



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

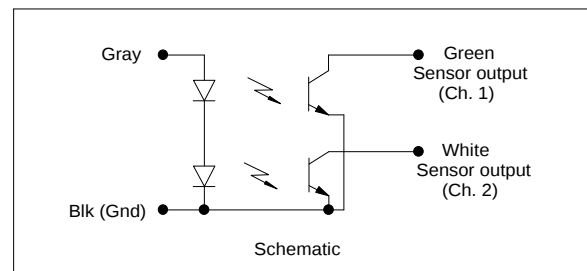
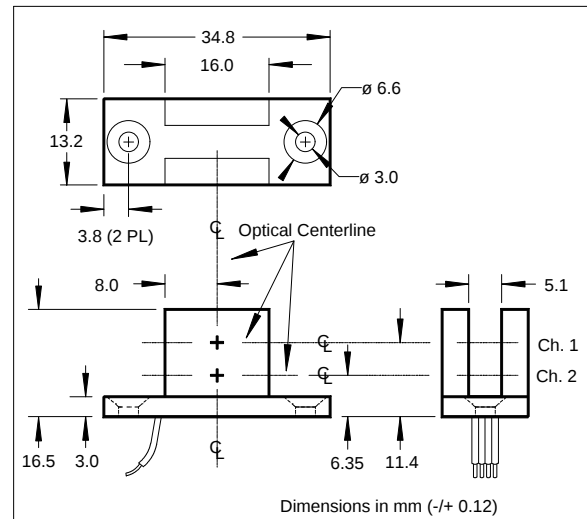
Power Dissipation (Note 2) 200 mW

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, Ee = 0, I _F = 0
BV _{CEO}	Collector-Emitter Breakdown Voltage	30			V	I _C = 100 μA, Ee = 0
BV _{ECO}	Emitter-Collector Breakdown Voltage	5			V	I _C = 100 μA, Ee = 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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