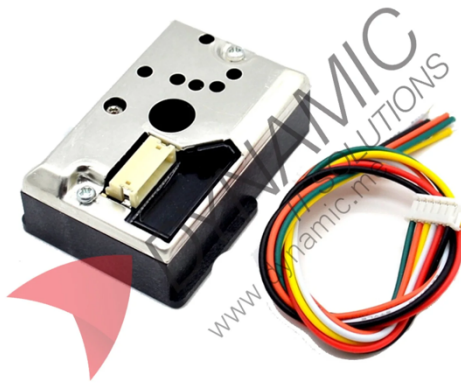


Optical Dust Sensor PM2.5 (GP2Y1014AU)



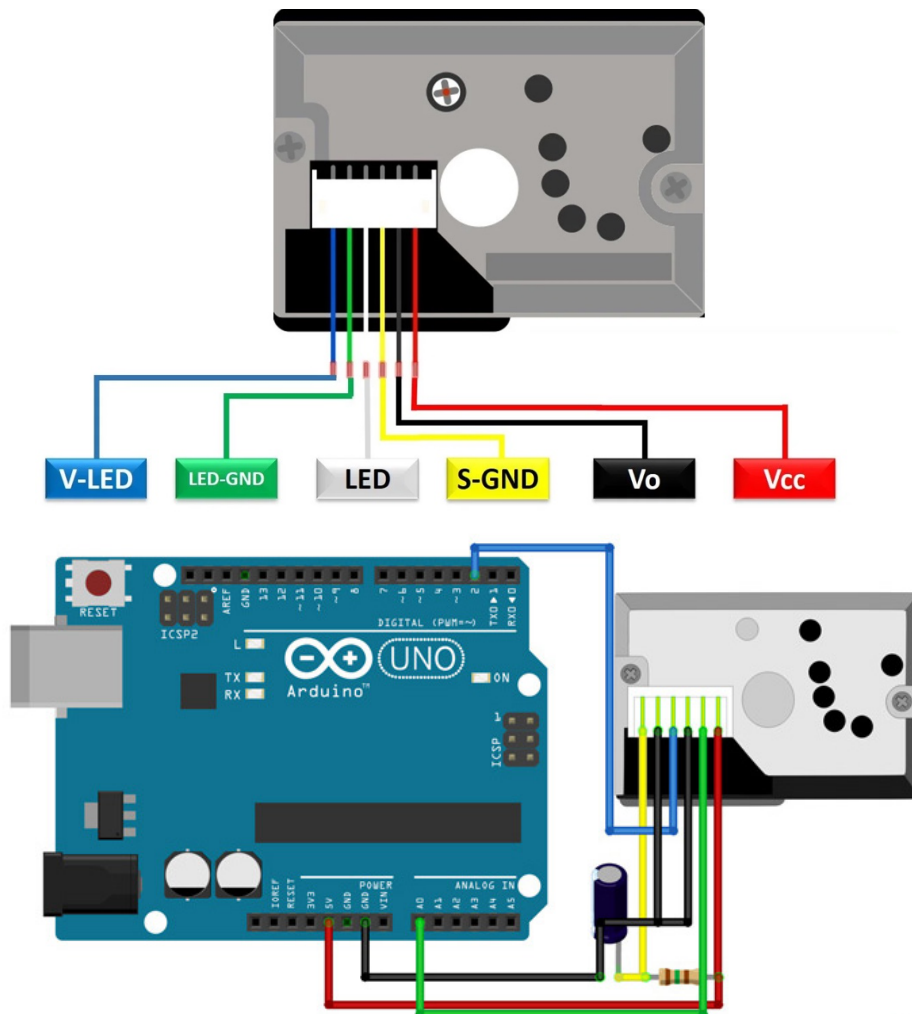
Features:

The GP2Y1014AU is an optical PM2.5 dust sensor that uses an infrared LED and phototransistor arranged diagonally to detect airborne dust particles via light reflection. It offers excellent sensitivity for fine particles such as cigarette smoke and outputs an analog voltage proportional to dust concentration. With low current consumption and wide voltage support, this sensor is widely used in air purifiers and air quality monitoring devices. It is also compatible with various TelePort expansion boards for easy integration in embedded systems.

Specifications	
Model	GP2Y1014AU
Sensor Type	Optical (Infrared scattering)
Detection Principle	IR LED + phototransistor (light reflection)
Minimum Detectable Particle	0.8 micron
Sensitivity	0.5 V per 0.1 mg/m ³
Voltage in Clean Air	0.9 V (typical)
Operating Voltage	DC 5 V (typical), supports up to 7 V
Current Consumption	11 mA typical, 20 mA max
Operating Temperature	-10 °C to +65 °C
Storage Temperature	-20 °C to +80 °C
Output Type	Analog voltage
Dimensions	69.7 mm x 35.6 mm x 28 mm
Weight	27 g
Use Cases	Air purifiers, dust sensors, air quality monitoring, HVAC systems

Pinouts:

Pin Name	Type	Description
V-LED	Power Input	LED power supply (5 V, use current-limiting resistor)
LED-GND	Power Ground	LED ground connection
LED	Control Input	Pulse control for LED operation (connect to MCU)
S-GND	Power Ground	Signal ground
Vo	Analog Output	Analog voltage proportional to dust concentration
VCC	Power Input	Main operating voltage (5 V typical, up to 7 V max)



Product Pictures:

