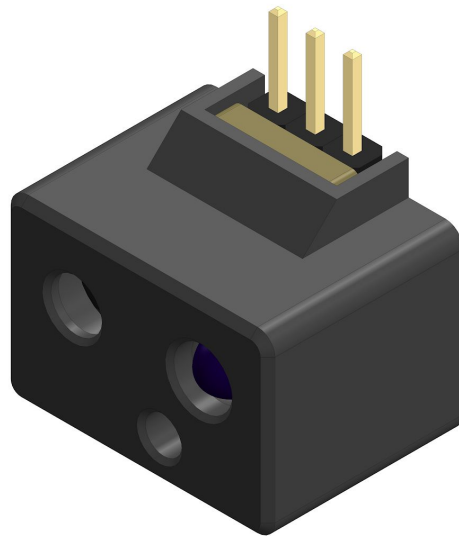




MAKER-OBJECT

Simplifying Object Sensor for Beginner

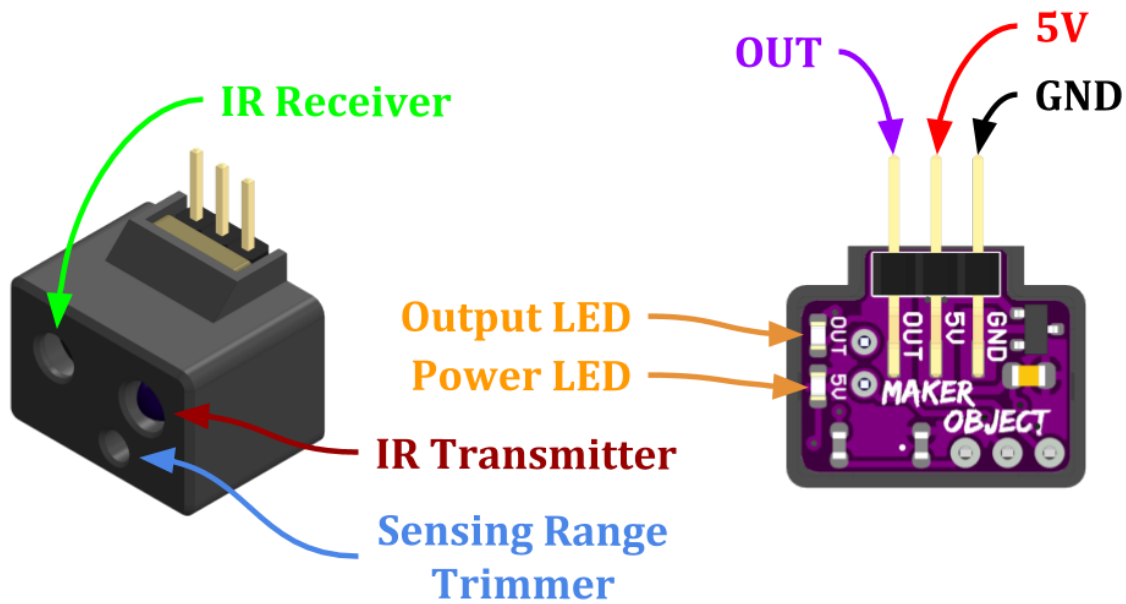


Datasheet

Rev 1.0
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1. BOARD LAYOUT & FUNCTION

