DRACULA
TECHNOLOGIES

Demonstrator

LAYER®
Co_2 Sensor

Beyond Batteries, Beyond Imaginations:
LAYER® Lights Up Innovation.

What is it?

A **portable, self-powered** carbon dioxide (Co_2) sensor using non-dispersive infrared (NDIR) technology.

It measures Co_2 levels according to a specific cycle time (defined by the host). The measured value is displayed on a 7-segment bar graph electrochromic e-paper display and transmitted to an Android application using the Bluetooth Low Energy communication protocol (BLE).

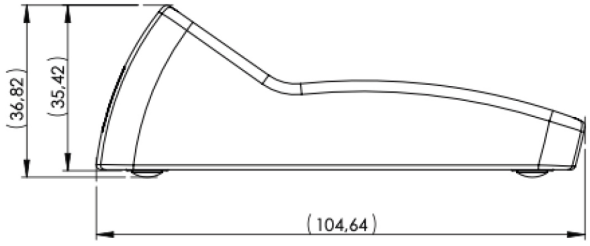
Applications

The **Co_2 sensor** can be deployed in a wide range of applications :

- Life science incubators
- Cold storage facilities
- Food & beverage transport
- Fermentation & brewing
- Agriculture & animal husbandry
- Ambient Co_2 measurement
- Heating, ventilation

C02 thresholds for Ynvisible bar graph display

Bar graph	CO_2 (ppm)	Description
7	5000	Dangerous in case of exposure
6	2000	Negative health effects
5	1200	Necessary ventilation
4	1000	Desirable ventilation
3	800	**Acceptable level**
2	600	Healthy indoor level of CO_2
1	400	Open air CO_2 level
none	-	Sensor insufficiently supplied, put it in front of a light source



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Main features

First use procedure
Expose the device under strong light 2 hours after display activation

Communication protocol
- Bluetooth Low Energy (BLE)
- BLE transmission periodicity (10.24s)

Self-powered portable
Co_2 sensor (006-1-0100)

Minimum illumination required
14h under 300 lx

Measurement range
0-5000 PPm

High accuracy
(50ppm +/-3%) at room temperature

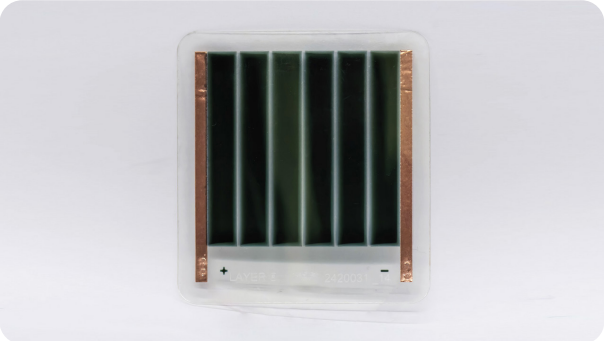
Long lifespan
Minimum of 10 years

Autonomous
- Auto-calibration
- Autonomy in the dark (8h) (no need for maintenance)

Harvesting
Indoor light

What's new?

This Co_2 gas sensor is battery less, self-powered by Dracula Technologies OPV (organic photovoltaic) module.



LAYER® 6B module powers the Co_2 Sensor-P.

LAYER® properties
- Thin
- Small
- Flexible
- Free-shape

What's next?

Co_2 sensor - SP mini
- Smaller size & compact structure
- Communicates with LoRaWAN® protocol
- Multi-parameter Co_2 sensing platform (light, humidity, temperature) for energy management of infrastructures.

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