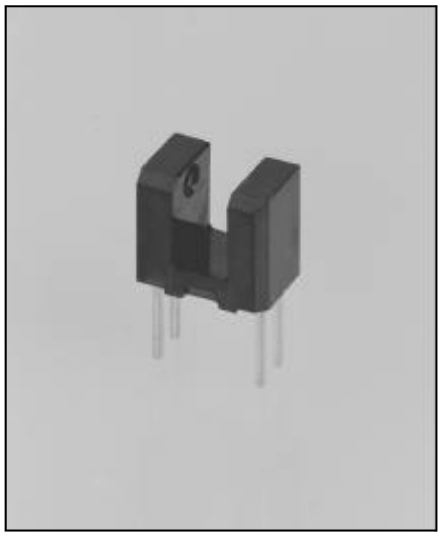
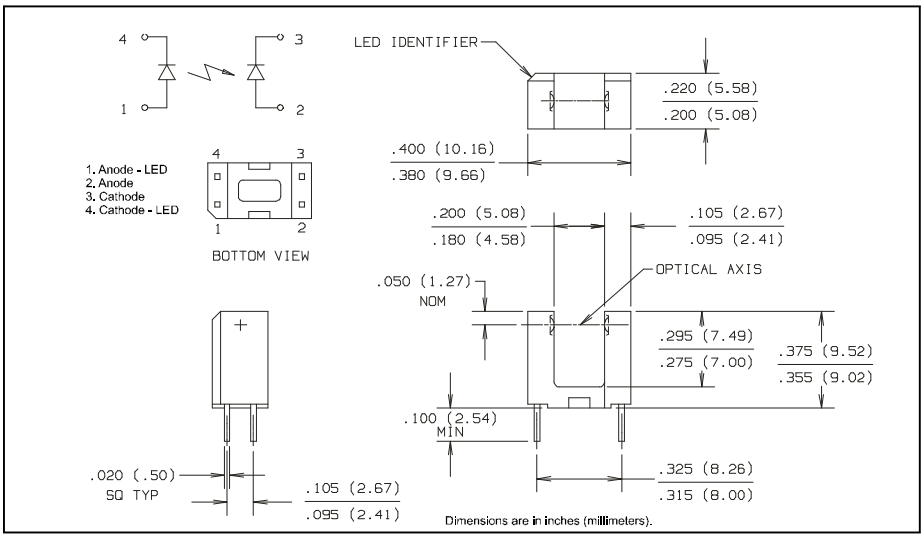
Slotted Optical Switch
Type OPB621





Features

- PIN photodiode sensor for high speed
- Non-contact switching
- Printed circuit board mounting
- 0.320” (8.13 mm) lead centers
- 0.190” (4.83 mm) gap

Description

The OPB621 slotted optical switch consists of an infrared emitting diode and a PIN photodiode.

The low t_r/t_f of the PIN photodiode is ideal for high speed operation. The polysulfone housing is opaque to visible light but transmissive to infrared. The sensitivity to ambient radiation is minimized.

Absolute Maximum Ratings ($T_A = 25^o$ C unless otherwise noted)

Storage and Operating Temperature. . . . . -40° C to +100° C
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 sec. with soldering iron] . . . . . 260° C(4)

Input Diode
Forward DC Current . . . . . 50 mA
Peak Forward Current (1 µs pulse width, 300 pps) . . . . . 3.0 A
Reverse DC Voltage . . . . . 3.0 V
Power Dissipation . . . . . 100 mW(2)

Output Photodiode
Reverse Breakdown Voltage . . . . . 60 V
Power Dissipation. . . . . 100 mW

NOTES:
(1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering. Maximum 20 grams force may be applied to leads when soldering.
(2) Derate linearly 1.33 mW/° C above 25° C.
(3) Methanol and isopropanol are recommended as cleaning agents. Plastic housings are soluble in chlorinated hydrocarbons and ketones.

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
V_F	Forward Voltage	1.15		1.45	V	I_F = 10 mA
I_R	Reverse Current			100	µA	V_R = 3.0 V
Photodiode						
I_D	Dark Current			65	nA	V_R = 30 V, E_e = 0 mW
$V_{(BR)R}$	Reverse Breakdown Voltage	60			V	I_R = 100 µA, E_e = 0 mW
V_F	Forward Voltage			1.0	V	I_F = 1 mA, E_e 0 mW
Coupled						
$I_{L(ON)}$	Light Current (ON)	9.0		90.0	µA	V_R = 5.0 V, I_F = 20 mA, Gap Unblocked