

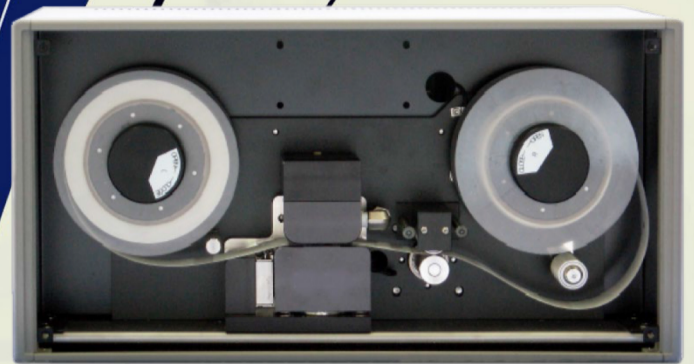
Black Carbon Monitor

Model 3130

The Model 3130 is a continuous soot monitoring system for fully automated, high-sensitivity, continuous measurement of light absorption by black carbon aerosols.

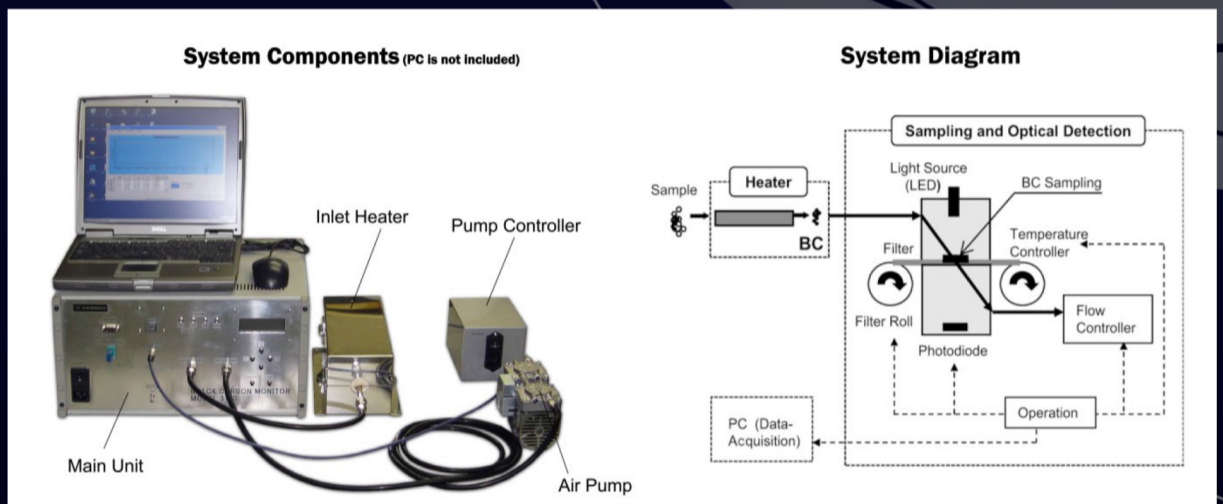
Applications

- Assessment of black carbon causing health hazards in metropolitan environments
- Creation of basic data for environmental assessment
- Black carbon impact assessment for global warming studies
- Black carbon source monitoring
- Investigation and monitoring of black carbon diffused from remote locations
- Impact assessment of how black carbon affects mountain and polar snow regions



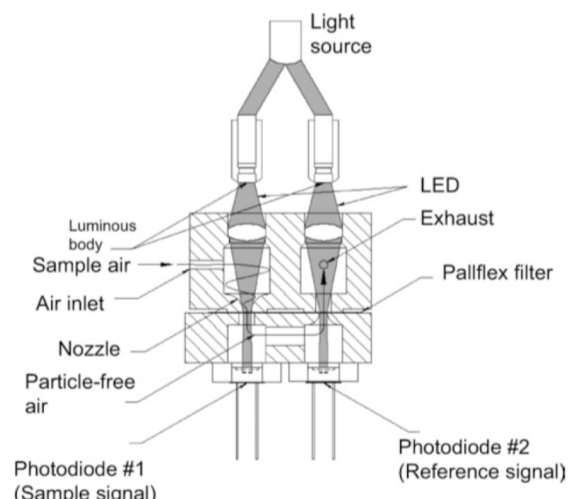
Features & Benefits

- Advanced detection sensitivity enables measurement in low concentrated areas
- The monitor measures black carbon concentration in the air in real time
- Preprocessing of sample air improves measurement accuracy
- Automatic filter feed enables continuous measurement for extended periods



■ Cross-section of the filter and optical setup

The Model 3130 monitors changes in transmittance across an automatically advancing quartz fiber filter tape using an LED at a 565 nm wavelength. To achieve measurements with high sensitivity and a lower detectable light absorption coefficient, the Model 3130 uses a double-convex lens and optical bundle pipes to maintain high light intensity and signal data, obtained at 1000 Hz.



Black Carbon Monitor Model 3130 Specifications

Measurement Method	Light Absorption Method
Light Source	LED Wavelength 565 nm
Lowest Detection	0.05 $\mu\text{g}/\text{m}^3$ @1 min @0.8 L/min
Measurement Interval	1 min ~ 5 min
Collection Flow Rate	0.8 L/min
Collection Filter	Fiberglass Filter (Length : 12 m)
Display	Display (LCD) : 20 characters \times 4 lines Shows Time, Black Carbon Concentration, Alarm etc
Data Output	USB
Power Supply	AC100 V \pm 10% , 6A
Dimension	430(W) \times 352(H) \times 222(L)mm
Weight	17 kg
Components	Main Unit, Inlet Heater, Pump, Pump Controller, 2.5 μm Cut Impactor, Power Cable, CD for Software

Specifications subject to change without notice.