

MQ-2 - Smoke Gas LPG Butane Hydrogen Gas Sensor



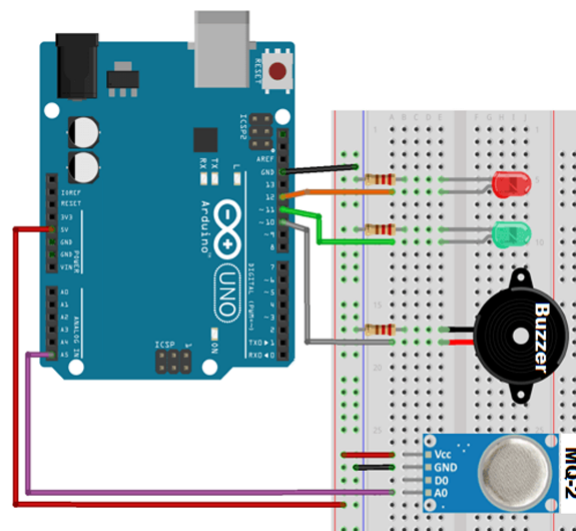
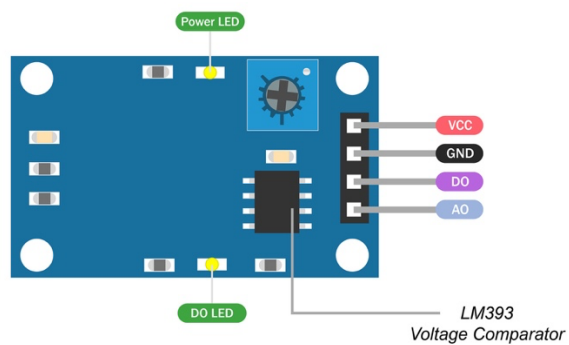
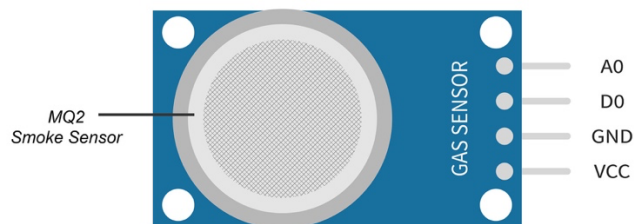
Features:

The MQ-2 is a low-cost semiconductor gas sensor designed to detect combustible gases and smoke, including LPG, propane, butane, hydrogen, and methane. It operates by detecting changes in the conductivity of its SnO₂-sensitive material when exposed to target gases. The sensor features high sensitivity, long life, and a simple drive circuit, making it suitable for both domestic and industrial gas leakage detection systems.

Specifications	
Model	MQ-2
Sensor Type	Semiconductor
Encapsulation	Black Bakelite
Detection Gases	LPG, propane, butane, hydrogen, methane, smoke
Concentration Range	300–10000 ppm (combustible gases)
Loop Voltage (Vc)	<= 24 V DC
Heater Voltage (Vh)	5.0 V +/- 0.2 V (AC or DC)
Load Resistance (RL)	Adjustable
Heater Resistance (Rh)	31 Ohm +/- 3 Ohm at room temperature
Heater Power Consumption	<= 900 mW
Sensing Resistance (Rs)	2 kOhm–20 kOhm (in 2000 ppm C3H8)
Sensitivity	Rs (in air) / Rs (in 1000 ppm isobutane) >= 5
Concentration Slope (alpha)	<= 0.6 (R5000ppm / R3000ppm CH4)
Standard Operating Temp	20 +/- 2 °C
Standard Humidity	65% +/- 5% RH
Standard Test Voltages	Vc: 5.0 V +/- 0.1 V, Vh: 5.0 V +/- 0.1 V
Preheat Time	Over 48 hours
Use Cases	Domestic gas leak alarms, industrial gas detectors, portable gas monitoring devices

Pinouts:

Pin Name	Type	Description
VCC	Power Input	Power supply input (5 V recommended)
GND	Power Ground	Common ground
AO	Analog Output	Analog voltage output proportional to gas concentration
DO	Digital Output	Digital signal output when gas level exceeds threshold (if comparator is present)



Product Pictures:

