dual-in-line sockets. OPB825A has one mounting tab on the phototransistor side.
Phototransistor switching takes place whenever an opaque object passes through the slot.

Applications:

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

Ordering Information	
Part Number	**Description**
OPB825	Slotted Switch (no tabs) IR-LED
OPB825A	Slotted Switch (one tab) IR-LED
OPB825B Obsolete	Slotted Switch (two tabs) IR-LED
OPB825R Obsolete	Slotted Switch (no tabs) Red-LED

Pin #	Description	Pin #	Description
1	Anode	3	Collector
2	Cathode	4	Emitter



RoHS

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.

© TT electronics plc

TT Electronics | OPTEK Technology
2900 E. Plano Pkwy, Plano, TX 75074 | Ph: +1 972 323 2200
www.ttelectronics.com | sensors@ttelectronics.com

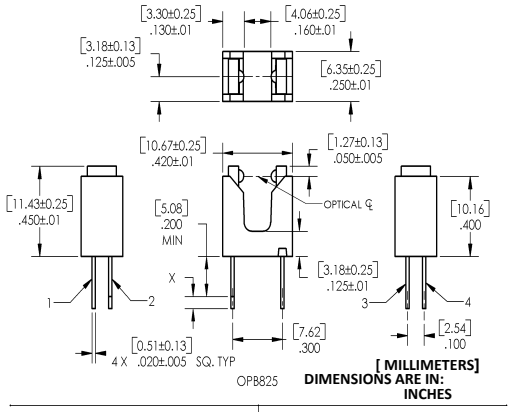
Electrical Specifications

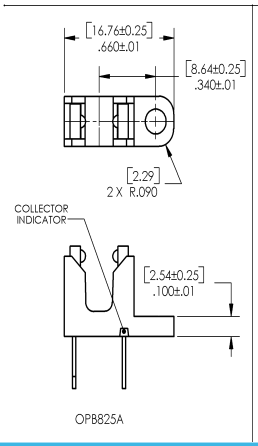
Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

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

Input Diode	**OPB825—A**
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	**OPB825—A**
Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Collector DC Current	30 mA
Power Dissipation[2]	100 mW





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.

© TT electronics plc

TT Electronics | OPTEK Technology

2900 E. Plano Pkwy, Plano, TX 75074 | Ph: +1 972 323 2200

www.ttelectronics.com | sensors@ttelectronics.com

Electrical Specifications

OPB825, OPB825A

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	-	-	1.6	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
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5	-	-	V	I_E = 100 µA
I_{CEO}	Collector Dark Current	-	-	100	nA	V_{CE} = 10 V, I_F = 0, E_E = 0
Combined						
$V_{CE(SAT)}$	Collector-Emitter Saturation	-	-	0.4	V	I_C = 250 µA, I_F = 20 mA
$I_{C(ON)}$	On-State Collector Current	1.0	-	-	mA	I_F = 20 mA, V_{CE} = 10 V

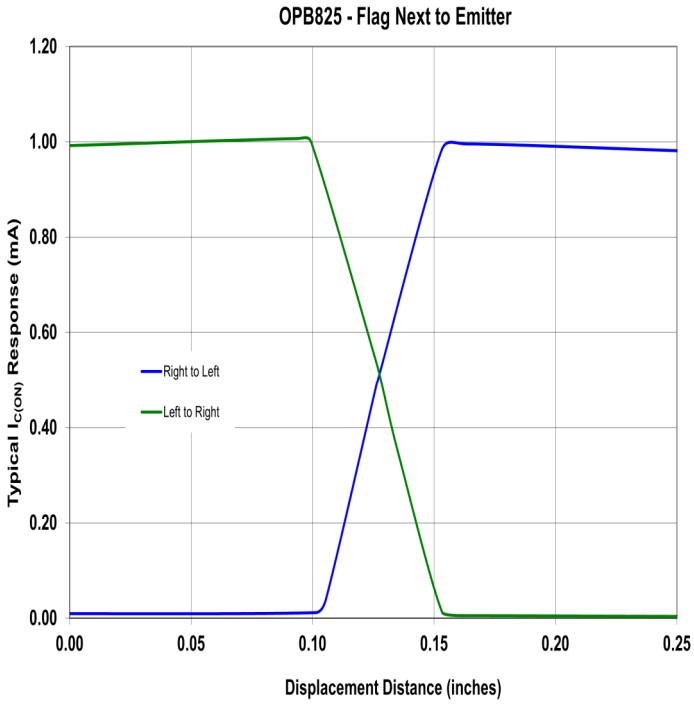
Notes:

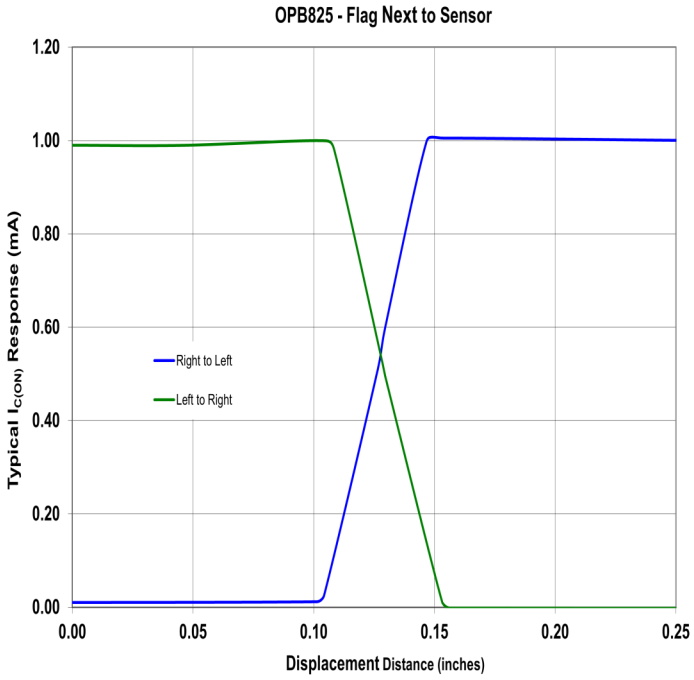
(1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
(2) Derate linearly 1.67 mW/°C above 25° C.
(3) All parameters tested using pulse techniques.
(4) Methanol or isopropanol are recommended as cleaning agents. Plastic housing is soluble in chlorinated hydrocarbons and ketones.
(5) Simulates optical path blocked with thick paper.

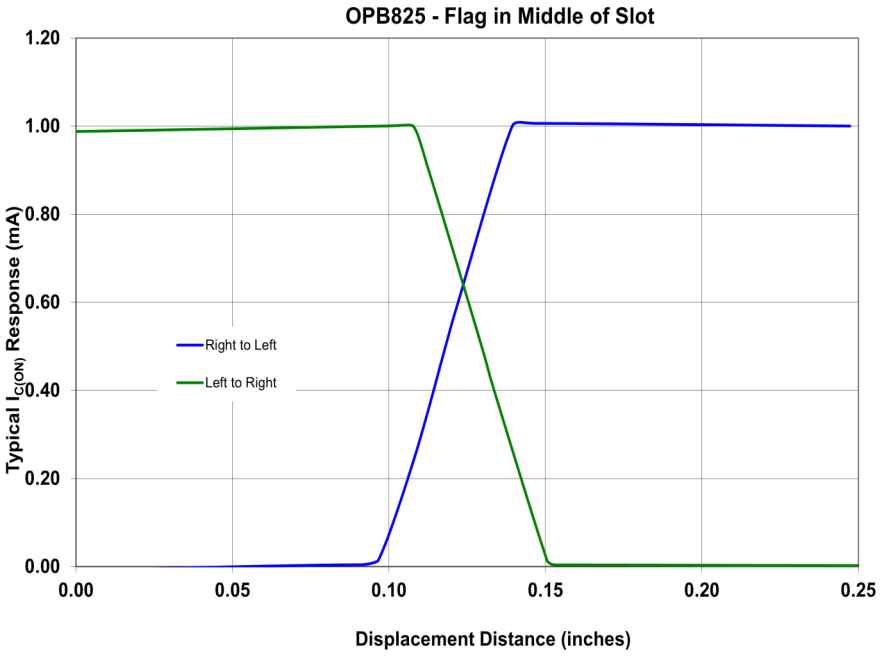
General Note
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

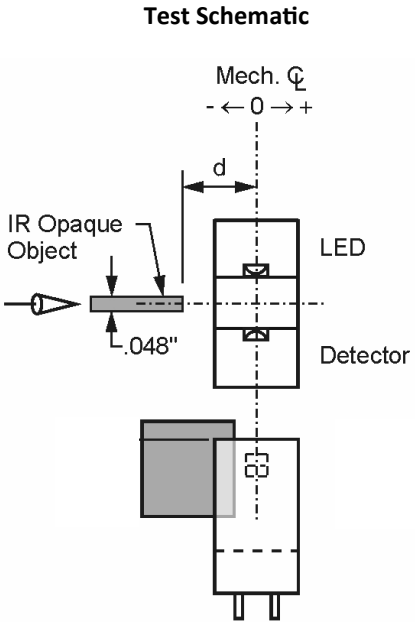
© TT electronics plc

Performance









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.

© TT electronics plc