



*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.*

## SD5610-001

### SD Series Optoschmitt Detector, TO-46 Metal Can Package

#### Features

- TO-46 metal can package
- 6 ° (nominal) acceptance angle
- High noise immunity output
- TTL/LSTTL/CMOS compatible
- Buffer (SD5600) or inverting (SD5610) logic available
- Mechanically and spectrally matched to SE3450/5450, SE3455/5455 and SE3470/5470 infrared emitting diodes

#### Description

The SD5600/5610 series is a family of single chip Optoschmitt IC detectors mounted in a TO-46 metal can package. The photodetector consists of a photodiode, amplifier, voltage regulator, Schmitt trigger and an NPN output transistor with 10 kOhm (nominal) pull-up resistor. Output rise and fall times are independent of the rate of change of incident light. Detector sensitivity has been internally temperature compensated. The TO-46 package is ideally suited for operating in hostile environments.

Device Polarity:

Buffer - Output is HI when incident light intensity is above the turn-on threshold level.

Inverter - Output is LO when incident light intensity is above the turn-on threshold level.



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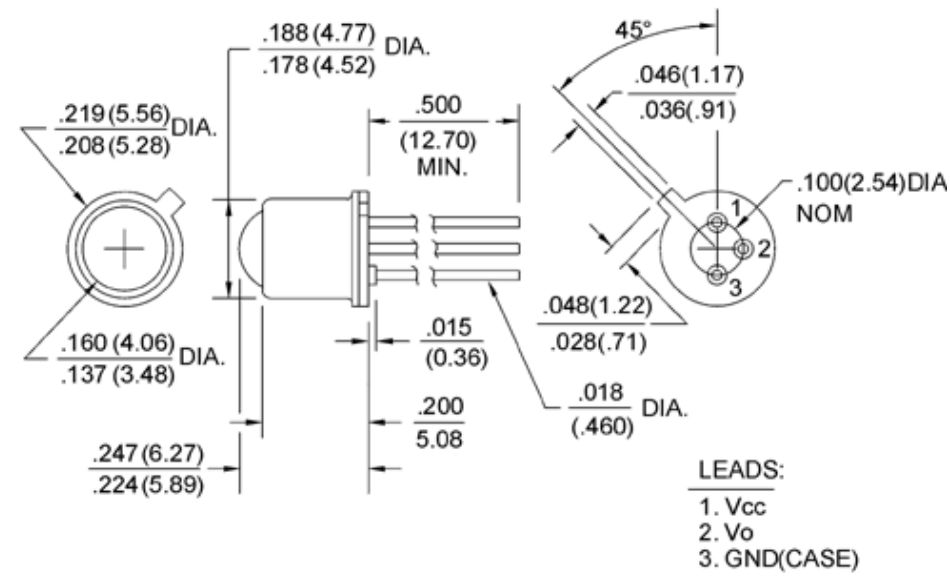
### SD Series Optoschmitt Detector, TO-46 Metal Can Package

Product Specifications	
Product Type	IR Component
Angular Response (Degree)	12
Turn-on Threshold Irradiance	2.5 mW/cm <sup>2</sup> maximum
Output	10 kOhm Pull-up
Output Logic	Inverter
Package Style	TO-46, Dome Lensed
Package Components	Metal
Operating Temperature Range	-40 °C to 100 °C [-40 °F to 212 °F]
Hysteresis (H)	5% to 30%
Operating Supply Voltage	4.5 V to 16.0 V
Supply Voltage	16.0 Vdc
High Level Output Voltage	2.4 V minimum
Low Level Output Voltage	0.4 V maximum
Operating Point Temperature Coefficient	-0.76 %/°C
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

Clock Frequency	100 kHz
Duration of Output Short Vcc or Ground	1.0 second
Comment	Output is LO when incident light intensity is above the turn-on threshold level.
Availability	Global
Product Name	Optoschmitt Detector
Supply Current max.	12.0 - 15.0 mA @ 25 °C
Output Current max.	18 mA


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**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.**

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