



Representative photograph, actual product appearance may vary.

HOA0880-T51

HOA Series Infrared Transmissive Sensor, Transistor Output, Two-Mounting Tabs, Plastic package

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.

FEATURES

- Phototransistor output
- Four mounting configurations
- Accurate position sensing
- 0.125 in (3.18 mm) slot width
- Choice of detector aperture
- 24.0 in (610 mm) min. 26 AWG UL 1429 wire leads
- Choice of opaque or IR transmissive housings

DESCRIPTION

The HOA088X/089X series consists of an infrared emitting diode facing an NPN silicon phototransistor encased in a black thermoplastic housing. Phototransistor switching takes place whenever an opaque object passes through the slot between emitter and detector. This series allows the user to choose from available options: (1) mounting tab configurations, (2) detector aperture size, (3) electro-optical characteristics, and (4) housing materials.

All devices employ a built-in strain relief for maximum wire attachment strength. The HOA088X 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 HOA089X series employs an opaque polysulfone housing with aperture openings for use in applications in which maximum rejection of ambient light is important and in situations where maximum position resolution is desired. The HOA088X/089X series employs plastic molded components. For additional component information see SEP8506 and SDP8406.

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

The detector to emitter lead spacing is 0.32 in (8.13 mm) for all versions. Wire color code and functions are:

- Red - IRED Anode
- White - Detector Collector
- Black - IRED Cathode
- Green - Detector Emitter

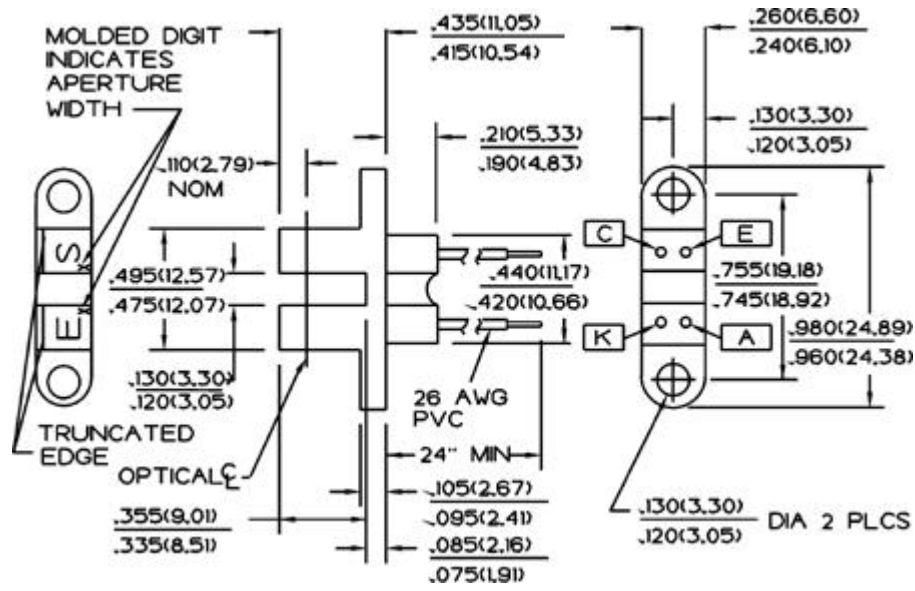
HOA0880-T51

HOA Series Infrared Transmissive Sensor, Transistor Output, Two-Mounting Tabs, Plastic package

Product Specifications	
Product Type	IR Switch
IR Switches	Transmissive Sensor
On-State Collector Current	0.50 mA
Output	Transistor
Sensor Aperture L x W, mm [in]	1,52 x 0,25 [0.060 x 0.010]
Slot Width, mm [in]	3,18 [0.125]
Mounting Configuration	Two-Mounting Tabs
Package Components	Plastic
Package Color	Black
Forward Current	20 mA
Continuous Forward Current	50 mA
Forward Voltage	1.6 V
Reverse Breakdown Voltage	3 V
Reverse Current	10 μ A
Housing Material	Polysulfone, Opaque
Rise and Fall Time	15 μ s
Power Dissipation	100 mW
Operating Temperature Range	-40 °C to 85 °C [-40 °F to 185 °F]
Dark Current	100 nA
Collector DC Current	30 mA
Collector-Emitter Breakdown Voltage	30 V
Emitter-Collector Breakdown Voltage	5 V
Collector-Emitter Saturation Voltage	0.4 V
Detector Color	White
IRED Anode Color	Red
IRED Cathode Color	Black
Detector Emitter Color	Green
Availability	Global

