

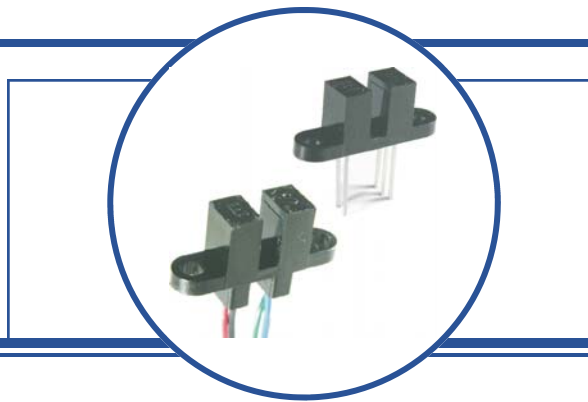
Photologic® Slotted Optical Switch

OPB960, OPB970, OPB980, OPB990 Series



Features:

- Choice of logic and output driver circuits
- Choice of aperture size, covered or open
- Wire or PCB leads
- Choice of mounting features
- Direct TTL, LSTTL, CMOS Interface



Description:

The OPB960/ 970/ 980/ 990 series of non-contact Photologic® slotted optical switches provides flexibility in meeting application specific requirements for the design engineer.

Building from a standard housing with a 0.125" (3.18mm) wide slot, the user can specify output logic state, output driver circuit, aperture width, aperture surface and mounting tab locations. Furthermore, an option of wire or PCB leads allows electrical interface flexibility.

The device body is an opaque plastic which minimizes sensitivity to both visible and near-infrared external light sources which may impact operation. Aperture width choices provide different optical resolution for motion sensing. A covered aperture provides dust protection, while an open aperture provides maximum protection against external light sources.

Electrical operation is over a wide supply voltage range. LED emissions are near-infrared (850—940nm). Detector digital output logic choices of buffer or inverter with totem-pole or open-collector driver circuit simplify interface for various electrical requirements.

Custom electrical, wire and cabling services are available.

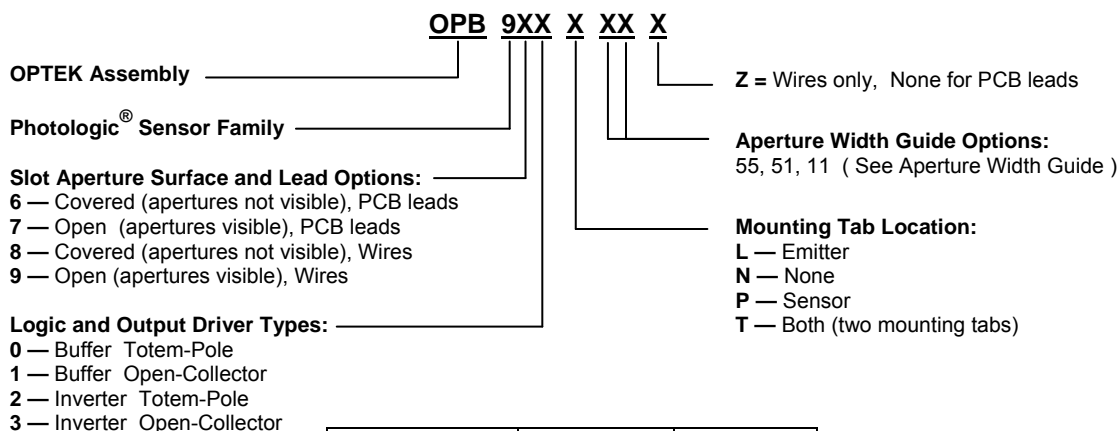
Contact your local representative or OPTEK for more information. Compliant to EU RoHS Directive 2002/95/EC .

Applications:

For more information see Application notes 201, 213

- Speed and direction indication
- Mechanical switch replacement
- Printers - Top of form, End of travel, Home position.
- Rotary encoders
- Mechanical limit indication
- Sliding Door Automotive and Lift gate applications

Part Number Guide



| Logic Type | Input LED | Output Logic State |
|------------|-----------|--------------------|
| Buffer | OFF | LOW = 0 |
| Inverter | OFF | HIGH = 1 |



RoHS

OPTEK reserves the right to make any changes at any time in order to improve design and to supply the best product possible.

