Melexis Contactless Infrared Sensor - MLX90614 5V

This cyber-tronic looking sensor hides a secret behind its glimmering eye. Unlike most temperature sensors, this sensor measures infrared light bouncing off of remote objects so it can sense temperature without having to touch them physically. Simply point the sensor towards what you want to measure and it will detect the temperature by absorbing IR waves emitted. Because it doesn't have to touch the object it's measuring, it can sense a wider range of temperatures than most digital sensors: from -70°C to +380°C! It takes the measurement over 90-degree field of view so it can be handy for determining the average temperature of an area.

This sensor comes in an easy-to-use metal can. You can easily solder it or plug it into a breadboard. The four pins are used for power, ground, i2c clock and i2c data. There are two versions, one for 3V power and logic levels and one for 5V power and logic levels. This item is the 5V version which is good for use by classic Arduino.

SPECIFICATIONS:

- Factory calibrated
- -40°C to +125°C for sensor temperature
- -70°C to +380°C for object temperature
- ±0.5°C accuracy around room temperatures
- High accuracy of 0.5°C over wide temperature
- 90° Field of view
- 5V version: 4.5 to 5.5V power
- 3V version: 2.6 to 3.6V power
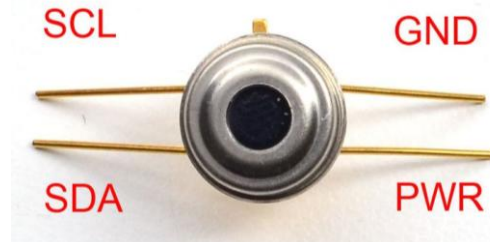- I2C interface, 0x5A is the fixed 7-bit address

FEATURES:

- Low cost
- Small size
- Easy to integrate
- Factory calibrated in wide temperature range: -40 to 125 ˚C for sensor temperature and -70 to 380 ˚C for object temperature
- High accuracy of 0.5°C over wide temperature range (0..+50°C for both Ta and To)
- High (medical) accuracy calibration optional Measurement resolution of 0.02°C
- Single and dual zone versions
- SMBus compatible digital interface
- Customizable PWM output for continuous reading
- Available in 3V and 5V versions
- Simple adaptation for 8 to 16V applications
- Power saving mode
- Different package options for applications and measurements versatility
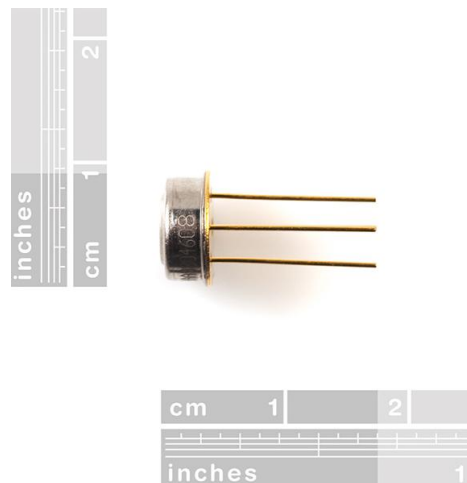- Automotive grade

APPLICATION:

- High precision non-contact temperature measurements;
- Thermal Comfort sensor for Mobile Air Conditioning control system;
- Temperature sensing element for residential, commercial and industrial building air conditioning;
- Windshield defogging;
- Automotive blind angle detection;
- Industrial temperature control of moving parts;
- Temperature control in printers and copiers;
- Home appliances with temperature control;
- Healthcare;
- Livestock monitoring;
- Movement detection;
- Multiple zone temperature control – up to 100 sensors can be read via common 2 wires
- Thermal relay/alert
- Body temperature measurement

PIN-OUTS:

DIMENSIONS (CM, INCHES):

SCHEMATIC DIAGRAM