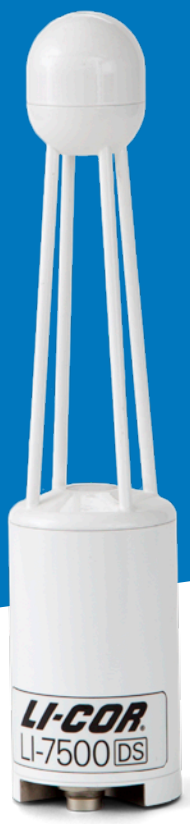
LI-7500DS

Open Path CO_2/H_2O Gas Analyzer

Water vapor and carbon dioxide are the two most influential greenhouse gases affecting global climate change. Fluxes of both gases can be measured directly using the LI-7500DS and the eddy covariance method.



Cited in more than 3500 publications and trusted as the standard by more than 20 worldwide networks, the LI-7500 family of CO_2/H_2O gas analyzers are renowned for providing stable, dependable performance.

The LI-7500DS delivers exceptional data in a streamlined, affordable design. Designed to be robust, with low maintenance and power requirements, the LI-7500DS is ideal for long-term deployments in remote locations.

To learn more about the LI-7500DS visit **licor.com/LI-7500DS**.

Key Features

- Open-path, omnidirectional design provides continuous data sampling with minimal flow distortion
- Nominally draws just 4 watts of power
- SmartFlux® System processes real-time fluxes on-site using EddyPro® Software
- SmartFlux syncs instrument clocks using GPS and PTP for precise data synchronization within and across sites
- Improved, temperature-controlled optics deliver stable measurements, even in extreme conditions
- Compatible with nearly all fast response, three-dimensional sonic anemometers to meet your unique research needs

LI-COR®

LI-7500DS Specifications

CO_2 Measurements

Calibration range: 0 to 3000 µmol mol^{-1}

Accuracy: Within 1% of reading

Zero drift (per °C):

- ±0.1 ppm typical
- ±0.3 ppm maximum

RMS noise (typical @ 370 ppm CO_2):

- **@5 Hz:** 0.08 ppm
- **@10 Hz:** 0.11 ppm
- **@20 Hz:** 0.16 ppm

Gain drift (% of reading per °C @ 370 ppm):

- ±0.02% typical
- ±0.1% maximum

Direct sensitivity to H_2O (mol CO_2 mol^{-1} H_2O):

- ±2.00E-05 typical
- ±4.00E-05 maximum

H_2O Measurements

Calibration range: 0 to 60 mmol mol^{-1}

Accuracy: Within 1% of reading

Zero drift (per °C):

- ±0.03 mmol mol^{-1} typical
- ±0.05 mmol mol^{-1} maximum

RMS noise (typical @ 10 mmol mol^{-1} H_2O):

- **@5 Hz:** 0.0034 mmol mol^{-1}
- **@10 Hz:** 0.0047 mmol mol^{-1}
- **@20 Hz:** 0.0067 mmol mol^{-1}

Gain drift (% of reading per °C @ 20 mmol mol^{-1}):

- ±0.15% typical
- ±0.30% maximum

Direct sensitivity to CO_2 (mol H_2O/mol CO_2):

- ±0.02 typical
- ±0.05 maximum

General

Fundamental Gas Sampling Rate: 150 Hz

Bandwidth: 5, 10, or 20 Hz; software selectable

Type: Absolute, open-path, non-dispersive spectroscopy

Detector: Thermoelectrically cooled lead selenide

Path Length: 12.5 cm (4.92")

Air Temperature Thermistor: 10K ohm @ 25 °C thermistor

- **Measurement Range:** -40 to 70 °C
- **Sensor Accuracy:** ±0.25 °C from -20 to 70 °C
- **Resolution:** 0.003 °C @ 25 °C

Pressure Sensor:

- **Measurement Range:** 20 to 110 kPa
- **Sensor Accuracy:** ±0.4 kPa from 50 to 110 kPa
- **Resolution:** 0.006 kPa

Outputs: Ethernet

Operating Temperature Range: -25 to 50 °C (-40 to 50 °C verification on request)

Relative Humidity Range: 0-95% (non-condensing)

Weatherproof Rating: Tested to IEC IP65 standard

User Interface: Windows® PC software

Power Requirements: 10.5 to 30 VDC

Steady-State Power Consumption: 4 W typical at 25 °C 8 W max over operating range of -25 to 50 °C

Head:

- **Size:** Diameter 6.5 cm (2.6"), Length 30 cm (11.8")
- **Weight:** 0.67 kg (1.5 lbs); 1.3 kg (2.9 lbs) with mounting post

Head Cable Length: 200 cm (78.7")

DSI Box:

- **Size:** 13.24 × 14.64 × 6.24 cm (5.2" × 5.8" × 2.5")
- **Weight:** 0.93 kg (2.1 lbs)

Specifications subject to change without notice.

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