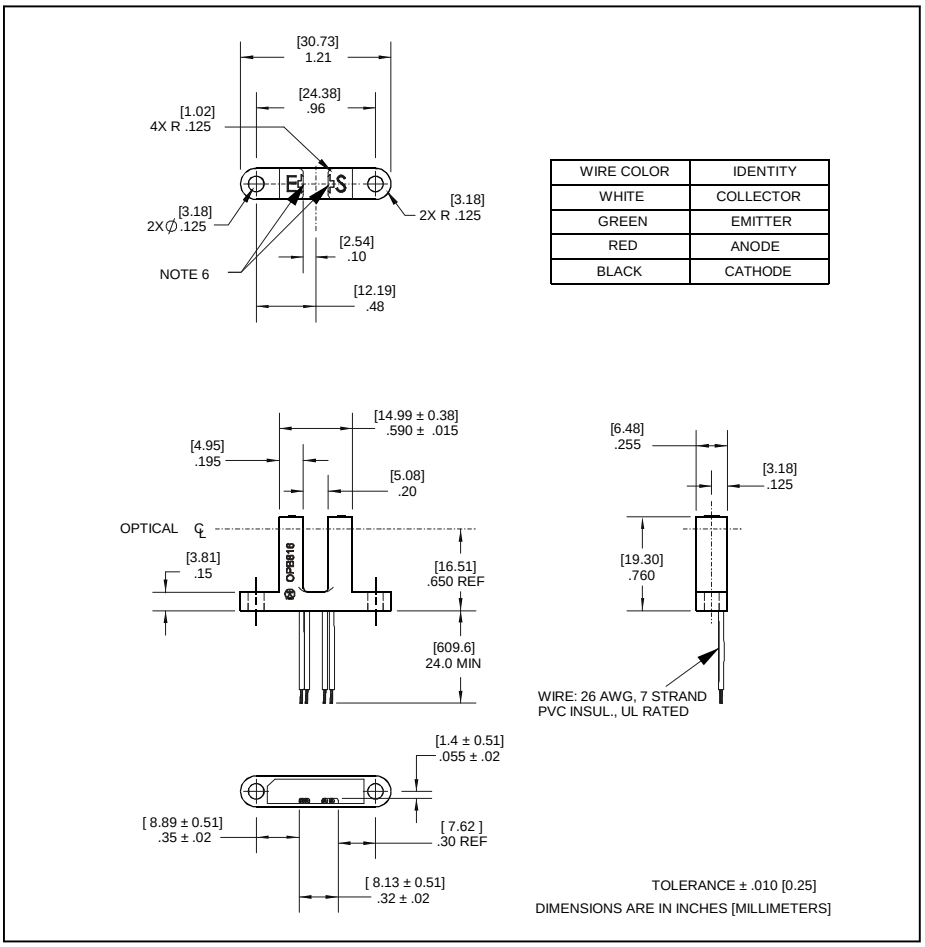
Slotted Optical Switch
Type OPB816



Features

- .20” (5.08 mm) wide gap
- 24” minimum, 26 AWG wire leads .86” (21.8 mm) deep slot
- Dust protection

Description

The OPB816 consists of an infrared emitting diode and an NPN silicon phototransistor mounted in an opaque housing with clear windows for dust protection. The deep slot allows for a longer reach of the optical center line from the mounting plane, .650” (16.51 mm).

Internal apertures are .010” x 0.06” for the phototransistor “S side” and .050” x .06” for the LED “E side”.

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

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

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

Storage and Operating Temperature Range . . . . . -40° C to +80° C

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 Phototransistor

Collector-Emitter Voltage . . . . . 30 V
Emitter-Collector Voltage. . . . . 5.0 V
Collector DC Current . . . . . 30 mA
Power Dissipation . . . . . 100 mW(1)

NOTES:
(1) Derate linearly 1.67 mW/° C above 25° C.
(2) All parameters tested using pulse technique.
(3) Clear dust protection.

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.

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

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
Input Diode					
V_F	Forward Voltage		1.8	V	I_F = 20 mA
I_R	Reverse Current		100	µA	V_R = 2 V
Phototransistor					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30		V	I_C = 1 mA, I_F = 0, E_e = 0
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5.0		V	I_E = 100 µA, I_F = 0, E_e = 0
I_{CEO}	Collector-Emitter Leakage Current		100	nA	V_{CE} = 10 V, I_F = 0, E_e = 0
Coupled					
$I_{C(ON)}$	On-State Collector Current	1.0	10	mA	V_{CE} = 5.0, I_F = 20 mA
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage		0.40	V	I_C = 100 µA, I_F = 20 mA