

## AEROCET 531S Particle Mass Profiler & Counter

The AEROCET 531S is a full-featured, battery operated, hand-held mass monitor or particle counter. This amazing unit simultaneously measures 6 mass concentration ranges or five particle count sizes (0.3 $\mu$ m, 0.5 $\mu$ m, 1.0 $\mu$ m, 5.0 $\mu$ m and 10 $\mu$ m). View sample history data in either mode.

### Key Features:

#### Aerosol Mass and Particle Count Measurements in a Single Hand held Unit

The AEROCET 531S is a small, hand-held, battery operated, and completely portable unit. This unit provides both particle counts and mass PM measurements.

#### Six Mass Ranges and Five Particle Sizes

Six important mass size ranges (PM<sub>1</sub>, PM<sub>2.5</sub>, PM<sub>4</sub>, PM<sub>7</sub>, PM<sub>10</sub>, and TSP) are displayed in mass mode as well as five popular particle sizes 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 over 6,000 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. Import sample data into a spreadsheet or print hard copies using 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.



## Applications

- Controlled Environments
- Industrial/Occupational Hygiene
- Indoor Air Quality
- HVAC Applications
- Hospitals & Clinics
- Filter Testing

\*Note: Not recommended for continuous outdoor use. Avoid sampling in rainy or foggy conditions.

## Mass Mode

Mass Concentration Ranges	PM <sub>1</sub> , PM <sub>2.5</sub> , PM <sub>4</sub> , PM <sub>7</sub> , PM <sub>10</sub> , and TSP
Sensitivity	High = 0.3µm, Low = 0.5µm
Concentration Limit Sample Time	0 – 1,000 µg/m <sup>3</sup> 1 minute

## Particle Count Mode

Concentration Limit Sample Time	0 – 3,000,000 particles per cubic foot (105,900 particles/L) 1 minute
Size Accuracy	± 10%
Sensitivity	User selectable (0.3µm / 0.5µm)
Flow Rate	0.1 cfm (2.83 lpm)
Particle Size Ranges	High sensitivity: 0.3µm, 0.5µm, 1.0µm, 5.0µm and 10µm Low sensitivity: 0.5µm, 1.0µm, 5.0µm and 10.0µm

## Electrical

Light Source	Laser diode, 90 mW, 780 nm
Battery Pack	7.4V Li-ion battery pack
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
Battery Life	6 hours continuous operation Up to 20 hours of typical (intermittent) operation.

<b>Interface</b> Display / Keyboard	16-character × 4-line LCD / 7-key membrane keypad
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## Physical

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

## Environmental

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

*Specifications are subject to change at any time.*

## SUPPLIED ACCESSORIES

User Manual	Comet Communications	USB Cable
Isokinetic Sample Probe	Software Zero Particulate Filter	AC Adapter / Battery Charger
Carrying Case	Calibration Certificate	

## OPTIONAL ACCESSORIES

RH & Temperature Probe  
Portable Printer  
Flow Meter  
Custom Serial Cable  
Wall/Tripod Mount

