MICROTRAC
a VERDER company

PARTICLE SIZE ANALYZER

S3500

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The Microtrac S3500 is a industry-preferred Laser Diffraction (LD) analyzer, ideally suited for various particle characterization tasks. It is the first particle size analyzer that uses three precisely placed red laser diodes to accurately characterize particles like never before.

The patented Tri-Laser System provides accurate, reliable and repeatable particle size analysis for a diverse range of applications by utilizing the proven theory of Mie compensation for spherical particles and the proprietary principle of Modified Mie calculations for non-spherical particles. The S3500 measures particle size from 0.02 to 2,800 µm.

Laser Diffraction with red and blue lasers: BLUEWAVE

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FEATURES

- Tri–laser, red, multi-detector, multi-angle optical system
- Algorithms that utilize Mie compensation and Modified Mie calculations for non-spherical particles
- Measurement capability from 0.02 to 2,800 µm
- Wet and dry measurements
- Enclosed optical path ensures complete protection of the optical components leading to little or no operator intervention

PRODUCT ADVANTAGES

- Utilizing three red lasers, increases the range of measurement, giving you the flexibility to conduct analysis on a wide range of samples
- Proprietary Modified Mie calculations allow users to accurately measure complex particles that other particle analyzer struggle to accurately characterize
- Seamless transition from wet to dry measurement reduces down time
- Fixed detectors provide rugged durability and assure proper positioning
- Small bench footprint reduces demand on valuable laboratory space

TYPICAL APPLICATIONS

Used in various fields such as: beverages, biotechnology, chemicals, food, medicine / pharmaceuticals, metal powders, metals, pigments, geology / metallurgy, ...

chemicals

battery materials

powders

To find the best solution for your particle characterization needs, visit our application database

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PARTICLE SIZE ANALYZER S3500

TECHNICAL DATA

Measuring range	0.02 µm - 2.8 mm
Measuring principle	Laser diffraction
Lasers	3x Red 780 nm
Laser power	3 mW nominal
Detection system	Two fixed photo-electric detectors with logarithmically spaced segments placed at correct angles for optimal scattered light detection from 0.02 to 165 degrees using 151 detector segments.
Data	Volume, number and area distributions as well as percentile and other summary data
Data format	Stored in ODBC format in encrypted Microsoft Access Databases to ensure compatibility with external statistical software applications.
Data integrity	Data integrity may be ensured using FDA 21 CFR Part 11 compliant security features including password protection, electronic signatures and assignable permissions
Measuring time	~ 10 to 30 seconds
Power requirements	AC input: 90 - 132 VAC, 47 - 63 Hz, single phase 200 to 265 VAC, 47 - 63 Hz, single phase
Power consumption	25 W nominal, 50 W max. (depending on options installed)
Environmental conditions	Temperature: 5° to 40° Celsius (50° to 95° Fahrenheit) Humidity: 90% RH, non- condensing maximum Storage temperature: -10° to 50° Celsius (14° to 122° Fahrenheit) (dry only) Pollution: Degree 2
Physical specifications	Case Material: Steel and impact resistant plastic Exterior surfaces are finished with corrosion resistant paint or plating
Dimensions (W x H x D)	~ 560 x 360 x 460 mm (22 x 14 x 18 in)
Weight	~ 27 kg (60 lbs)
Eductor air supply	100 psi (689 kPa) maximum pressure 5 CFM (8,5 m3/h) at 50 psi (345 kPa) minimum flow rate Free of dry contaminants, moisture and oil
Vacuum	Vacuum must exceed 50 CFM

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