Adafruit will not be shipping orders <u>Thanksgiving Day</u>, <u>Thursday November 22, 2018</u>. Expedited orders placed after 11am ET Wednesday November 21 will go out Friday November 23.



SENSORS / LIGHT/COLOR/PHOTO / MINIATURE REFLECTIVE INFRARED OPTICAL SENSORS - 5 PACK













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## Miniature Reflective Infrared Optical Sensors - 5 Pack -ITR20001/T

PRODUCT ID: 3930

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DESCRIPTION TECHNICAL DETAILS

## DESCRIPTION

This **Reflective IR Sensor** is a simple plastic casing with two elements - an IR LED and an IR phototransistor. You can control the IR LED and turn it on to bounce IR off objects to determine their reflectivity. White & light colored stuff will bounce the light, so you can detect it. Black & dark colored stuff will absorb the IR light so that it isn't detected. Likewise, if something isn't in the way of the sensor, it won't trigger either.

These sensors are handy when you want to detect if something has passed by the sensor, or a very simple hand-detector. Also sometimes these are used as rotary encoder, if the encoder wheel has black and white stripes, the photo sensor is fast enough to tell you the RPM. Most common usage of these sensors is for line following robots, they're so small and easy to solder, you can pack them together very close.

This sensor is compact, breadboard friendly and easy to solder to. It even has handy markings on the plastic so you know which side is the LED and which side is the phototransistor output. We don't include any 470 $\Omega$ -1K $\Omega$  resistors for the Infrared LED, or a 10K $\Omega$  for the output pullup. But you do get a pack of 5!

This works best when detecting a light-colored object approximately 5mm away - 2mm to 10mm worked fairly well but your results may vary with the LED brightness, object shininess, etc.



**TECHNICAL DETAILS** 



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Hall effect sensor



Reflective Infrared IR





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"A good scientist is a person with original ideas. A good engineer is a person who makes a design that works with as few original ideas as possible. There are no prima donnas in engineering" - Freeman Dyson



4.6 ★★★★★ Google Customer Reviews