

IR Line Tracking Module

User Manual



Content

Overview	3
Electrical Parameters	3
Pin Definition.....	3
How to use	3
Warranty	3

IR Line Tracking Module

1. Overview

IR Line Tracking Module consists of a IR reflex sensor, it is a sensor with optoelectronic transmitter and receiver in a package. It functions by illuminating a surface with infrared light; the sensor then picks up the reflected infrared radiation and, based on its intensity, determines the reflectivity of the surface in question. Lightly colored surfaces will reflect more light than dark surfaces; therefore, lightly colored surfaces will appear brighter to the sensor. This allows the sensor to detect a dark line on a pale surface, or a pale line on a dark surface.

This module enables a robot to autonomously navigate a line-marked path. By drawing a line in front of a robot outfitted with a line tracker, one can dictate the robot's path by showing it where to go without using a remote controller. A typical application uses three line trackers, with the middle sensor aligned directly above the intended line.

2. Electrical Parameters

Operating Power Supply	DC 3.3V ~ 5V
Detection Range	0 ~ 3cm
Output	(i) TTL logic ('H' on Black or no obstacle; 'L' on White or obstacle) (ii) Analog voltage output (0 ~ 5V)
Interface	4 wires
PCB Dimension	35mm x 15mm

3. Pin Definition

Pin	Definition
VCC	Connect to 3.3V/5V
GND	Connect to ground
DO	Digital output ('H' or 'L')
A0	Analog voltage output (0 ~ 5V)

4. How to use

Connect VCC pin to the 3.3V/5V, connect GND pin to the ground, connect DO pin to the microcontroller's I/O pin. The module will output 'HIGH' whenever there is BLACK object or no obstacle detected; output 'LOW' whenever there is WHITE object or any obstacle detected.

5. Warranty

- Product warranty is valid for 3 months.
- Warranty is only applies to manufacturing defect.
- Damage caused by improper use is not cover under warranty.
- Warranty does not cover freight cost for both ways.