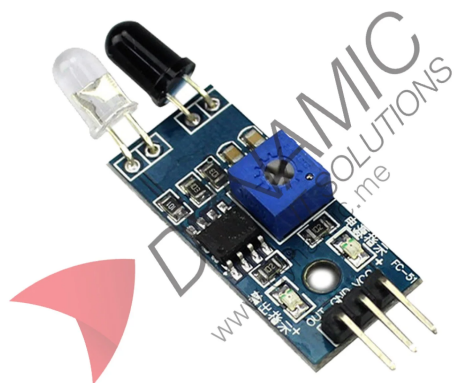


IR Infrared Obstacle Avoidance Sensor



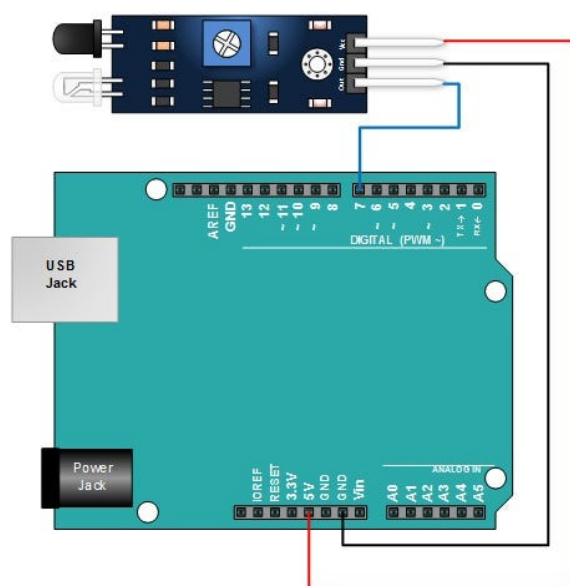
Features:

The IR infrared obstacle avoidance sensor module uses an active reflection system consisting of an infrared emitter and receiver pair to detect nearby objects. It emits a modulated IR beam and detects its reflection off obstacles within a range of 2–20 cm. An onboard LM393 comparator processes the signal and provides a digital output, which goes LOW when an obstacle is detected. The sensing range is adjustable via a potentiometer, and the module includes status indicators for power and detection. Compact and reliable, it's commonly used in robotic navigation, edge detection, and automatic systems.

Specifications	
Sensor Type	Active infrared reflection
Operating Voltage	3.3 V to 5 V DC
Detection Range	2 cm to 20 cm (adjustable)
Detection Angle	~35°
Output Type	Digital (LOW when obstacle detected)
Sensitivity Adjustment	Onboard potentiometer
Comparator IC	LM393
Output Drive Capability	Can directly trigger microcontroller IO or 5V relay
Indicators	Red LED for power, IR LED for obstacle detection
Mounting	Includes 3 mm screw holes for installation
Dimensions	32 mm × 14 mm
Use Cases	Ideal for robot obstacle avoidance, detection systems, counter systems, and black/white line sensing

Pinouts:

Pin Name	Type	Description
VCC	Power Input	Supply voltage (3.3V to 5V DC)
GND	Power Ground	Common ground reference
OUT	Digital Output	LOW signal when obstacle is detected within range



Product Pictures:

