



STS-8831

Dual Channel Optical Switch Assembly Over / Under Optical Axis

Features

- Non contact switching
- Four wires for electrical connection
- Fast switching speed

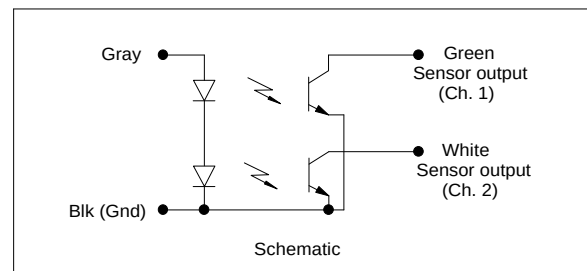
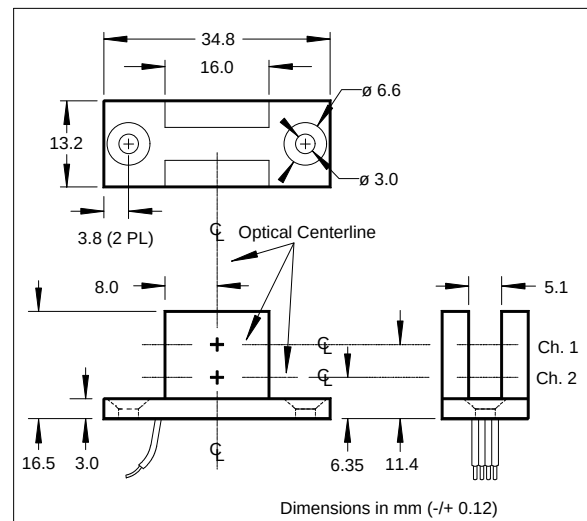
Description

The STS-8831 consists of a pair of infrared emitting diodes and a pair of NPN phototransistors mounted on opposite sides of a 5.1 mm. wide slot. Phototransistor switching takes place whenever an opaque object passes through the slot. The Phototransistors have a 0.5x1.5 mm internal aperture for increased resolution. The polysulfone housing (Note 1) reduces interference from ambient light and provides dirt and dust protection. 340 mm length wires may be terminated with an IDC connector upon special order.

Absolute Maximum Ratings

Operating & Storage Temp. -40°C to +100°C

Input Diode Pair	
Reverse Voltage	6 V
Average Forward Current	50 mA
Peak Forward Current (1µs pulse)	3 A
Power Dissipation (Note 2)	200 mW
Phototransistor (each)	
Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Power Dissipation (Note 3)	100 mW



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

Symbol	Parameter	Min	Typ	Max	Units	Test Conditions
Input Diode						
V _F	Forward Voltage		2.4	3.4	V	I _F = 40 mA
I _R	Reverse Current			100	µA	V _R = 4 V
Output Phototransistor						
I _{CEO}	Collector Dark Current			100	nA	V _{CE} = 10V, E _e = 0, I _F = 0
BV _{CEO}	Collector-Emitter Breakdown Voltage	30			V	I _C = 100 µA, E _e = 0
BV _{ECO}	Emitter-Collector Breakdown Voltage	5			V	I _C = 100 µA, E _e = 0
Coupled						
V _{CE(SAT)}	Collector Emitter Saturation Voltage			0.4	V	I _C = 250 µA, I _F = 25 mA
I _{C(ON)}	On-State Collector Current	400			µA	V _{CE} = 10V, I _F = 25 mA
I _{CX}	Cross talk			200	µA	I _F = 25 mA, V _{CE} = 2.0 V

Specifications subject to change without notice

103327 REV 1

Notes: (1) Plastic housing is soluble in chlorinated hydrocarbons and ketones. Recommended cleaning agents are methanol or isopropanol.

(2) Derate linearly 2.6 mW/°C above 25°C.

(3) Derate linearly 1.3 mW/°C above 25°C.

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