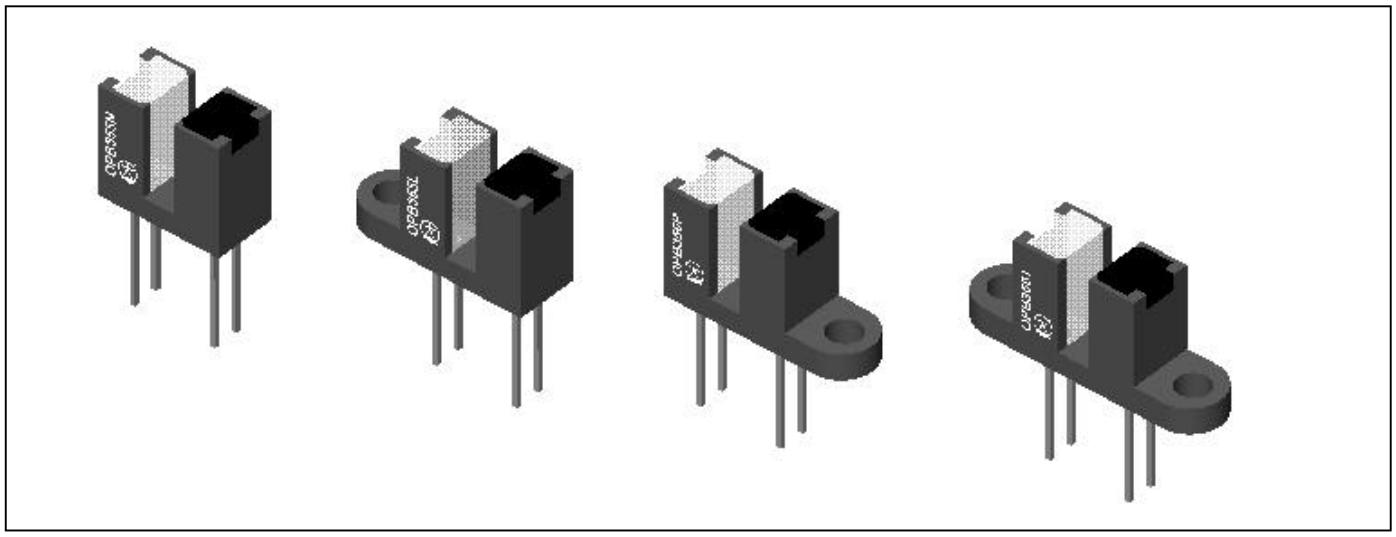
Product Bulletin OPB355
November 2000

Slotted Optical Switches
Type OPB355 Series (Photodiode Output)



Features

- 0.125” (3.18 mm) wide gap
- Choice of mounting configuration

Description

The OPB355 series of slotted switches provides the design engineer with the flexibility of a custom device from a standard product line. Building from a standard housing with a .125” (3.18 mm) wide slot, the user can specify the mounting tab configuration.

The photodiode output provides a lower but more linear output vs. light input when compared to slotted switches with a standard phototransistor output.

All housings are an opaque grade of injection molded plastic to minimize the assembly’s sensitivity to ambient radiation, both visible and near-infrared. Discrete shells (exposed on the parallel faces inside the device throat) are IR transmissive plastic for applications where aperture contamination is a concern.

Custom electrical, wire and cabling is available. Contact your local representative or Optek for more information.