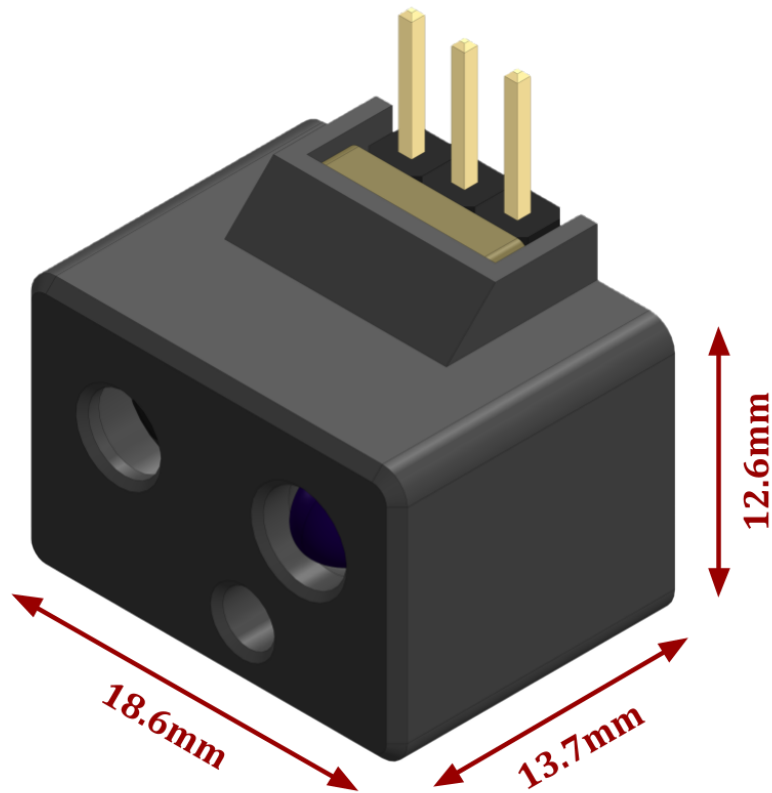


| Function | Description |
|------------------------------|--|
| IR Transmitter | Infrared LED that transmits the modulated infrared light. |
| IR Receiver | Infrared receiver that receives the reflected infrared light from the object. This receiver has a built-in bandpass filter of 38kHz. |
| Sensing Range Trimmer | Adjust the object detection range. |
| Power LED | Turn on when the sensor is power up. |
| Output LED | Turn on when object is detected. |
| Connector | Connector: <ul style="list-style-type: none"> • 5V : Power input for the Maker Object. • GND : Ground. • OUT : NPN output with internal pull up. Output LOW when object is detected (Active Low). The power input has reversed polarity protection. |

2. SPECIFICATIONS

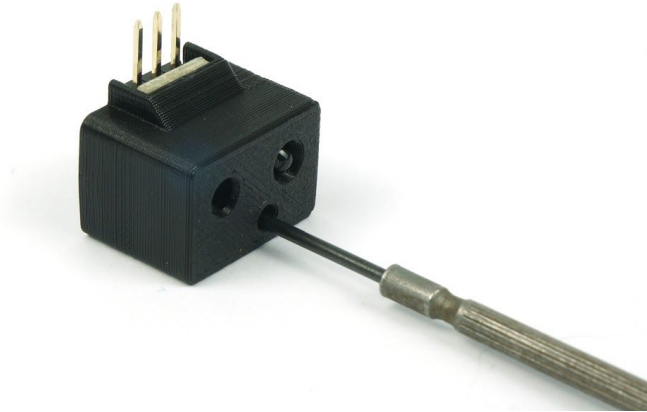
| No | Parameters | Min | Max | Unit | |
|----|--|-------------------------|-----------|------|----|
| 1 | VCC Voltage | 4.5 | 5.5 | V | |
| 2 | Output Voltage (NPN Output with Internal Pull Up) | Object Detected | 0 | 0.8 | V |
| | | No Object Detected | VCC - 0.5 | VCC | V |
| 3 | Sensing Distance (Adjustable) | White Surface (A4 Size) | 40 | 140 | cm |
| | | Black Surface (A4 Size) | 15 | 60 | cm |

3. DIMENSION



4. ADJUSTING SENSING RANGE

The sensing distance of the Maker Object can be adjusted using a small Phillips head screwdriver via the small opening at the front of the sensor.



- **Maximum Distance** - To set the range to maximum, power on the sensor and turn the trimmer clockwise until the output LED turn off. Turn back counter-clockwise slowly until the LED just turn on. This will be the maximum sensing distance for the sensor.
- **Minimum Distance** - To set the range to minimum, power on the sensor and turn the trimmer counter-clockwise until the output LED turn off. Turn back clockwise slowly until the LED just turn on. This will be the minimum sensing distance for the sensor.

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