



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## Gravity: I2C Non-contact IR Temperature Sensor (MLX90614-DCI)

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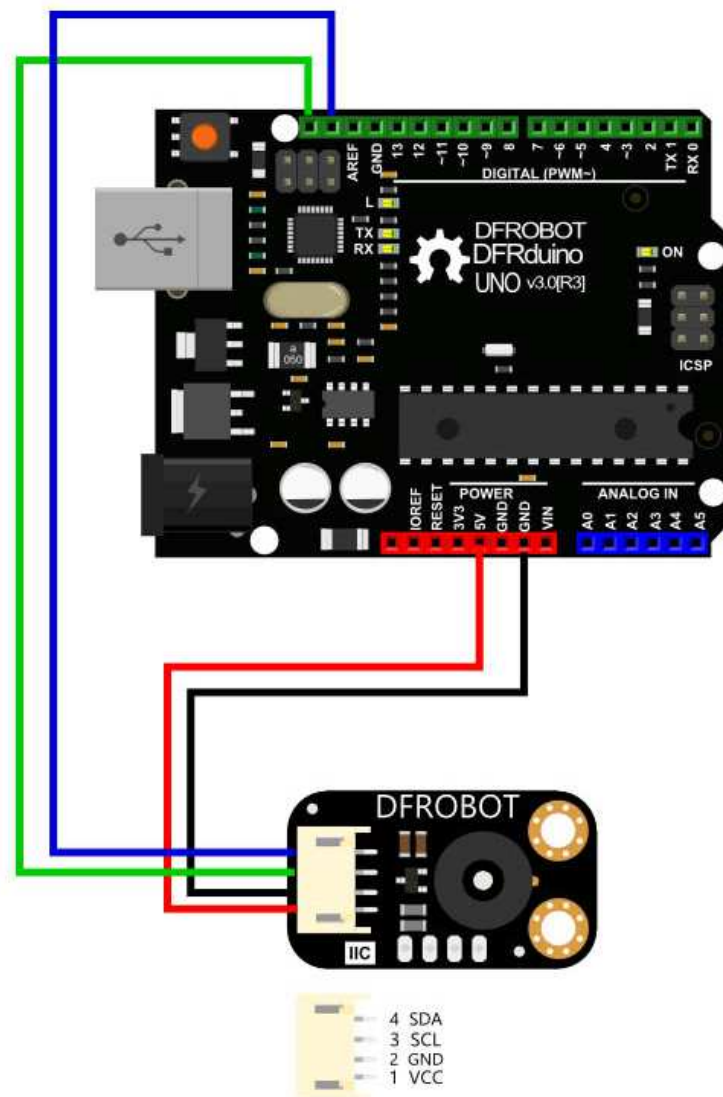
SKU:SEN0263

### *INTRODUCTION*

We can divide temperature measurement into two types: contact and non-contact. Contact measurement can only accurately measure temperature when the testing object and the sensor reach thermal equilibrium. This can mean longer response times and reading inaccuracies offset by ambient temperature. By contrast, non-contact measurement uses infra-red radiation to measure the temperature and does not require a direct touch. Additionally, this method of measurement can be read quickly and accurately.

In recent years non-contact measurement methods have been used for medical, environmental monitoring, home automation, automotive electronic, aerospace and military applications.

Our latest infrared temperature measurement module is the MLX90614. This module measures the surface temperature by detecting infrared radiation energy and wavelength distribution. The IR temperature probe consists of an optical system, photoelectric detector, amplifier, signal processing and output module. The optical system collects the infrared radiation in its field of view and the infrared radiation energy is converted in to corresponding electrical signals when converging on the photoelectric detector. After being processed by the amplifier and signal processing circuit, the signal is converted in to a temperature value. The MLX90614 is self calibrating and has a low noise amplifier integrated in to the signal processing chip. The chip itself is a 17-bit ADC and DSP device, giving accurate and reliable results.



SEN0263 (MLX90614-DCI), due to its small field of view (FOV = 5°), is more suitable for industrial applications where the detection distance can be longer. In general applications, you can use SEN0206(MLX90614-BCC)

## *SPECIFICATION*

- Model: MLX90614-DCI
- Operating Voltage: 3.3V - 5V
- Operating Current: 1.2mA
- Temperature: -70.01°C to +270°C, (0.01 °C resolution)
- Interface Type: I2C
- Interface Line Sequence: VCC, GND, SCL, SDA
- FOV: 5°
- Dimensions: 31.5\*18 mm/1.24 x 0.7 inches
- Weight: 15g

