DATA SHEET

DESIGN • MANUFACTURE • CUSTOMISE • CONFIGURE

LuminOx O_2 Sensors

Luminescence-based Optical Series

FEATURES

- Luminescence–based optical technology, NOT electrochemical
- Contains no hazardous materials; RoHS & REACH compliant
- Connects directly to a microcontroller without any additional circuitry
- Factory calibrated
- High accuracy
- Maintenance free[a]



Housing	Supply Voltage	Operating Temp	Output Digital	Response Time
COMPACT	4.5 - 5.5 V VOLTAGE	+10°C to +45°C TEMPERATURE	TTL	< 30 secs

BENEFITS

- Compact, diffusion-type housing with sealed base
- Low power, long life due to non-depleting sensing principle
- Low cost

TECHNICAL SPECIFICATIONS

Supply voltage (Vs)	4.5—5.5V_{DC}
Supply current (Is)	<7.5mA (streaming one sample per second), <20mA Peak
Output Type	3.3V TTL level USART
Temperature	
Operating:	+10°C to +45°C
Storage:	-30°C to +60°C
Humidity	0—99% Rh (non-condensing)
Barometric pressure range	500—1200mbar

OUTPUT VALUES[b]

gen range	0—25% O_2
Oxygen pressure range	0—300mbar ppO_2
Response time	T90 < 30s (typical)
Accuracy	
ppO_2	< 2% FS
Temperature	Indication only
Pressure	±5mbar
O_2	Determined by ppO_2 & pressure accuracy
Resolution	
ppO_2	0.1mbar
Temperature	0.1°C
Pressure	1mbar
O_2	0.01%
Lifetime	> 2 years

Other sensor options available on request, email: technical@sstsensing.com

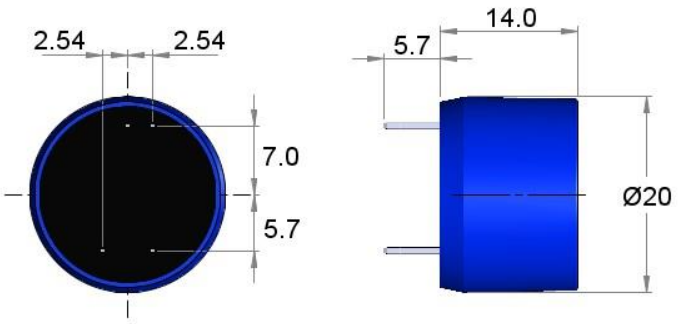
Need help? Ask the expert
Tel: + 44 (0)1236 459 020
and ask for "Technical"

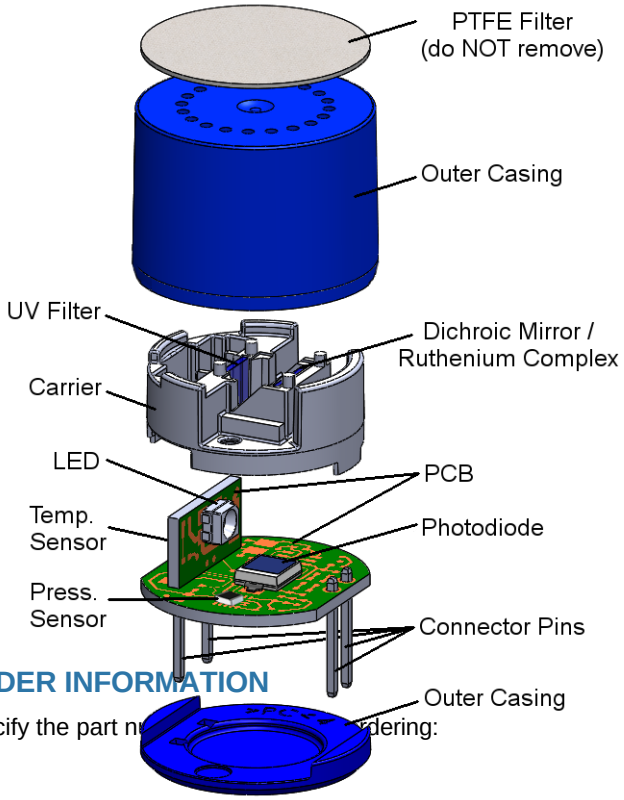
OUTLINE DRAWING

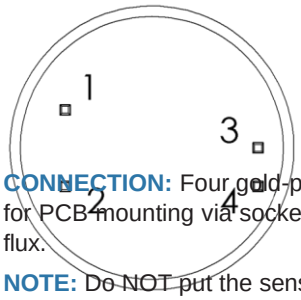
All dimensions shown in mm. Tolerances = ±0.5mm.

NOTES

a) The sensor housing can be cleaned using a damp cloth. Do NOT immerse the sensor in any cleaning media.
b) At ambient conditions. All performance measurements are at STP unless otherwise stated. Following extreme temperature fluctuations, re-calibration may be required.







Pin	Designation
1	Vs (+5V)
2	GND (0V)
3	3.3V USART Sensor Transmit
4	3.3V USART Sensor Receive

CONNECTION: Four gold-plated pins (0.64mm) on a 2.54mm grid for PCB mounting via sockets or hand soldering using no-clean flux.

NOTE: Do NOT put the sensor through a PCB washing process.

NOTE: Always apply power to sensor pins 1 and 2 before attempting to communicate on pins 3 and 4.

The sensor should be treated as an electronic component and handled using the correct ESD handling precautions.

ORDER INFORMATION

Specify the part number when ordering:

L O X - 0 2 - S

SENSOR CONSTRUCTION

CAUTION

Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.
Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.
Do NOT use chemical cleaning agents.

These products must not be used in safety applications where product failure could cause injury or risk to life.

Failure to comply with these instructions may result in product damage.

INFORMATION

As customer applications are outside of SST Sensing Ltd.'s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application.

For technical assistance or advice, please email:
technical@sstsensing.com

General Note: SST Sensing Ltd. reserves the right to make changes to product specifications without notice or liability.
All information is subject to SST Sensing Ltd.'s own data and considered accurate at time of going to print.

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RoHS
REACH COMPLIANCE