



Measurement Principle

Real-time sample collection and analysis of Aerosol Black Carbon mass concentration in air using the Aethalometer optical absorption method.

Optical Source

880 nm wavelength (IR) LED

Measurement Range

0-1 mg BC/m³ for 15-min @ 50 mL/min

Measurement Resolution

0.001 µg BC/m³

Measurement Precision

±0.100 µg BC/m³, 1-min avg., 150 mL/min flow rate

Measurement Time Base

1 sec or 1 or 5 min

Flow Rate (User setting)

50 to 225 mL / min

Data Storage

Internal data storage capacity of 3 months (1-min time base)

Communications

USB Connectivity to Windows®-based PC

Data Output

Data streaming via USB. Data polling via control command protocol

PC Software

microAeth COM software is included. Provides visual interface including real-time BC mass concentration values and graphing. Facilitates calibration routines, downloading data, and uploading new instrument firmware

Consumables

One filter strip per sampling event

Filter Media

Teflon-coated glass fiber

Sample Spot Size

3 mm

Vacuum Pump

Internal with built in mass flow control

Dimensions

4.6 in (117 mm) L x 2.6 (66) W x 1.50 (38) D

Weight

0.55 lbs (250 g)

Power

Internal rechargeable lithium-ion battery

Power Supply Adapter

100-240VAC (50/60 Hz) input, 3.5-5VDC variable output (500mA)

Charging Time

4 hours to full charge (using A/C adapter, turned off)

Total Run Time (single battery charge)

> 24-hour run time at 5-min time base, 150mL/min flow rate

Operation Environment

0 to 45C, non-condensing

Package Includes

microAeth Model AE51 instrument, 1m conductive sample tubing, AC-power charging adapter, USB charging/interconnect cable, Pack of 5 filter strips, microAeth-COM software, Quick Start Guide (hard copy), and Operating manual (electronic copy).

Specifications are subject to change without notice.

