Driesen + Kern

Senseair Sunlight CO_2

World's most power efficient CO_2 sensor with NDIR technology

As a follow-up to our high performance flagship product Sunrise, we present Sunlight - the world's most power efficient NDIR CO_2 sensor. Sunlight can be used in a wide range of applications but is optimal for battery and wireless applications or in places where you want to secure a reliable and secure sensor with long lifetime.

The module is designed for simple integration into products. The optical solid state design with no moving parts makes this sensor robust and resistant to vibrations.

With our automatic baseline correction Sunlight is maintenance-free, which means that you can mount and forget your sensor during its whole lifetime and it will still be accurate.

Standard specification

Article No.	006-1-0100
Measured gas	Carbon dioxide (CO_2)
Operating principle	Non-dispersive infrared
Measurement range (CO_2)	400 – 5000 ppm; extended range up to 10000 ppm
Accuracy (CO_2)	±50 ppm ±3% of reading [1, 2] (extended range ±10% of reading)
Average current, typical	See table to the right
Measurement period	Default: 16 s, 8 samples (adjustable by host)
Steady state current during sampling	50 mA
Peak current	<80 mA
Power supply	3.05 – 5.5 V [3]
Dimensions	34 x 21 x 12 mm
Weight	5 g
Life expectancy	>15 years
Operating range	0 – 50 °C, 0 – 85% RH
Storage temperature	-40 – 70 °C
Serial communication	UART, I^2C

Note 1: 15 – 35 °C, 0 – 80%RH, after 3 ABC (Automatic Baseline Correction) periods and default measurements settings.
Note 2: Specification is referenced to uncertainty of calibration gas mixtures (±1%).
Note 3: Unprotected against surges and reverse power supply polarity.

Key benefits

- Optical Solid State
- Ultra Low Power consumption
- High Precision
- Robust
- Mass Production
- Self-correcting

Average current (typical), at continuous and single measurement mode respectively.

Measurement period	2 Samples		8 Samples		32 Samples	
	Cont	Single	Cont	Single	Cont	Single
16 s	21 µA		30 µA			
1 min	18 µA	7 µA	20 µA	16 µA	30 µA	22 µA
5 min	16 µA	1 µA	17 µA	3 µA	19 µA	4 µA

Senseair
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