



Flexible, small form-factor CO₂ sensor

Fit and forget, fully autonomous operation

The ExplorIR[®]-W is a small footprint low power CO₂ sensor designed for applications where space is at a premium. The combination of small size, low power and high accuracy makes this sensor suitable for portable, battery powered personal safety equipment.

About ExplorIR[®]-W

The ExplorIR[®]-W has a very wide dynamic range and is capable of measuring CO₂ gas concentrations up to 100%, without compromising measurement accuracy or responsiveness.

The ExplorIR[®]-W uses patented NDIR solid-state LED optical technology that delivers consistent and accurate CO₂ measurement performance over the lifetime of the sensor.

Features

- Measure up to 100% CO₂ concentration
- Low power CO₂ sensor
- Solid state LED optical technology
- Vibration and shock resistant
- Optional temperature and relative humidity sensor
- Optional voltage output
- UART data interface
- Built-in auto-calibration
- Optional flow through adaptor

Applications

- Industrial Safety
- Incubators
- Transportation
- Refrigeration
- Horticulture and Agriculture



CO₂ Sensor Specifications

Measurement Ranges	0-5%, 0-20%, 0-60%, 0-100%
Accuracy (typ.)	0-60% ±(70ppm +5% of reading) 0-100% ±(300ppm +5% of reading)
Time to 1st Reading	1.2 seconds
Response Time	<30 Seconds (Diffusion Limited)
Readings per Second	2
Sample Method	Solid-state LED NDIR Diffusion

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ExplorIR® Series

Further models from our series



ExplorIR® - M
Miniature footprint
CO₂ Sensor

Electrical and Mechanical Specifications

Measurement Output	UART (optional voltage)
Supply Voltage	3.25V - 5.5V
Power Consumption (typ.)	3.5mW @ 3.3V
Dimensions and Weight	40mm x 25mm x 23mm, 8g

Operating Conditions

Operating Conditions - Temperature	0°C to 50°C (Standard) -25°C to 55°C (Extended)
Operating Conditions - Humidity	0-95% RH, non-condensing
Storage Conditions - Temperature	-40°C to +70°C
Pressure Dependence	500mbar - 10bar
Sensor Lifetime	>15 years
Environmental Compliance	RoHS and REACH

Ordering Information

EXPLORIR-W-X-XXX-X

X	Measurement Range
5	0-5%
20	0-20%
60	0-60%
100	0-100%
X	Temperature and RH
H	Included
Blank	Not included
X	CO ₂ Voltage Output
V	Included
Blank	Not included
X	Temperature
E	Extended
Blank	Standard
X	Flow Adaptor
F	Included
X	Not included

ExplorIR® - W



Discover also our further product series

CozIR® Series



Ultra-Low-Power CO₂ sensors

SprintIR® Series



High Speed CO₂ Sensors



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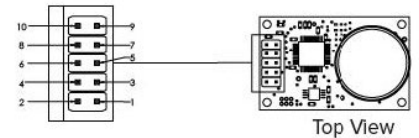
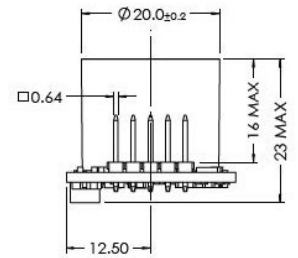
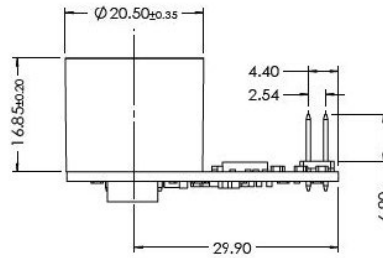
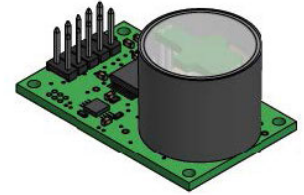
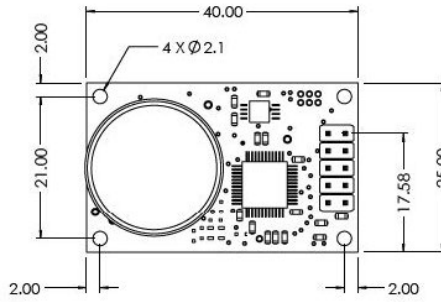
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Dimension Drawing - ExplorIR® - W



Pin-Out Description - ExplorIR® - W

Pin	Name	Type	Description
1	GND	Supply	Sensor ground
2	NC	Unused	Do Not Connect
3	VDD	Supply	Sensor supply voltage
4	GND	Supply	Sensor ground
5	Rx_In	Digital Input	UART Receive Input
6	GND	Supply	Sensor ground
7	Tx_Out	Digital Output	UART Transmit Output
8	NITROGEN_ZERO	Digital Input	Set low to initiate a Zero in Nitrogen Calibration Cycle
9	ANALOGUE_OUTPUT	Analogue Output	CO ₂ Level (Optional)
10	FRESH_AIR_ZERO	Digital Input	Set low to initiate a Zero in Fresh Air Calibration Cycle



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