

NEW

Fast, accurate, and ultra-stable



New Enhanced Performance version provides measurements of carbon dioxide and water vapor *with minimal drift*

Carbon Dioxide Analyzer (model CDA-22)

Features and Benefits

- CO₂ and H₂O mixing ratios measured simultaneously
- High resolution absorption spectra always viewable
- CO₂ (dry mol basis) obtained from measured high resolution CO₂ and H₂O absorption spectra
- Ideal for applications requiring highest accuracy (Enhanced Performance model)
- New EP model reports over extremely large ranges with ultra-high stability

The Los Gatos Research (LGR) Carbon Dioxide Analyzer (CDA) provides measurements of carbon dioxide (CO₂) and water vapor (H₂O) simultaneously with unsurpassed precision, accuracy and dynamic range. The instrument reports CO₂ on a dry basis (accurately corrects for dilution and absorption line broadening effects) by analyzing high resolution lineshape spectra and without the need for sample drying.

All LGR analyzers are simple to use, rugged and require low power which makes them ideal for a wide variety of field studies and lab applications.

LGR's new "Enhanced Performance" series incorporates proprietary internal thermal control for ultra-stable measurements with unsurpassed precision and accuracy. Moreover, only LGR's analyzers provide reliable measurements (*with guaranteed specs*) at concentrations more than 10 times higher than typical ambient levels.

The Analyzer uses LGR's patented Off-Axis ICOS technology, a fourth-generation cavity enhanced absorption technique. Off-axis ICOS

has many advantages over conventional cavity ringdown spectroscopy (CRDS) techniques such as being simpler to build, alignment insensitive, having a much wider dynamic range, and not requiring expensive, power consuming auxiliary components.

The Analyzer has an internal computer that can store data practically indefinitely on its hard disk drive and send real time data to a data logger via the digital (RS232), analog and Ethernet outputs.

As with all LGR analyzers, the CDA may be controlled remotely via the Internet.. This capability allows the user to operate the analyzer using a web browser practically anywhere Internet access is available. Furthermore, remote access allows bios-level control of the instrument and provides the opportunity to obtain data and to diagnose the instrument operation without being on site.

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Performance Specifications

Precision (1 σ , 5 sec / 100 sec):

CO₂: 150 ppb / 50 ppb
H₂O: 100 ppm / 30 ppm

Maximum Drift (Enhanced Performance model) (15 min average, at STP, over 24 hrs):

CO₂: 120 ppb
H₂O: 100 ppm or 1% reading, whichever greater

Measurement Rates:

0.01 – 10 Hz (Standard model)
0.01 – 1 Hz (Enhanced Performance model)
(external pump required for <10 second flow response)

Accuracy (over entire temperature range):

< 1% (reading) without calibration (Standard models)
< 0.25% (reading) without calibration (-EP model)
(much higher accuracy with calibration)

Measurement Range (meets all specs; all models):

CO₂: 200 – 20000 ppm
H₂O: 7000 – 70000 ppm

Operational Range (all models)

(external calibration may be required):

CO₂: 0 – 200,000 ppm
H₂O: 0 – 70,000 ppm (< 100% relative humidity)

Sampling Conditions (all models):

Sample Temperature: -10 – 50 °C
Operating Temperature (standard model): 5 – 45 °C
Operating Temperature (EP model): 0 – 40 °C
Ambient Humidity: 0-100% RH non-condensing

Outputs (all models):

Digital (RS232), analog (both gases), Ethernet, USB

Power Requirements:

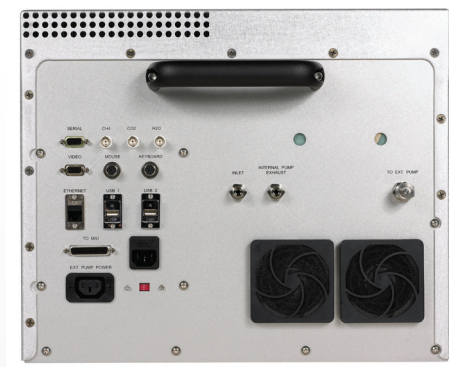
115/230 VAC, 50/60 Hz
Standard models: 100 watts
Enhanced Performance model: 300 watts on startup
Enhanced Performance model: 150 watts steady state

Dimensions:

Benchtop Package (Standard model): 10" × 38" × 14"
Rackmount Package (Standard model): 8.75" × 19" × 24"
Rackmount Package (Enhanced Performance model): 14" × 19" × 24"

Weight:

65 pounds (Standard models)
90 pounds (Enhanced Performance model)



Ordering Information

Rackmount (Standard model): 907-0002

Benchtop (Standard model): 908-0002

Rackmount (Enhanced Performance model): 911-0002

Accessories

908-0003-9001: Multiport Inlet Unit – 16 inlet port multiplexer

908-0003-9002: Multiport Inlet Unit – 8 inlet port multiplexer

908-0008-9009: N920 Pump –
provides flow-through (1/e) time = 1.2 secs

908-0001-9011: N940 Pump –
provides flow-through (1/e) time = 0.7 secs