

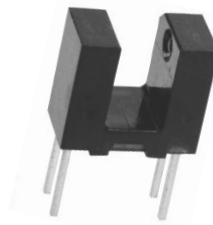
# Slotted Optical Switch



## OPB610, OPB611, OPB620, OPB621

### Features:

- Non-contact switching
- Printed circuit board mounting
- Enhanced signal to noise ratio
- PIN photodiode sensor for high speed (OPB611, OPB621)
- Lead centers: 0.275: (OPB61\_) / 0.320" (OPB62\_)



### Description:

The **OPB610** and **OPB620** slotted optical switches consist of an infrared emitting diode and an NPN silicon phototransistor with an enhanced low current roll-off to improve contrast ratio and immunity to background irradiance.

The **OPB611**, **OPB621** slotted optical switch consists of an infrared emitting diode and a PIN photodiode with a polysulfone housing that is opaque to visible light, but transmissive to infrared. The low  $t_r/t_f$  of the PIN photodiode is ideal for high-speed operation. The sensitivity to ambient radiation is minimized.

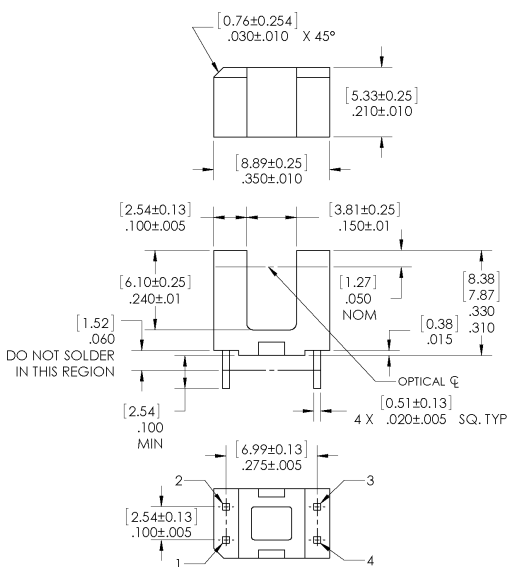
Custom electrical, wire and cabling and connectors are available. Contact your local representative or OPTEK for more information.

### Applications:

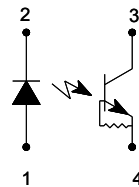
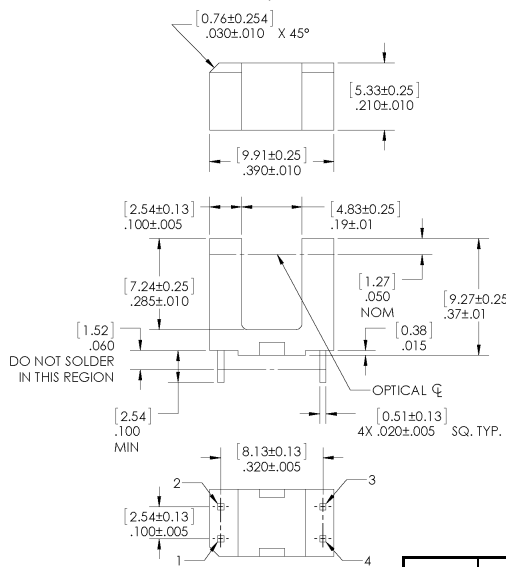
- Non-contact reflective object sensor
- Assembly line automation
- Machine automation
- Machine safety
- End of travel sensor
- Door sensor

Ordering Information					
Part Number	LED Peak Wavelength	Sensor	Slot Width / Depth	Aperture Emitter / Sensor	Lead Length / Spacing
OPB610	890 nm	Rbe Transistor	0.150" / 0.240"	0.06" / 0.06"	0.100" / 0.275"
OPB611		Diode			
OPB620		Rbe Transistor	0.190" / 0.285"		0.100" / 0.320"
OPB621		Diode			

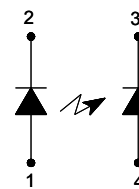
### OPB610, OPB611



### OPB620, OPB621



### OPB610, OPB620



### OPB611, OPB621

Pin #	LED	Pin #	Transistor / Diode
1	Anode	4	Emitter / Anode
2	Cathode	3	Collector / Cathode



RoHS

DIMENSIONS ARE IN:  
[ MILLIMETERS ]  
INCHES

### 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 | OPTEK Technology  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
www.ttelectronics.com | www.optekinc.com

# Slotted Optical Switch

OPB610, OPB611, OPB620, OPB621



## Electrical Specifications

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

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

### Input Diode

Forward DC Current	50 mA
Peak Forward Current (1 $\mu\text{s}$ pulse width, 300 pps)	3 A
Reverse DC Voltage	3 V
Power Dissipation <sup>(2)</sup>	100 mW

### Output Photodiode (OPB621)

Reverse Breakdown Voltage	60 V
Power Dissipation	100 mW

### Output Phototransistor (OPB610, OPB620)

Collector-Emitter Voltage	24 V
Emitter-Reverse Current	10 mA
Collector DC Current	30 mA
Power Dissipation <sup>(3)</sup>	200 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 | OPTEK Technology  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
www.ttelectronics.com | www.optekinc.com