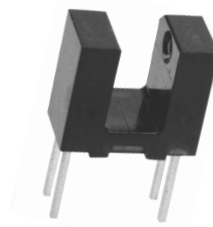


Slotted Optical Switch

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.

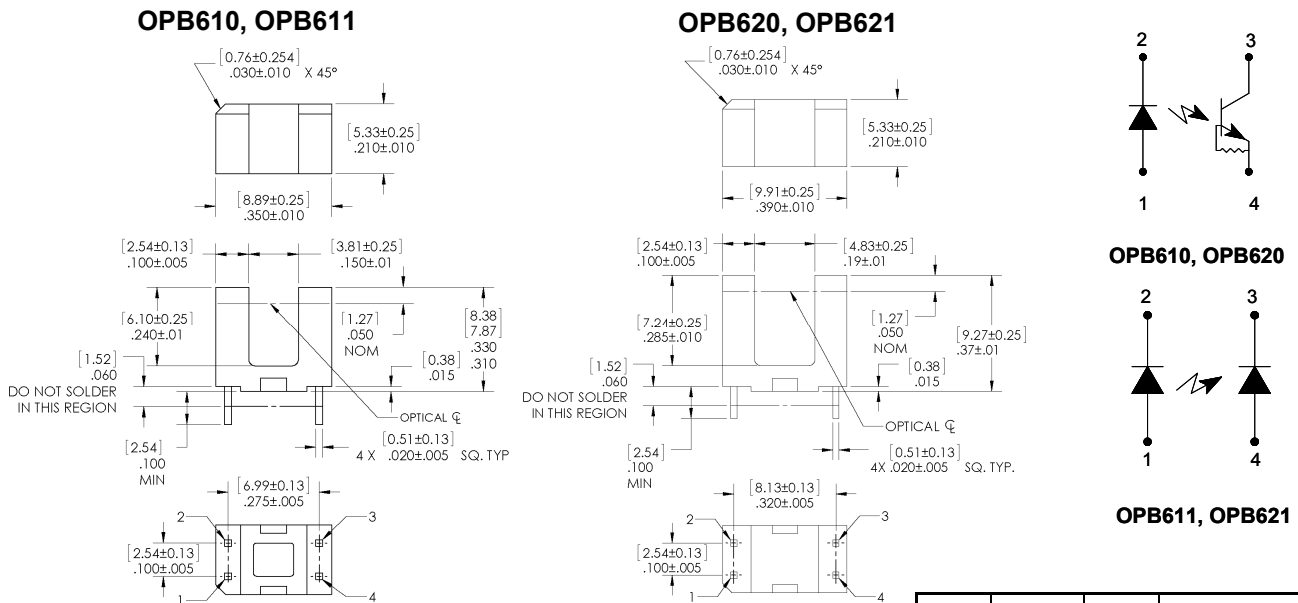
The **OPB611**, **OPB621** slotted optical switch consists of an infrared emitting diode and a PIN photodiode with a polysulfone housing that is opaque to visible light, but transmissive to infrared. The low t_r/t_f of the PIN photodiode is ideal for high-speed operation. The sensitivity to ambient radiation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



RoHS

DIMENSIONS ARE IN: [MILLIMETERS] INCHES

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

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.



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] ⁽¹⁾ | 260° C |

Input Diode

| | |
|---|--------|
| Forward DC Current | 50 mA |
| Peak Forward Current (1 μs pulse width, 300 pps) | 3 A |
| Reverse DC Voltage | 3 V |
| Power Dissipation ⁽²⁾ | 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 ⁽³⁾ | 200 mW |

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