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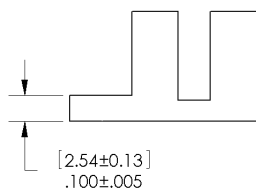
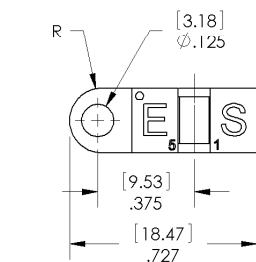
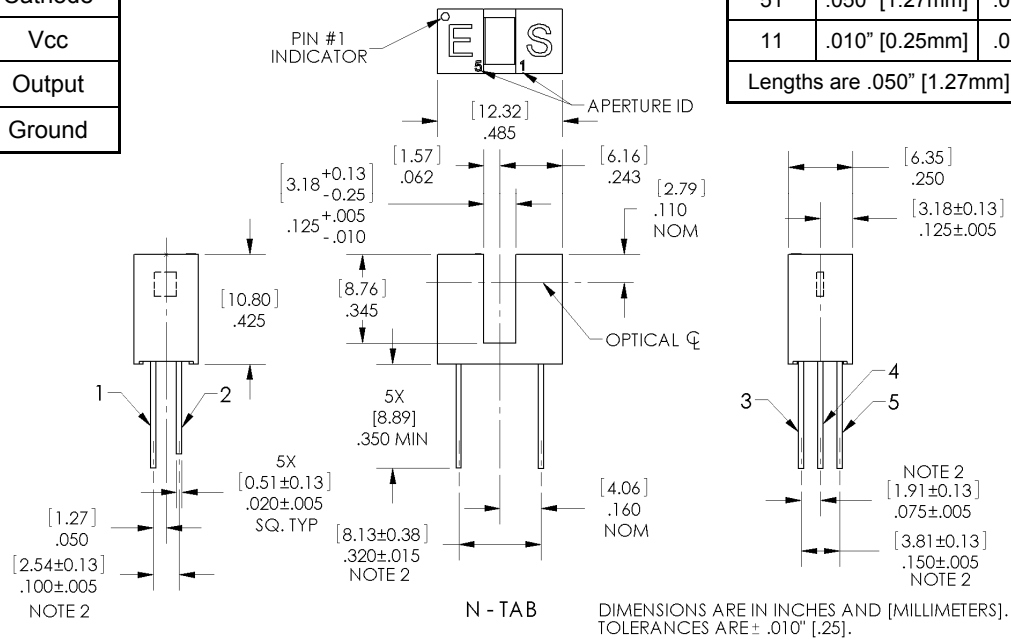


PACKAGE OUTLINE for OPB960 and OPB970 Series

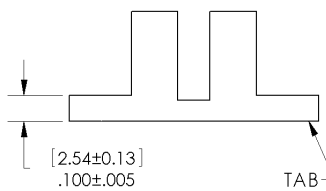
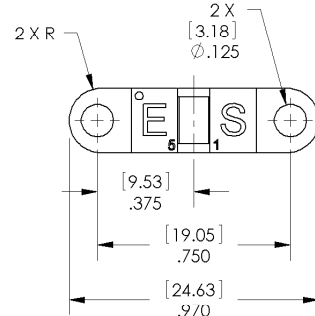
TABLE 1

| Lead No. | Function |
|----------|----------|
| 1 | Anode |
| 2 | Cathode |
| 3 | Vcc |
| 4 | Output |
| 5 | Ground |

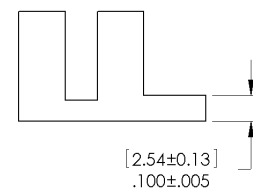
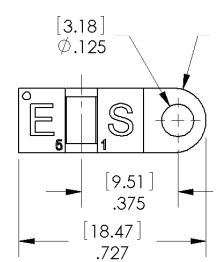
| APERTURE WIDTH GUIDE | | |
|----------------------------|----------------|----------------|
| CODE | LED | SENSOR |
| 55 | .050" [1.27mm] | .050" [1.27mm] |
| 51 | .050" [1.27mm] | .010" [0.25mm] |
| 11 | .010" [0.25mm] | .010" [0.25mm] |
| Lengths are .050" [1.27mm] | | |



L - TAB



T - TAB



P - TAB

Notes:

- (1) RMA flux recommended. Duration can be extended to 10 seconds max.
- (2) Feature controlled at body.
- (3) Highly activated water soluble fluxes may attack plastic. Recommend trial to verify application.
- (4) Maximum lead soldering temperature [1.6mm from case for 5 seconds with soldering iron] 260° C.
- (5) Cathode lead may be shorter.
- (6) Part number marking may be on any side.

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