



*Representative photograph, actual product appearance may vary.*

*Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.*

## HOA2005-001

### HOA Series Transmissive Optoschmitt Sensor, Transistor Output, Plastic Package

#### Features

- Direct TTL interface
- Buffer logic
- Side mount package
- Ambient light and dust protective filter
- Accurate position sensing
- 0.010 in [0.25 mm] aperture windows
- 0.125 in [3.18 mm] slot width
- 24.0 in [610 mm] min. 26 AWG UL 1429 wire leads

#### Description

The HOA2005 consists of an infrared emitting diode facing an Optoschmitt detector encased in a black thermoplastic housing. The photodetector consists of a photodiode, amplifier, voltage regulator, Schmitt trigger and an NPN output transistor with 10 kOhm (nominal) pull-up resistor. The buffer logic provides a high output when the optical path is clear, and a low output when the path is blocked. The side mounting package is useful in applications in which the interruptive element is parallel to the mounting plane. Both emitter and detector have a 0.010 in (0.25 mm) x 0.060 in (1.52 mm) vertical aperture. This feature is ideal for use in applications in which maximum position resolution is desired.

All devices employ a built-in strain relief for maximum wire attachment strength. The sensor housing contains IR transmissive optical windows. This arrangement provides excellent protection against ambient light while eliminating aperture openings which could be clogged by airborne contaminants. The HOA2005 series employs plastic molded components. For additional component information see SEP8506, and SDP8600.

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

Wire color and functions are:

- Red - IRED Anode
- Black - IRED Cathode
- Green - Detector Ground
- White - Detector Vcc



## HOA2005-001

### HOA Series Transmissive Optoschmitt Sensor, Transistor Output, Plastic Package

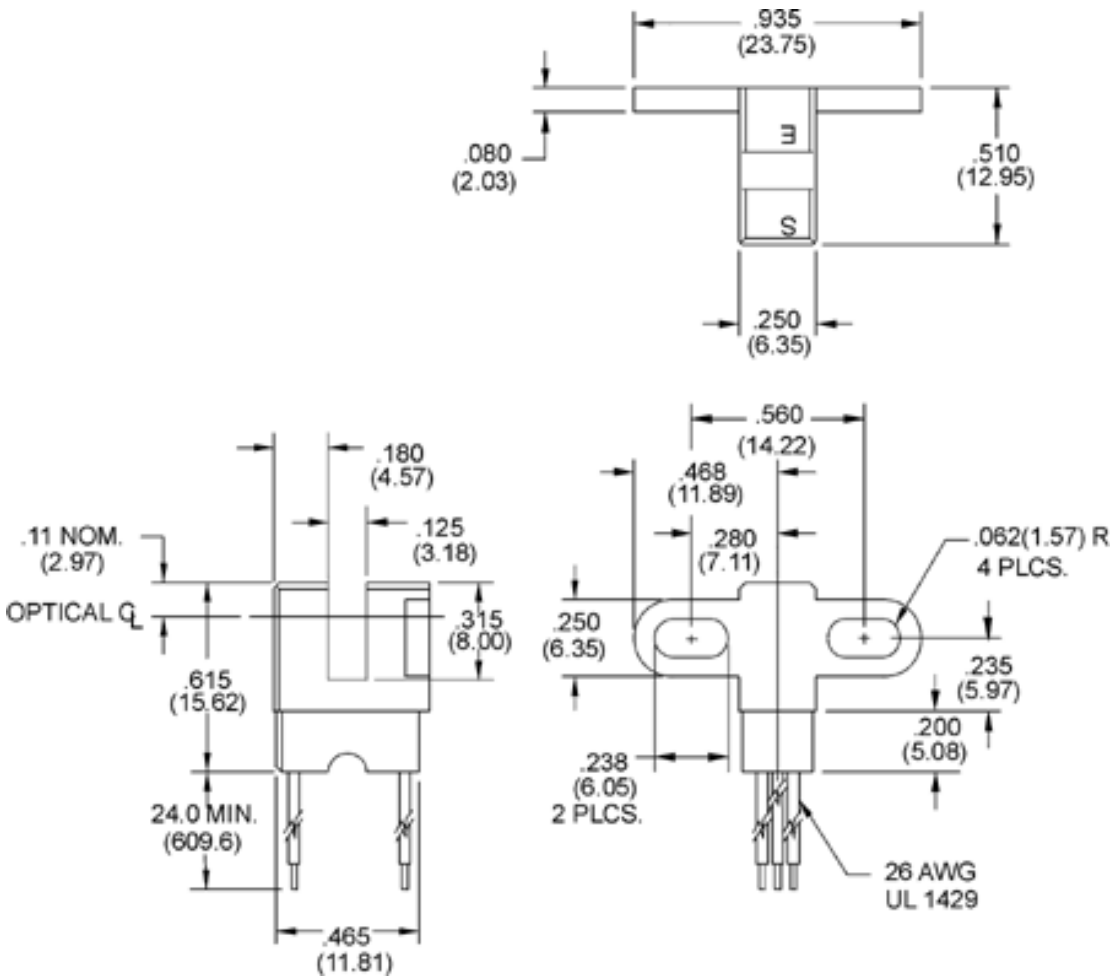
Product Specifications	
Product Type	IR Switch
Output	10 kOhm Pull-up
Output Logic	Buffer
Mounting Configuration	Side-Mount with Two Mounting Tabs
Package Components	Plastic
Continuous Forward Current	50 mA
Forward Voltage	1.6 V
Reverse Breakdown Voltage	3 V
Reverse Current	10 $\mu$ A
Maximum Trigger Current	20 mA
Housing Material	Polysulfone, Opaque
Power Dissipation	100 mW
Operating Temperature Range	-40 °C to 70 °C [-40 °F to 158 °F]
Collector-Emitter Saturation Voltage	0.4 V
Hysteresis (H)	10%
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	2.0 mA to 10 mA
Low Level Output Voltage	0.4 V maximum
Low Level Supply Current	4.0 mA to 12 mA
Internal Pull-up Resistor	5.0 kOhm min., 10.0 kOhm typ., 20.0 kOhm max.
Output Rise Time	60 ns
Output Fall Time	15 ns
Output Sink Current	18 mA
Propagation Delay, Low-High, High-Low	5.0 $\mu$ s

