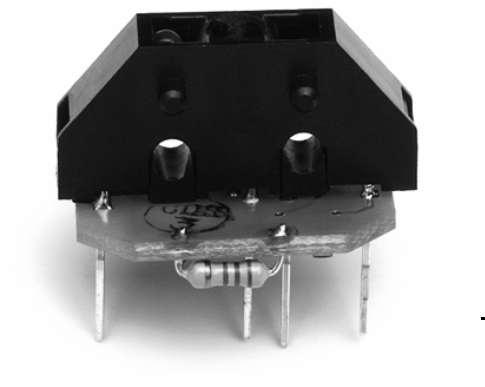
Honeywell

HOA6480 Series Barcode Sensor

Infrared Products



DESCRIPTION

The HOA6480 Series is a reflective barcode sensor that incorporates a VCSEL (Vertical Cavity Surface-emitting Laser) emitter and phototransistor detector in a custom-molded plastic package. The VCSEL technology allows the sensor to operate with a very low drive current. The phototransistor drives an operational amplifier with an open-collector output, providing users with flexibility in their interface designs.

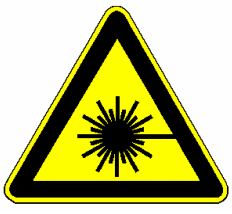
The HOA6480 Series provides a digital output that allows it to be interfaced with most decoding equipment. The 4,5 mm [0.180 in] focal length allows measurement with no contact and the 0,254 mm [0.010 in] resolution works well in most barcode applications. The HOA6480 typical scan speed is 254,0 mm [10.0 in] per second.

A choice of pin, wire or custom termination allows flexible interconnections and the reflective sensor configuration promotes easy mounting.

FEATURES

- Class IIIB VCSEL
- Digital output
- Depth of field: 4,5 mm ±0,5 mm [0.180 in ±0.20 in]
- Focal length: 4,5 mm [0.180 in]
- Resolution: 0,254 mm [0.010 in]
- Choice of pin, wire or custom termination





POTENTIAL APPLICATIONS

- Barcode verification in dispensing and processing equipment
- Line or edge detection
- Encoding
- Data collection from manufacturing lines, robotic operations, production instrumentation/control units, automated sorting and screening equipment and analytical systems such as medical analysis. (Note that carbon black ink is required for this device to sense lines.)

HOA6480 Series Barcode Sensor

TESTING PROCESS
Each HOA6480 Barcode Sensor is precisely tested using automated testing equipment and a custom fixture.

During the testing process, the test fixture holds each sensor at a distance of approximately 4,5 mm [0.180 in] from a rotating wheel with a diameter of 89,0 mm [3.5 in] and a height of 15,2 mm [0.600 in].

One half of the wheel consists of a 50 % duty cycle barcode of alternating black and white stripes of the same size (0,38 mm [0.015 in] wide and 16,2 mm [0.600 in] tall). The other half of the wheel has a sample barcode of a known value.

The wheel rotates at 1 RPS (~254,0 mm [10.0 in] per second). Power, ground and output connections are applied to the sensor loaded into the test fixture.

Custom software in the test system evaluates the duty cycle collected by the sensor and sets the desired duty cycle between 40 % and 60 %. The software then reads a sample barcode and verifies that an accurate and complete barcode signal has been collected.

REFLECTIVITY
The sensor output will be below 1.1 V when presented with a 50 % reflective surface at 6,35 mm [0.250 in] (Kodak Grey Scale #3, CAT 152 7662).

ELECTRICAL CHARACTERISTICS (25 ºC [77 ºF] unless otherwise noted)

Parameter	Min	Typ.	Max	Unit	Condition
Supply current	–	–	15	mA	all
Voltage high	4.5	–	–	Vdc	black surface
Voltage low	–	–	1.0	Vdc	white surface
Voltage low (d=6,35 mm [0.250 in])	–	–	1.1	Vdc	50 % reflective surface
Output short circuit (sourcing) Vo = 0 V	2	16	–	mA	–
Output short circuit (sinking) Vo = 5 V	20	60	–	mA	–

