CAPS PM_{ex} Monitor

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

- *Single Wavelength*
- *Dual Wavelengths*

Attributes

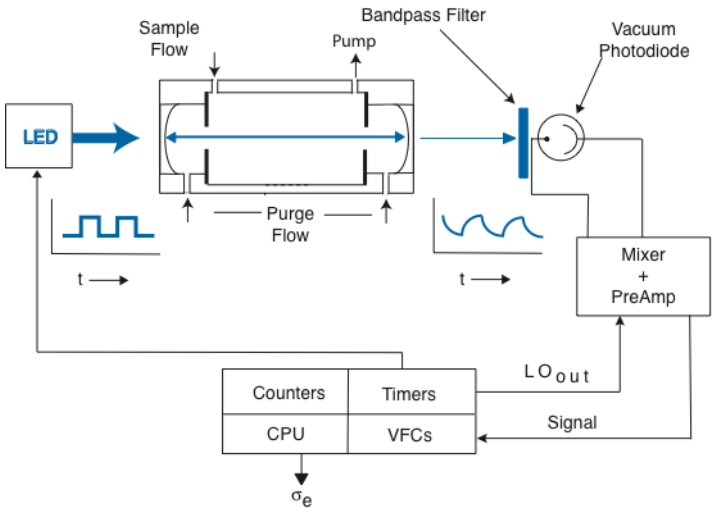
- Ultraviolet or visible (red, green or blue) measurement of particle optical extinction using patented Cavity Attenuated Phase Shift (CAPS) technology
- Measurement of ambient optical extinctions at the < 1 Mm^{-1} level with 1s response time
- Climate change research
- Optical properties closure
-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

Advantages

- Choice of 6 wavelengths:

Ultra Violet	(365 nm)
Far Blue	(405 nm)
Blue	(450 nm)
Green	(530 nm)
Red	(630 nm)
Far Red	(660 nm)

- No calibration required
- Automated and autonomous operation:
  - No zero air
  - Automated background subtraction
- Linear response (1%)
- Minimal maintenance (periodic change of filter)



CAPS PM_{ex} Monitor

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	2 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]	

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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