

AEROCET 531S Handheld Particle Mass Profiler & Counter

2-in-1 performance!



Met One Instruments, Inc.

Particle Mass Profiler and Counter in a Single Handheld Unit

The Aerocet 531S is a small, handheld, battery operated, and completely portable unit. This unit provides both particle counts and mass PM measurements.

Six Mass Ranges and Four Particle Sizes

Six important mass size ranges (PM1, PM2.5, PM4, PM7, PM10, and TSP) are displayed in mass mode as well as four popular cumulative particle sizes (0.5 μ m, 1.0 μ m, 5.0 μ m and 10.0 μ m) in count mode.

Tailored Mass Conversion

The particle counts from eight size ranges are converted to mass using a proprietary algorithm for typical-density aerosols. Accommodation for special particulate with different densities is provided through user-programmable "K-factors."

Flexible Data Interfaces

The Aerocet 531S stores up to 6,257 records. These records can be viewed on the display, or transferred to a computer via USB or RS232. Our included Comet download utility makes file transfers easy. Data files can be imported into Excel*. Also, print hard copies with the optional G3115 printer.

Temperature and Relative Humidity Option

A plug-and-play option that immediately adds ambient temperature and relative humidity capabilities to the displayed and logged data.



Whatever your particular needs,
the right choice is only natural.

Applications:

Controlled Environments

Indoor Air Quality

Hospitals & Clinics

Process Control

HVAC Applications

Filter Testing

Mining & Ore Processing

Emission Sourcing

OPERATING PRINCIPLE

Counts individual particles using scattered laser light and calculates the equivalent mass concentration using a proprietary algorithm

PERFORMANCE

Mass Mode

Mass Concentration Ranges PM1, PM2.5, PM4, PM7, PM10, and TSP
 Concentration Range 0 – 1,000 $\mu\text{g}/\text{m}^3$
 Sample Time - Mass Mode 1 minute

Particle Mode

Particle Size Range Four channels—0.5 μm , 1.0 μm , 5.0 μm and 10.0 μm
 Concentration Range 0 – 3,000,000 particles per cubic foot (105,900 particles/L)
 Sample Time - Particle Mode 1 minute
 Accuracy $\pm 10\%$, to calibration aerosol
 Sensitivity 0.5 μm
 Flow Rate 0.1 cfm (2.83 lpm)

ELECTRICAL

Light Source Laser diode, 90 mW, 780 nm
 Power 7.4V Li-ion battery pack —provides 20 hours of typical intermittent operation, up to 10 hours continuous use
 AC Adapter/Charger Li-ion battery charger, 100 – 240 VAC, 50/60Hz, 0.2A
 Communications RS-232, USB
 Certifications Meets or exceeds CE and ISO 21501
 Mass Certifications Requires proper use of appropriate K-factors for material being measured

INTERFACE

Display 16-character \times 4-line LCD
 Keyboard 7-key membrane type

PHYSICAL

Size Height = 6.25" (15.9 cm) Width = 4.0" (10.2 cm)
 Thickness = 2.1" (5.4 cm)
 Weight 2.0 lbs - 32oz (0.9 kg)

ENVIRONMENTAL

Operating Temperature 0° to +50°C
 Relative Humidity < 95% (non-condensing)
 Storage Temperature -20° to +60°C

ACCESSORIES

Supplied
 Operation Manual
 USB Cable
 Communications Software (Comet)
 AC Adapter / Battery Charger
 Isokinetic Sample Probe
 Carrying Case
 Zero Particulate Filter

Optional
 RH & Temperature Probe (PN G3120)
 Flow Meter (PN 9801)
 Portable Printer (PN G3115)
 Custom Serial Cable (PN 3228)
 Particle View Software (PN Particle View)

* Excel is a registered trademark of Microsoft Corporation.



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