IR Obstacle Detection Module

User Manual

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IR Obstacle Detection Module

1. **Overview**
   This module having a pair of infrared transmitter and receiver. It is well adaptable to surrounding light with strong anti-interfere property.

   The light is emitted by transmitter, When it meets an obstacle(reflection surface), it is reflected and received by receiver. Then the signal will pass to a comparator(LM393) for processing then the corresponding indicator light is on and a LOW level signal is send out to the interface(OUT).

   Detection distance can be adjusted through potentiometer knob between 2 ~ 80cm. Working voltage is from 3.3V to 5V. It is suitable for a variety of microcontroller, such as Arduino. It can be installed on robot to detect the surrounding environment changes.

2. **Electrical Parameters**

Operating Power Supply	DC 3.3V ~ 5V
Detection Range	2 ~ 80cm
Output	TTL logic (‘H’ for no obstacle detected; ‘L’ for obstacle detected)
Interface	3 wires
PCB Dimension	31mm x 15mm

3. **Pin Definition**

Pin	Definition
VCC	Connect to 3.3V/5V
GND	Connect to ground
OUT	Digital output (‘H’ or ‘L’)

4. **How to use**
   Connect VCC pin to the 3.3V/5V, connect GND pin to the ground, connect OUT pin to the microcontroller’s I/O pin. The module will output ‘HIGH’ whenever there is no obstacle detected; output ‘LOW’ whenever there is obstacle detected.

5. **Warranty**
   a.) Product warranty is valid for 3 months.
   b.) Warranty is only applies to manufacturing defect.
   c.) Damage caused by improper use is not cover under warranty.
   d.) Warranty does not cover freight cost for both ways.