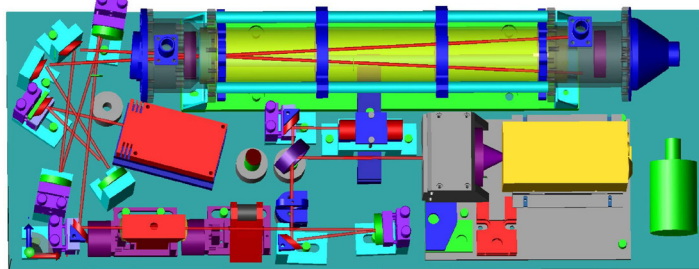




## Single Laser Quantum Cascade Laser Trace Gas Monitors: The Mini Monitor

*Sensitive, rapid, highly specific and continuous measurements of atmospheric trace gases in ambient air.*



### APPLICATIONS

- Detection of a wide variety of atmospheric trace gases, such as: methane, nitrous oxide, nitric oxide, nitrogen dioxide, carbon monoxide, carbon dioxide, formaldehyde, formic acid, ethylene, acetylene, carbonyl sulfide, acrolein, ammonia and others.
- N<sub>2</sub>O Monitors provide simultaneous monitoring of N<sub>2</sub>O, water vapor and either CO, CO<sub>2</sub>, or CH<sub>4</sub>.
- Isotopic monitoring of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.
- Combustion monitoring and characterization.
- Isotopic monitoring for source/sink characterization.
- Eddy Covariance measurements for nitrous oxide and other trace gases.
- Fast response plume studies.
- Breath analysis.
- Air quality monitoring.
- Mobile measurements from ship, truck, and aircraft platforms.

### ADVANTAGES

- Our smallest QC laser trace gas monitor with electronics and optics in a single compact unit.
- Absolute trace gas concentrations without calibration gases.
- Fast time response.
- Free from interferences by other atmospheric gases or water vapor.
- Turnkey and unattended operation.
- Cryogen free.
- Ready to be deployed in field measurements and on moving platforms.
- Optical path length up to 76 meters.
- Data rates up to 1 to 10 Hz (depends on specific instrument and vacuum pump)



# AERODYNE RESEARCH, Inc.



## POPULAR INSTRUMENTS

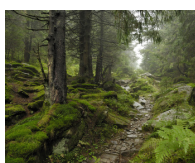
HIGHER PRECISION AND ACCURACY IS  
OBTAINABLE WITH MID-INFRARED LASERS



OCS, CO<sub>2</sub>, H<sub>2</sub>O



NH<sub>3</sub>



CO<sub>2</sub> Isotopes



N<sub>2</sub>O, CO<sub>2</sub>, CO, H<sub>2</sub>O



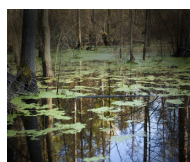
HCHO



C<sub>2</sub>H<sub>6</sub>, CH<sub>4</sub>



CO



CH<sub>4</sub>, N<sub>2</sub>O, H<sub>2</sub>O

### MECHANICAL SPECIFICATIONS FOR COMPACT SINGLE QCL INSTRUMENT:

Dimensions: 430 mm x 660 mm x 270 mm (W x D x H) (core instrument)

Weight: 25 kg (core instrument)

Electrical Power: 500 W, 120/240 V, 50/60 Hz (with Varian IDP-3 vacuum pump)

### REFERENCES:

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