CozIR®- LP²

Ultra-Low-Power CO_2 sensor with UART and I²C interface

User-Defined power consumption

The CozIR®-LP² is an ultra-low power NDIR CO_2 sensor using state-of-the-art solid-state LED optical technology.
The low-power LEDs are manufactured in-house, giving GSS complete control of the CO_2 sensor signal chain.

About CozIR®- LP²

The CozIR®-LP² allows users to reduce power consumption whilst maintaining high CO_2 measurement accuracy. The sensor incorporates a number of power saving modes, capable of reducing active and quiescent current consumption to unrivalled low levels.

The CozIR®-LP² also features a built-in auto-calibration function that maintains CO_2 measurement accuracy over the lifetime of the product.

Features

- Ultra-low-power CO_2 sensor
- 30ppm (typ.) measurement accuracy
- Solid state LED optical technology

- UART or I²C control and data interface
- Built-in auto-calibration
- California Building Standards Code, Title 24 compliant

Applications

- Indoor Air Quality (IAQ)
- IoT and Smart Technology wireless equipment
- Air Quality and HVAC Systems
- Building Management Systems (BMS)

- Demand-Controlled Ventilation (DCV) systems
- Transport
- In-Cabin Air Quality

CO_2 Sensor Specifications

Measurement Ranges	0-2000ppm, 0-5000ppm, 0- 10000ppm (0-1%)
Accuracy (typ.)	±(30ppm +3% of reading)
Time to 1st Reading	<1 seconds
Response Time	<30 Seconds (Diffusion limited)
Sample Method	Solid-state LED NDIR Diffusion

Electrical and Mechanical Specifications

Measurement Output	UART or I²C
Supply Voltage	3.25V - 5.5V
Power Consumption (typ.)	<3.5mW @ 3.3V
Dimensions and Weight	31mm x 19.5mm x 8.7mm, 2.5g

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CozIR®- LP²

CozIR® Series

Further models from our series

CozIR®- A
with optional temperature and humidity sensing.

CozIR®- Blink
Ultra-Low-Power CO_2 sensor with Power Cycling

CozIR®- LP
Ultra-Low-Power CO_2 sensor

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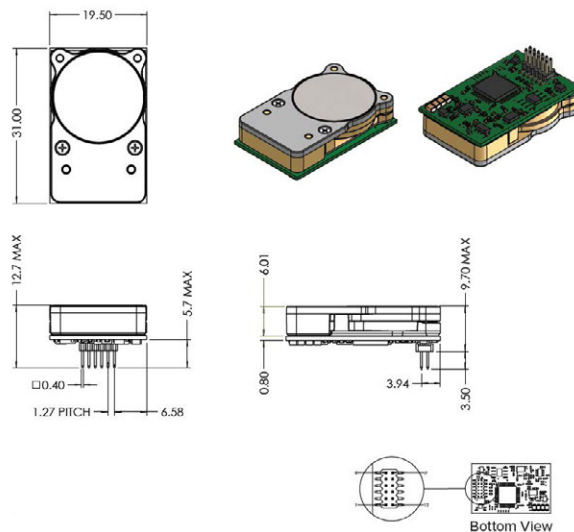United Kingdom, G68 9HQ

Operating Conditions

Operating Conditions - Temperature	0°C to 50°C
Operating Conditions - Humidity	0-95% RH, non-condensing
Storage Conditions - Temperature	-40°C to +70°C
Pressure Dependence	500mbar - 1500mbar
Sensor Lifetime	>15 years
Environmental Compliance	RoHS and REACH

Ordering Information

CozIR®-LP2-X

X	Measurement Range
2000	2000ppm
5000	5000ppm
1	10,000ppm (1%)

Dimension Drawing - CozIR®- LP²

Bottom View

Pin-Out Despription - CozIR® Blink

Pin	Name	Type	Description
1	GND	Supply	Sensor ground
2	VDD	Supply	Sensor supply voltage
3	Rx_In	Digital Input	UART Receive Input
4	Tx_Out	Digital Output	UART Transmit Output
5	NC	Unused	Do not connect
6	READY	Digital Output	Data ready pin. Pulsed high when data ready
7	NC	Unused	Do not connect
8	NC	Unused	Do not connect
9	NC	Unused	Do not connect
10	I²C_ENABLE	Digital Input	Set low for I²C interface mode. Leave floating to select UART interface mode. Pin status detected at power on.
11	I²C_SCL	Digital Input	I²C serial clock input. Open drain, external 4.7kΩ resistor pulled high to VDD required
12	I²C_SDA	Digital Inputtput	I²C serial data input/output. Open drain, external 4.7kΩ resistor pulled high to VDD required

QUALITY SYSTEM CERTIFICATION
DNV·GL
ISO 9001:2015

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