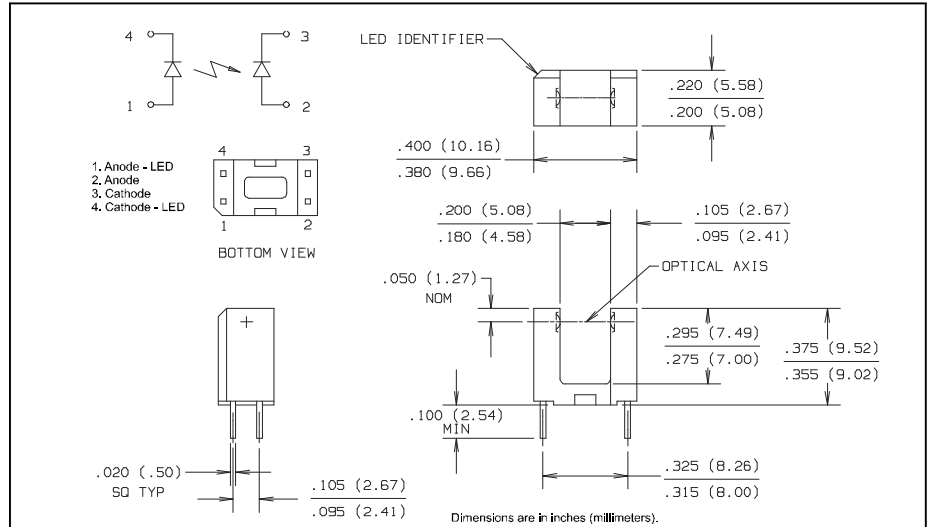
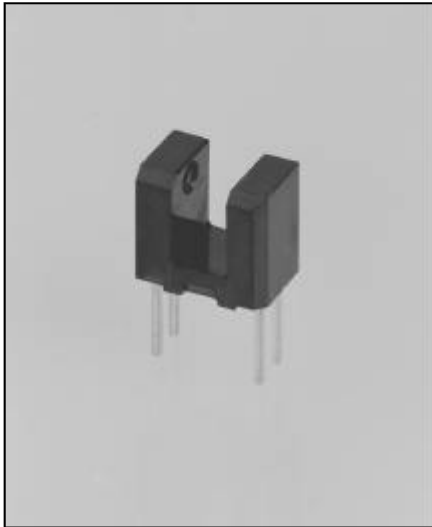


# Slotted Optical Switch Type OPB621



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

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

### Input Diode

Forward DC Current . . . . . 50 mA  
Peak Forward Current (1  $\mu\text{s}$  pulse width, 300 pps) . . . . . 3.0 A  
Reverse DC Voltage . . . . . 3.0 V  
Power Dissipation . . . . . 100 mW<sup>(2)</sup>

### 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/ $^\circ\text{C}$  above  $25^\circ\text{C}$ .
- (3) Methanol and isopropanol are recommended as cleaning agents. Plastic housings are soluble in chlorinated hydrocarbons and ketones.

# Type OPB621

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

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

SLOTTED  
OPTICAL  
SWITCHES