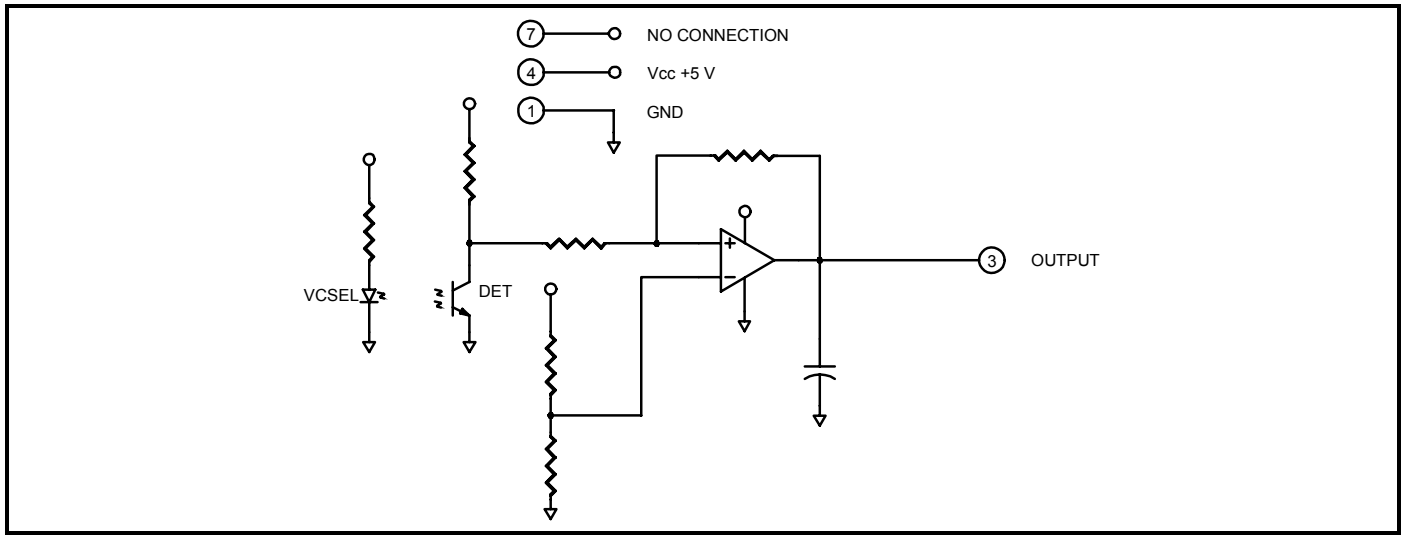
ABSOLUTE MAXIMUM RATINGS

Operating temperature range	-40 ºC to 85 ºC [-40 ºF to 185 ºF]

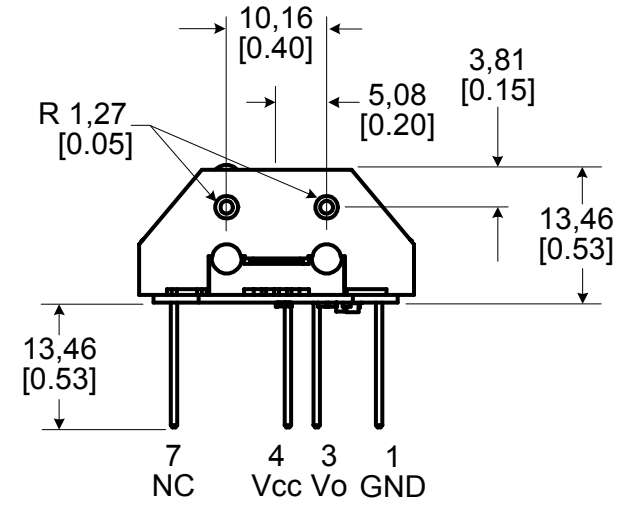
ELECTRICAL CONNECTIONS

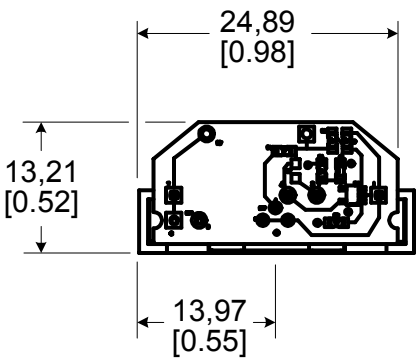
Vcc	5 Vdc
Ground	–
Output	open collector

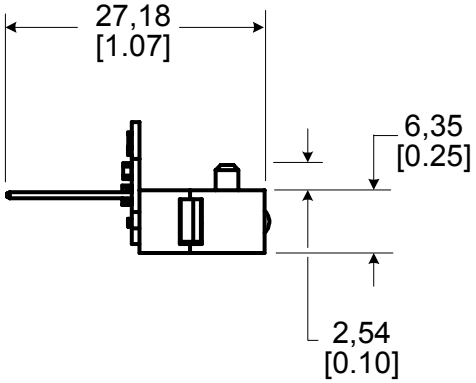
SCHEMATIC

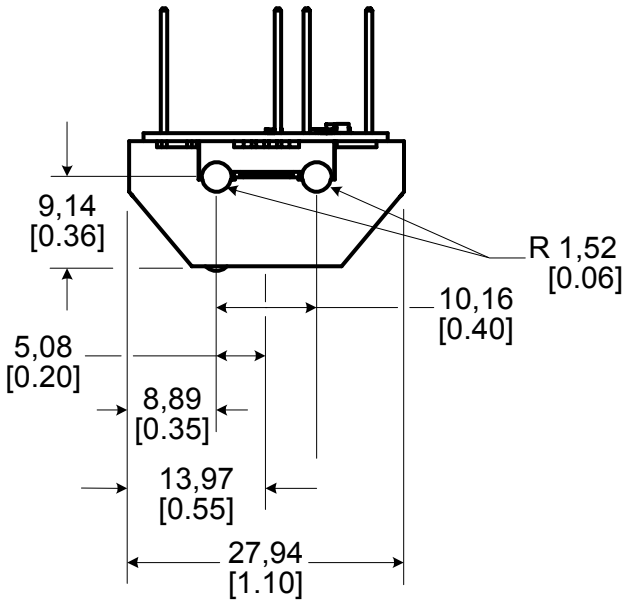


MOUNTING DIMENSIONS (For reference only mm/[in].)









ORDER GUIDE

Catalog Listing	Description
HOA6480-001	Barcode sensor with pins
HOA6480-002	Barcode sensor with 609,6 mm [24.0 in] wires

⚠ 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.

WARRANTY/REMEDY
Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

⚠ WARNING

MISUSE OF DOCUMENTATION
- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 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.

SALES AND SERVICE
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