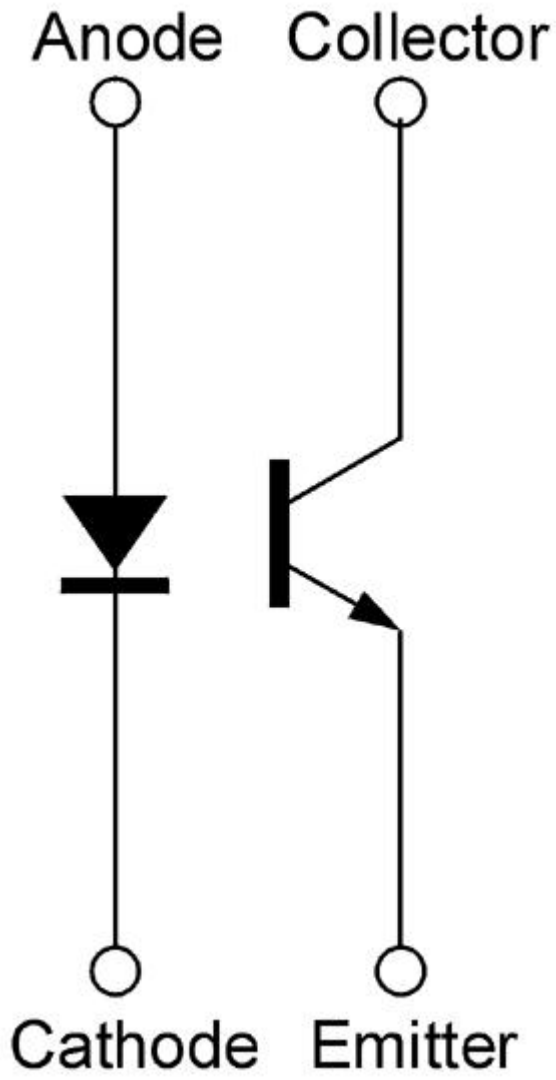
HOA0880-T51

HOA Series Infrared Transmissive Sensor, Transistor Output, Two-Mounting Tabs, Plastic package



HOA0880-T51

HOA Series Infrared Transmissive Sensor, Transistor Output, Two-Mounting Tabs, Plastic package



HOA088X/089X

Transmissive Sensor

Fig. 1 IRED Forward Bias Characteristics

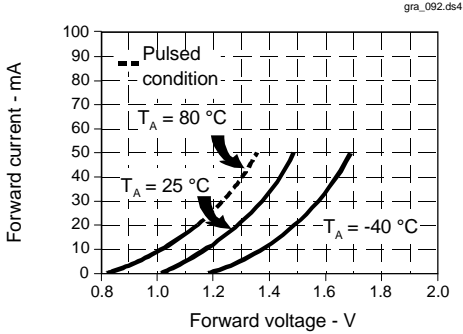


Fig. 2 Non-Saturated Switching Time vs Load Resistance

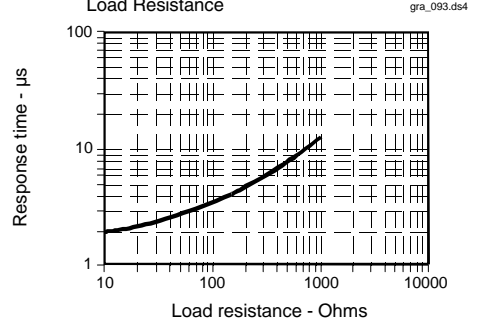


Fig. 3 Dark Current vs Temperature

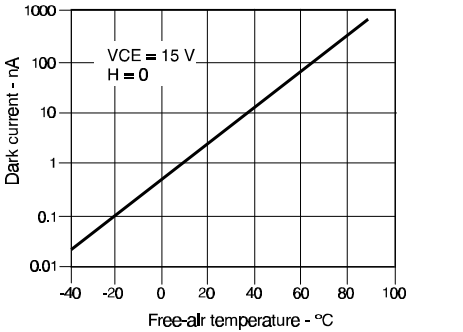
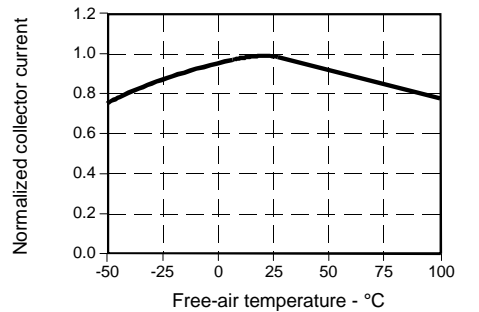


Fig. 4 Collector Current vs Ambient Temperature



All Performance Curves Show Typical Values

PART NUMBER GUIDE

HOA08XX-XXX

Housing Material

- 8 = Polysulfone, IR transmissive
- 9 = Polysulfone, opaque

Electrical Specifications

- 0 = Parameter A
- 1 = Parameter B
- 2 = Parameter C

*0.010 in. (.25 mm) aperture available with electrical Parameter A only

Aperture Width In Front Of Detector

- *1 = 0.010 in. (0.25 mm)
- 5 = 0.050 in. (1.27 mm)
- Aperture length is 0.060 in. (1.52 mm)

Aperture Width In Front Of IRED

- 5 = 0.050 in. (1.27 mm)
- Aperture length is 0.060 in. (1.52 mm)

Mounting Configuration

- L = Single mounting tab, emitter side
- N = No mounting tabs
- P = Single mounting tab, detector side
- T = Two mounting tabs