<b>Duration of Output Short Vcc or Ground</b>	1.0 second
<b>IRED Trigger Current</b>	10 mA
<b>Comment</b>	Output is LO when incident light intensity is above the turn-on threshold level.
<b>Availability</b>	Global
<b>Product Name</b>	Optoschmitt Sensor
<b>Sensor Aperture</b>	1,52 mm x 0,25 mm [0.060 in x 0.010 in]
<b>Slot Width</b>	3,18 mm [0.125 in]



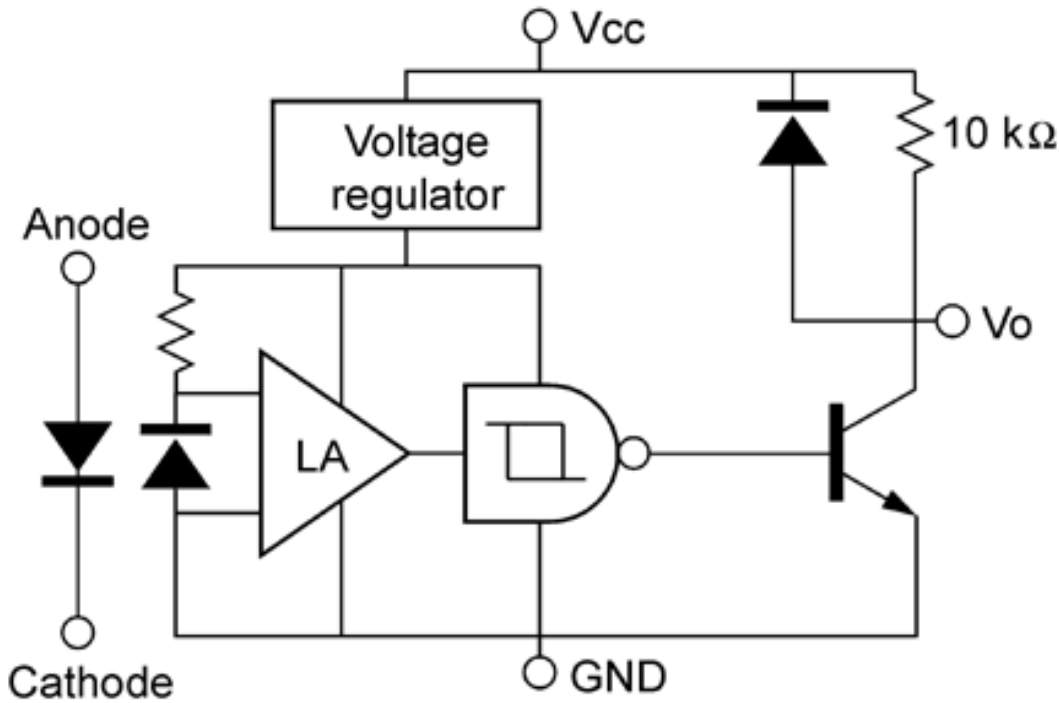
## HOA2005-001

HOA Series Transmissive Optoschmitt Sensor, Transistor Output, Plastic Package



# HOA2005-001

HOA Series Transmissive Optoschmitt Sensor, Transistor Output, Plastic Package



# Honeywell

# HOA2005-001

HOA Series Transmissive Optoschmitt Sensor, Transistor Output, Plastic Package

## **⚠ WARNING**

### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

 **WARNING**

**MISUSE OF DOCUMENTATION**

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

© Copyright Honeywell Inc.1998-2004 All rights reserved.