



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, 1 min or 5 min

Flow Rate (User setting)

50 to 150 mL / min

Data Storage

4 MB flash memory, providing up to 1 month data storage when operating on a 5 minute timebase, and more than 4 days when operating on a 1 minute timebase.

Communications

USB Connectivity to Windows®-based PC with microAethCOM, or data stream via digital output through mini USB port (Magee can supply command protocols).

Data Output

Stored files are output to microAethCOM software and stored in .csv file format. Quickview graphs are provided by microAethCOM.

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

Typical: one filter strip per sampling event

Filter Media

T60 Teflon-coated borosilicate glass fiber

Sample Spot Size

3 mm

Vacuum Pump

Internal 5 VDC 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 3.6 VDC rechargeable lithium-ion battery

Power Supply Adapter

Input: 100-240VAC /50-60 Hz/ 0.2 A

Output: 5VDC/0.5A max

Charging Time

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

Total Run Time (single battery charge)

24 hours @ 5 minute time base at 100 mL/min

Operation Environment

0 to 40 °C, non-condensing

Package Includes

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

Specifications are subject to change without notice.



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