CAPS PM_{ex} Monitor

Accurate and Precise Continuous Monitoring of Particle Optical Extinction (Scattering + Absorption)

- *Single Wavelength*
- *Multiple (1-4) Wavelengths*
  (different box dims and power requirements)

Attributes

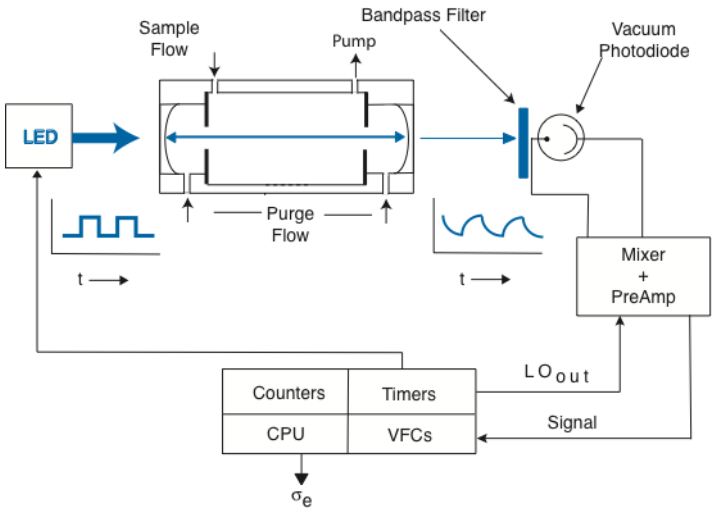
- Visible (red, green or blue) measurement of particle optical extinction using patented Cavity Attenuated Phase Shift technology.
- Measurement of ambient optical extinctions at the 1 Mm^{-1} level.
- Climate change research
- Optical properties closure.
- Roadside monitoring.
- Combustion plume analysis.
- Aircraft engine exhaust monitoring.

Advantages

- Choice of 5 wavelengths:

Far Blue	(405 nm)
Blue	(450 nm)
Green	(525 nm)
Red	(630 nm)
Far Red	(660 nm)

- No calibration required.
- Autonomous operation:
  - No zero air.
  - Automated background subtraction.
- Linear response (0 - 3000 Mm^{-1}).
- Maintenance-free.



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Specifications

MEASUREMENT SPECIFICATIONS	Each Cell
Range	0-3,000 Mm^{-1}
Resolution	0.01 Mm^{-1}
Precision (2σ, 1 s) (2σ, 60 s)	1.5 Mm^{-1} 0.3 Mm^{-1}
Time Response (10-90%)	1-2 s
Baseline Drift	Baselines Taken as Often as Required
Linearity	<± 10 Mm^{-1} at 1000 Mm^{-1}
Flow Rate (lpm)	0.85

1 Year Manufacturer's Warranty

Physical Specifications

Cell Pressure: ambient

Cell Temperature: ~5 °C above ambient

	1Cell	4 Cells
Power Usage:	< 40 W	< 100 W
Weight:	< 14 kg	< 20 kg
Size:	~65 cm x 43 cm x 23 cm (L x W x H) [19" rack mount, 5U, 24" deep]	65 x 43 x 31 cm [19", 7U, 25"]

Data Output

Display	Front Panel, 1 second time constant(± 1 digit)
RS-232	Rear Panel, DB-9 Female Connector (Null Modem cable provided)
USB	Rear Panel, Female B Connector (Male A to Male B cable provided)
Ethernet	Rear Panel, RJ-45 port
On-Board	Storage Capacity > 10 years continuous operation

REFERENCES

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