

## **dry dispersion laser particle size analyzer for the cement**

Dry dispersion laser particle size analyzer is a kind of high-precision instrument designed for the measurement of particle size distribution of dry powdery samples by using air as the dispersing medium.

### **Dry Dispersion Laser Particle Size Analyzer**

Dry dispersion laser particle size analyzer with advanced optical system and dispersion technology, suitable for moisture absorption, easy to chemical reaction with water or liquid, or in the liquid in the form of unstable powder material particle size detection. Widely used in research institutes, universities and industrial enterprises to meet the needs of scientific research, product development, process monitoring and quality inspection.

### **Main Features**

1. **Integrated dry dispersion system:** Equipped with a fully integrated dry dispersion module, using turbulent dispersion and positive excitation wave shear technology, to ensure that the sample is fully dispersed in the air to avoid agglomeration phenomenon. The key components are made of highly wear-resistant ceramic materials, which significantly improves the stability and durability of the system.



2. **Free fitting patented algorithm:** The use of self-developed unconstrained free fitting technology, particle size analysis is not limited by the traditional distribution function, can truly and comprehensively reflect the actual distribution of particles, to enhance the scientific and accurate analysis.
3. **High sensitivity optical path design:** Convergent Fourier transform optical path, significantly enhance the resolution of submicron and even nanometer particles, test results are more fine and reliable.
4. **Simple and efficient, low maintenance costs:** Dry testing without liquid dispersant, to avoid sample contamination and cleaning links, reduce operational complexity and maintenance costs.

### **Working Principle**

Dry laser particle size analyzer based on the laser scattering principle, through the dry powder sample in the air fully dispersed, so that a single particle uniformly through the measurement area, the laser beam irradiation, the particles will produce different angles of scattered light. The intensity of the scattered light is specifically related to the size of the particles. The instrument's built-in photoelectric detection system and data processing algorithms are able to analyze the scattered signals and calculate the particle size distribution of the particles. Fourier Transform Optical Circuit (FTOC) technology is adopted to enhance the detection sensitivity while effectively suppressing the background interference, realizing the accurate measurement of submicron particles.

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<b>Model</b>	<b>LP501</b>
Implementation standards	GB/T19077:2016, ISO13320:2020, Q/0100JWN001-2024
Measurement Range	0.1um to 300um
Channel number	40
Accuracy error	≤ 1%
Repeatability error	≤ 1%
Laser light source	Laser of high performance, wavelength 639 nm, output power greater than 2 mW
Dispersion Method	Dry turbulent dispersion mode
Operation Mode	SOP can be set; one-click automatic testing, automatic data storage, and automatic alignment functions
Measurement speed	less than 10 seconds

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<b>Model</b>	<b>LP501</b>
Dimensions	Host unit: 765x450x325mm, Dispersion module: 260x285x135mm
Weight	Host unit: 26kg, Dispersion module:7kg
Power Supply	100Vac, 230Vac, 50Hz, 60Hz