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### HOA0963-N51



Actual product appearance may vary.

**HOA Series Infrared Transmissive Optoschmitt Sensor, Diode Output, No Mounting Tab, Plastic Package**

#### Features

- Direct TTL interface
- Accurate position sensing
- Four mounting configurations
- Buffer or inverting logic available
- Choice of detector aperture
- 0.125 in [3.18 mm] slot width

#### Description

The HOA096X/097X series consists of an infrared emitting diode facing an Optoschmitt detector encased in a black thermoplastic housing. Detector switching takes place whenever an opaque object passes through the slot between emitter and detector. The photodetector consists of a photodiode, amplifier, voltage regulator, Schmitt trigger and an NPN output transistor with 10 kOhm (nominal) pull-up resistor. The user can choose from available options: (1) detector aperture size, (2) mounting tab configuration, and (3) housing material.

The HOA096X series utilizes an IR transmissive polysulfone housing which features smooth optical faces without external aperture openings; this feature is desirable when aperture blockage from airborne contaminants is a possibility. The HOA097X series employs an opaque polysulfone housing with aperture openings for use in applications where maximum rejection of ambient light is important and in situations in which maximum position resolution is desired. The HOA096X/097X series employs plastic molded components. For additional component information see SEP8506 and SDF8600.

Housing material is polysulfone. Housings are soluble in chlorinated hydrocarbons and ketones. Recommended cleaning agents are methanol and isopropanol.

Device Polarity:

Buffer - Output is LO when optical path is blocked.

Inverter - Output is HI when optical path is blocked.

#### Supporting Documentation

[Dimensions](#)

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#### Product Specifications

Series Name	Optoschmitt Sensor
Product Type	IR Switch
Output	10 kOhm Pull-up
Output Logic	Inverter
Mounting Configuration	No Mounting Tab
Package Components	Plastic
Package Color	Black
Continuous Forward Current	50 mA
Forward Voltage	1.6 V
Reverse Breakdown Voltage	3 V
Reverse Current	10 µA
Maximum Trigger Current	20 mA
Housing Material	Polysulfone, IR Transmissive
Power Dissipation	100 mW
Operating Temperature Range	-40 °C to 70 °C [-40 °F to 158 °F]
Hysteresis (H)	0.1
Operating Supply Voltage	4.5 V to 10 V
Supply Voltage	12.0 Vdc
High Level Output Voltage	2.4 V minimum
High Level Supply Current	3.0 mA to 12 mA
Low Level Output Voltage	0.4 V maximum
Low Level Supply Current	5.0 mA to 15 mA
Output Rise Time	60 ns
Output Fall Time	15 ns
Output Sink Current	18 mA
Propagation Delay, Low-High, High-Low	5.0 µs
Duration of Output Short Vcc or Ground	1.0 second
IRED Trigger Current	20 mA
Comment	Output is HI when incident light intensity is above the turn-on threshold level.
Availability	Global
Sensor Aperture	1,52 mm x 0,25 mm [0.060 in x 0.010 in]
Slot Width	3,18 mm [0.125 in]

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