Senseair Sunrise

A new generation NDIR sensors

Senseair Sunrise is a new generation NDIR sensors with Optical Solid State design. Electronics with no moving parts makes this sensor robust and resistant to vibrations. Any application with a tough environment or in environments with explosion risk is benefited by the solid state design.

It is also the first NDIR sensor with LED technology that truly saves power while maintaining a high precision. The sensor has an accuracy (CO_2) ±30ppm ±3% of reading and a power consumption 6 times lower than the other low power NDIR sensors on the market. Average current < 150µA [3].

Thanks to the built-in self-correcting ABC algorithm you can mount and forget your sensor for the next 15 years and it will still be accurate. With wireless applications it will be even more important to rely on a sensor you can mount and forget.

Standard specification

Measured gas	Carbon dioxide (CO_2)
Operating principle	Non-dispersive infrared
Measurement range	(CO_2) 400–5000ppm
Accuracy (CO_2)	±30ppm ±3% of reading [1, 2]
Peak current	< 125mA
Average current	< 150µA [3]
Measurement period	Default: 16s (adjustable by host)
Power supply	3.05–5.5V [4]
Dimensions [mm]	33.9 x 19.8 x 11.8
Weight	5.0 ± 0.1g
Life expectancy	> 15 years
Operation range	0–50 °C, 0–85% RH
Storage temperature	-40–70 °C
Serial communication	UART, I²C

Key benefits

- Optical Solid State
- Ultra Low Power
- High Precision
- Robust
- Mass Production
- Self Correcting
- Compliant with ANSI/ASHRAE Standard 62.1-2022
- Compliant with RESET grad B
- Compliant with WELL Building Standard® (WELL v2™)

Note 1: 15–35 °C, 0–80% RH, after three eight-day periods, each period followed by ABC command set in the Calculation Control byte.
Note 2: Specification is referenced to uncertainty of calibration as mixtures (±1%).
Note 3: Typical average current consumption @25 °C
Note 4: Unprotected against surges and reverse connection

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