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Storage and Operating Temperature Range . . . . . -40° C to +85° C
Lead Soldering Temperature Range [1/16 inch (1.6 mm) from case for 5 sec. with soldering iron] . . . . . 240° C(2)

Input Diode
Forward DC Current . . . . . 50 mA
Peak Forward Current (1 µs pulse width, 300 pps) . . . . . 3.0 A
Reverse DC Voltage . . . . . 2.0 V
Power Dissipation . . . . . 100 mW(1)

Output Diode
Reverse Breakdown Voltage . . . . . 60 V
Power Dissipation . . . . . 100 mW(1)

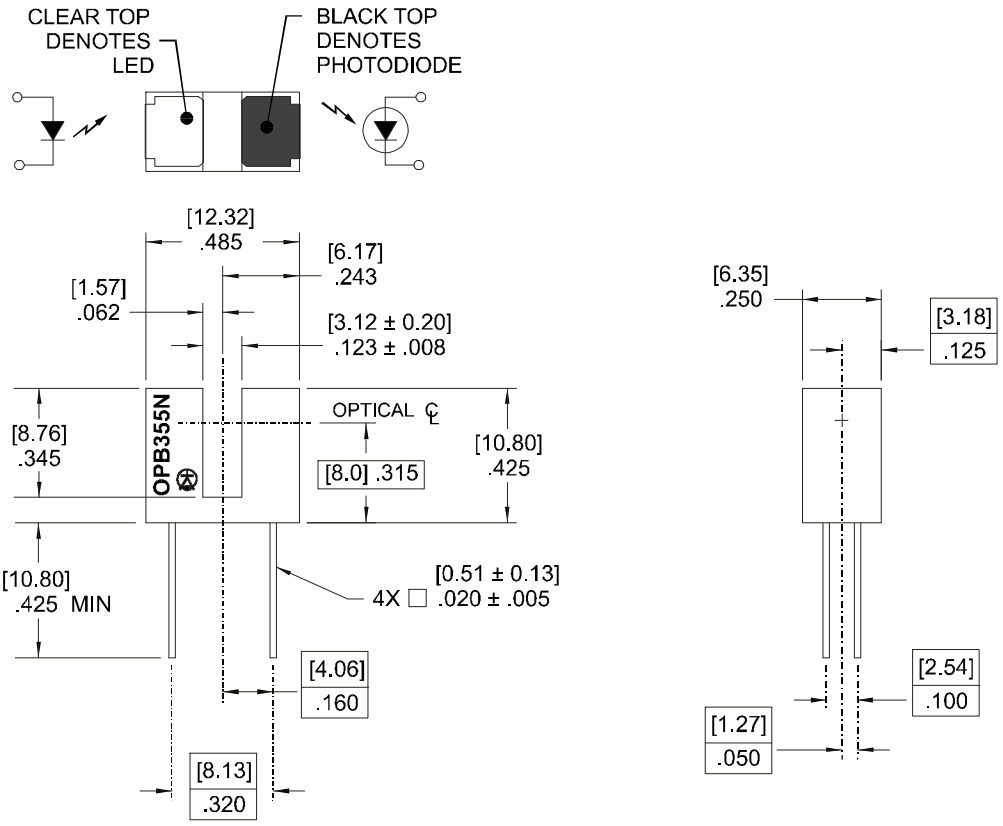
NOTES:
(1) Derate linearly 1.67 mW/° C above 25° C.
(2) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering.
(3) All parameters tested using pulse technique.
(4) Polarity is denoted by color of housing top:
LED - Clear
Sensor - Black

PRECAUTIONS: Exposure of the plastic body to chlorinated hydrocarbons and ketones such as thread lock and instant adhesive products will degrade the plastic body. Cleaning agents methanol and isopropanol are recommended. Spray or wipe do not submerge.

