

LuminOx Marketing Guide

Fluorescence-based Optical Oxygen Sensor

The LuminOx Family is a range of factory calibrated oxygen sensors which measure ambient ppO₂ levels using the principle of fluorescence quenching by oxygen.

There are 3 ranges within the LuminOx product family; LuminOx Sensor, LuminOx Evaluation Interface and LuminOx Industrial Sensor.

Our unique, patented process allows us to produce a sensor that benefits from low power operation, traditionally associated with electrochemical sensors, while providing a much longer lifetime due to the non-depleting sensing principle.

LuminOx is both temperature and oxygen pressure compensated enabling accurate operation over a wide environmental range

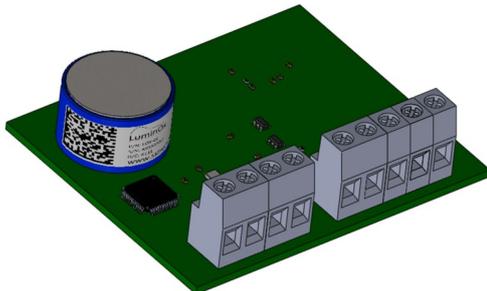
without the need for additional system components.

Unlike other sensor technologies, LuminOx is stable and robust, does not contain lead or any other hazardous materials and has negligible cross-sensitivity. LuminOx is fully ROHS compliant.

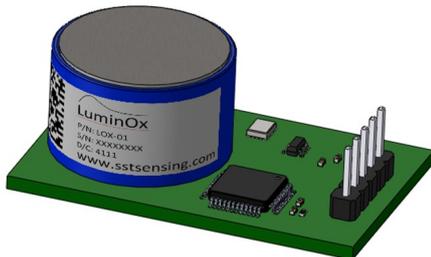
LuminOx is designed to measure oxygen partial pressure (ppO₂) and temperature as well as oxygen concentration (O₂%) and barometric pressure (if selected).



LuminOx Sensor



LuminOx Evaluation Interface



LuminOx Industrial

About LuminOx

Unique Selling Points

- Low Power
- Measures Oxygen Concentration (O₂%) & Pressure (if selected)
- Battery Power Usage
- Long Life
- High Accuracy
- Small and Compact
- Low Cost
- Maintenance Free
- Contains No Hazardous Materials
- Low Drift
- Factory Calibrated
- Extended Temperature Range Compared to Electrochemical
- No Need for Additional Electronics

Applications

- Oxygen Detection
- Portable Equipment
- Breathing Apparatus
- Inerting
- Medical
- Lab Equipment
- Agriculture
- Incubation
- Fire Prevention
- Flue Gas in Condensing Boilers

Specifications

Range	Supply voltage	Output
LuminOx Sensor	5Vdc	TTL level RS232
LuminOx Evaluation Interface	5Vdc	Includes: RS232, RS485 (Modbus RTU) and 0-5V Analogue
LuminOx Industrial	From 10-28Vdc	Choice of RS232, RS485 (Modbus RTU), 0-5V or 4-20mA *Other outputs available on request

LuminOx PRELIMINARY

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Competitive Advantage

LuminOx was designed in order overcome many issues associated with electrochemical technology, the biggest issue being life time. Below is a table that illustrates how LuminOx can give your product an overall competitive advantage compared to various technologies such as Zirconia, Electrochemical and Paramagnetic

	LuminOx	Zirconia	Electrochemical	Paramagnetic
Low Drift	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Long Life	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ROHS Compliant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Small in Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low in cost	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low Power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Overall Specifications

Oxygen Measuring Range	ppO ₂ Version: 0-300mbar, O ₂ % Versions: 0-25%
Response Time	<15s
Accuracy	Better than 2%FS
Lifetime	>5 years
Temperature Measurement	Accuracy +/- 2°C
Supply Current (Is)	<6mA (streaming 1 sample per second), <17mA Peak
Operating Temperature	-30°C to +60°C
Storage Temperature	-30°C to +60°C
Barometric Pressure Range	500 to 1200mbar (O ₂ % version) 100 to 1500mbar (ppO ₂ version)

All performance measurements are at STP unless otherwise stated.

PART NUMBERING SYSTEM

LOX - XX

Type

01: ppO₂ type
02: O₂% Type

For additional information or help in choosing the most suitable sensor for your application, please advise as we can provide full application and technical support on all products.

