

# Data Sheet

## LuminOx O<sub>2</sub> Sensor Fluorescence Optics Series



### Characteristic

- Non-electrochemical optical techniques based on fluorescence
- Free from harmful substances; comply with RoHS & REACH standards
- Direct connection to the microcontroller, no additional circuitry required
- Plant calibration
- high-accuracy
- Maintenance free <sup>a</sup>



<b>hull</b>  COMPACT	<b>service voltage</b>  4.5 - 5.5 V VOLTAGE	<b>working temperature</b>  -30°C to +60°C TEMPERATURE	<b>numeric output</b>  TTL	<b>response time</b>  < 30 secs
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### merit

- low cost
- Due to the non-consumption sensing principle, it has low power consumption and long life
- Compact size

### technical specifications

service voltage (Vs)	5V <sub>DC</sub> (4.5V <sub>DC</sub> min. —5.5V <sub>DC</sub> max.)
Power supply current (Is)	<7.5mA (streaming one sample per second), <20mA peak
Output type	3.3V TTL level UART (up to 5V)
temperature	
work :	-30°C ~ +60°C
lay in :	-30°C ~ +60°C 0—99%
humidity	Rh (non-condensing)
Range of atmospheric pressure	
LOX-01	100—1400mbar
LOX-02	500—1200mbar

### Output value <sup>b</sup>

Range of oxygen (LOX-02)	0—25% O <sub>2</sub>
Range of oxygen pressure	0-300mbar ppO <sub>2</sub> T
response time	90 <30s (typical)
Accuracy-ppO <sub>2</sub>	<2% FS for reference only ±5 mbar
temperature	
Pressure (LOX-02)	& It is determined by ppO <sub>2</sub> and pressure accuracy
O <sub>2</sub> (LOX-02)	
Resolution-ppO <sub>2</sub>	0.1mbar
temperature	0.1°C
Pressure (LOX-02)	1mbar
Life of 2 (LOX-02)	0.01% > 5 years

Additional sensor options may be provided upon request. Please email us at:

[technical@sstsensing.com](mailto:technical@sstsensing.com)

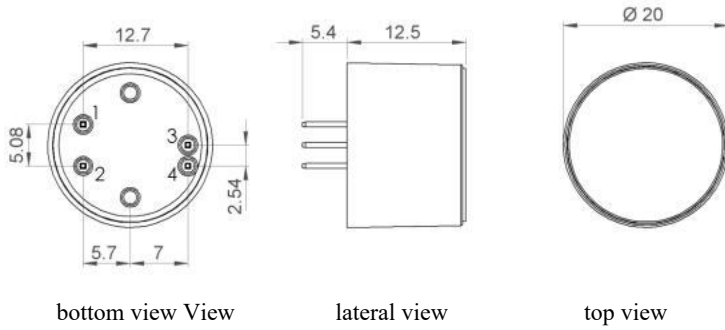
**Need help? Call + for expert advice  
44 (0) 1236 459 020 and Seek  
Technical assistance**



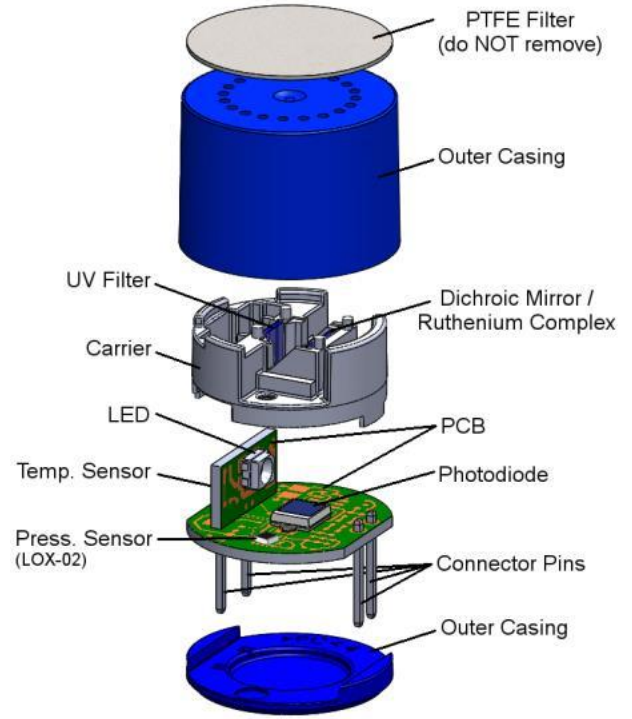
a) The sensor housing can be cleaned with a damp cloth. Do not immerse the sensor in any cleaning medium.  
b) Under ambient conditions. All performance measurements are made at standard temperature and pressure unless otherwise indicated. Re-calibration may be required after extreme temperature fluctuations.

## outside drawing

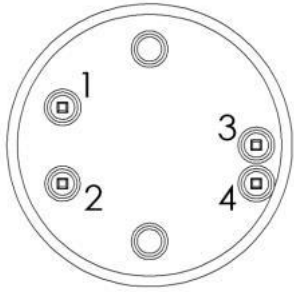
All dimensions are in mm. Tolerance = ±0.5mm.



## Sensor structure



## Electrical interface



Pin	definition
1	Vs (+5V)
2	GND (0V)
3	3.3V UART* sensor transmitter
4	3.3V UART* sensor receiver

\* Resistant to 5V.

**Connection:** Four gold-plated pins (0.64mm<sup>2</sup>) are located on the 2.54mm gate for PCB installation through the socket or by manual soldering using no-clean flux.

**Note:** If manual welding is performed, the recommended welding temperature is 370°C and the welding time for each pin is less than 3 s.

**Note:** Do not place the sensor in the PCB cleaning process.

**Note:** Before communicating through pin3 and pin4, make sure to power the sensor pin1 and pin 2.

Sensors should be treated as electronic components and treated with proper ESD handling precautions.

## Order information

Use the following naming rules to generate the specific model of sensor you need.

L O X - X X

type
<b>01</b> Measurement of 0-300mbar ppO <sub>2</sub> and temperature (°C)
<b>02</b> Measurement of 0-300mbar ppO <sub>2</sub> , 0-25% O <sub>2</sub> , temperature (°C) and 500-1200mbar atmospheric pressure

### 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.

**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](mailto: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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