Visit our website at www.optekinc.com or email us at sensors@optekinc.com

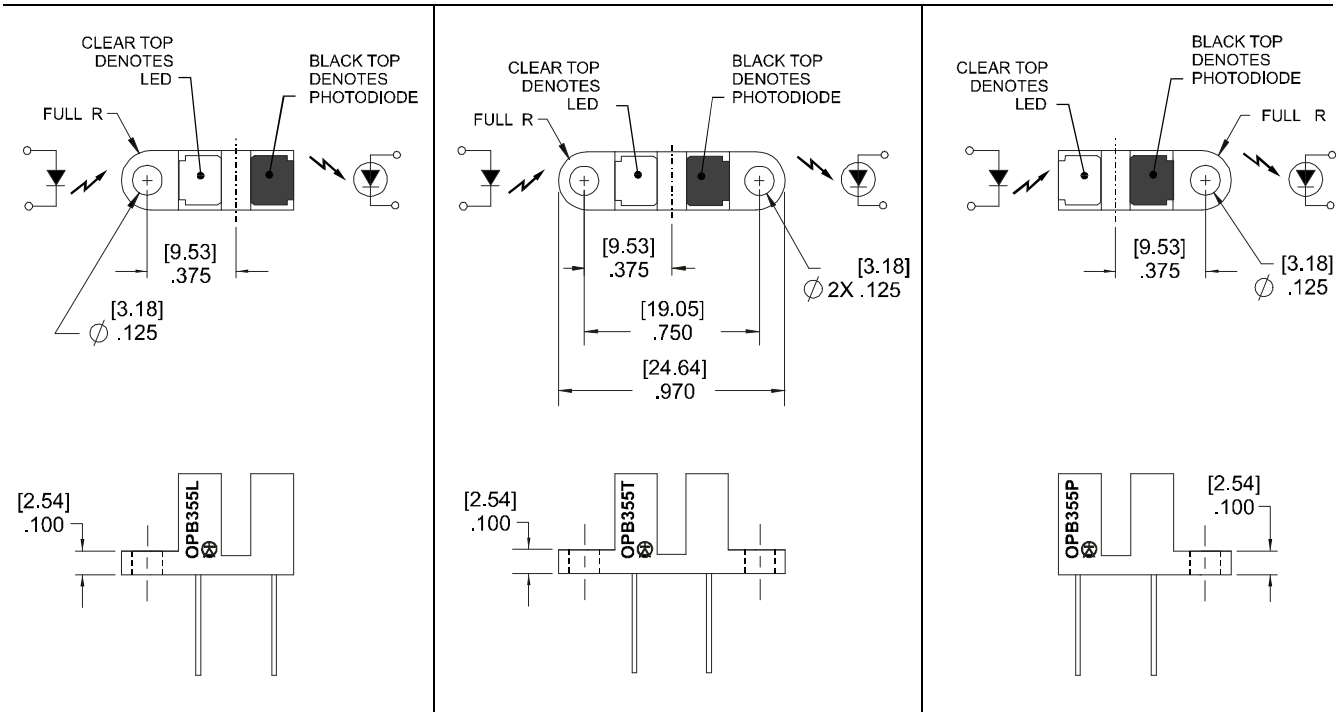
Optek Technology, Inc. 1215 W. Crosby Road Carrollton, Texas 75006 (972) 323-2200 Fax (972) 323-2396

Types OPB355 Series



TOLERANCE ± .010 [0.25]

DIMENSIONS ARE IN INCHES [MILLIMETERS]



Types OPB355 Series

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
V_F	Forward Voltage		1.30	1.8	V	I_F = 20 mA
I_R	Reverse Current			100	µA	V_R = 2 V
Output Diode						
V_{BR}	Reverse Diode Breakdown Voltage	60			V	I_R = 100 µA, I_F = 0, E_e = 0
V_{FD}	Forward Voltage Photodiode			1.2	V	I_F = 1 mA, I_F = 0, E_e = 0
I_D	Reverse Dark Current			60	nA	V_R = 30 V, IF = 0, E_e = 0
Coupled						
I_L	On-State Collector Current OPB355T, N, L, P	10		200	µA	V_R = 5 V, I_F = 40 mA

PART NUMBER GUIDE

OPB 3 5 5 X

Optek Assembly

Photodiode Output Family

Mounting Configurations

T - Both Mounting Tabs
N - No Mounting Tabs
L - Single Mounting Tabs Emitter Side
P - Single Mounting Tab Photodiode Side