

**partica** mini 

Quality Control for Food • Pharmaceuticals • Cosmetics



# Compact, Powerful Particle Size Analyzer

HORIBA's LA-350 Laser Diffraction Particle Size Distribution Analyzer is the ideal combination of performance, price, and packaging. Based on the advanced optical design of previous LA-series analyzers, the LA-350 strikes a harmonious balance between high-functionality, easy operation, low maintenance, and cost-effectiveness. The optimized design allows for a compact optical bench, resulting in an efficient use of bench space, while preserving the accuracy, precision and resolution that HORIBA's analyzers are famous for.



**Powerful, convenient, and outstanding performance to meet your needs.**

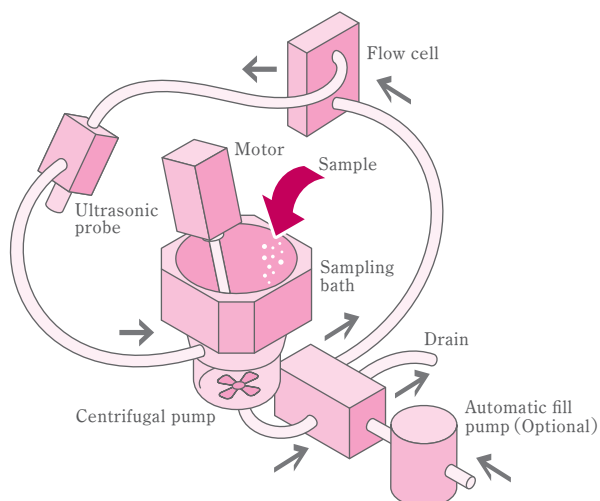


## Small and powerful

The combination optical bench and circulation pump in one system is one of HORIBA's most popular designs. Now this design has a much smaller footprint which allows you to move the analyzer from place to place. This is especially valuable for quality control situations when the locations of sampling and analysis need to be separate to avoid contamination. Also, because it requires less space, it is possible to place the instrument where it is needed.

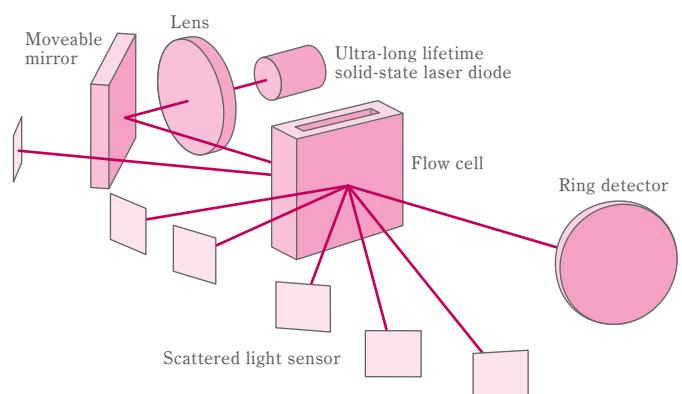
### A powerful & versatile circulation system

The optical bench and circulation pump are combined into a single compact system. The compact size and low weight make this a convenient analyzer for today's crowded laboratories. It also makes it possible to transport easily to different locations within a facility or ship to remote locations for on-site testing where it is not practical to dedicate an analyzer.



### A stable & reliable optical system

HORIBA's optical design ensures accuracy and stable measurement even in this small footprint. It features automatic alignment along with each blank. This prevents human error in the set up which allows even a novice user to obtain accurate measurements. The laser diode light source provides stable performance throughout the long lifetime of the analyzer. The detectors, lens, and mirrors, which are the most sensitive components, are protected by placing them in the interior of the instrument. The design has been rigorously tested for durability and robustness.

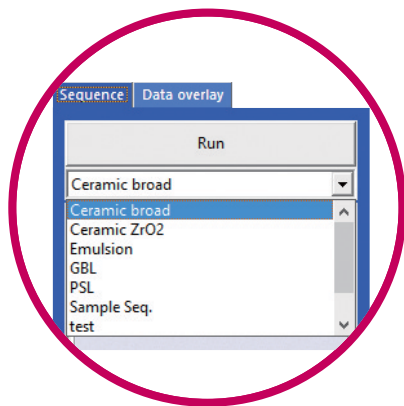




## Convenient to use

The software is simple to use. A single click selects the conditions and a second one generates the measurements. The system guides the user through the measurement, enabling stress free analysis without any advanced knowledge of the software. Additionally, there are flexible support features included in the standard software for those users who want to change the conditions and compare results with previous measurements.

### 1→2→3 step operation



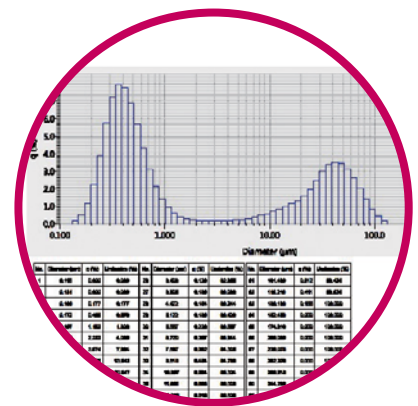
1

Click for measurement



2

Liquid filling and sample introduction



3

Rinsing and data printing

## Stress-free maintenance from an intelligent design

- The flow cell can be removed and replaced without any tools.



flow cell unit



The flow cell cleaning is one of the most essential maintenance routine. Therefore it should be easily handled by anyone who operates the analyzer. The system is designed to keep enough space in the cell chamber for easy operations.

The whole flow cell unit can be removed and replaced easily.

- Small volume sampling or collecting samples?

Fraction cell unit



The Fraction cell optional accessory enables measurement of very limited sample amounts and collecting them after the measurement. The stir bar inside of the cell of the cell prevents the particle segregation and sedimentation.

- **Optical alignment?** Instant automatic alignment function with blanking and sample measurement ensures reproducible measurements and reliable performances.



## Outstanding performance

Simple operation with exquisite performance!

The Partica mini covers a wide range of sizes: 100nm to 1000 microns.

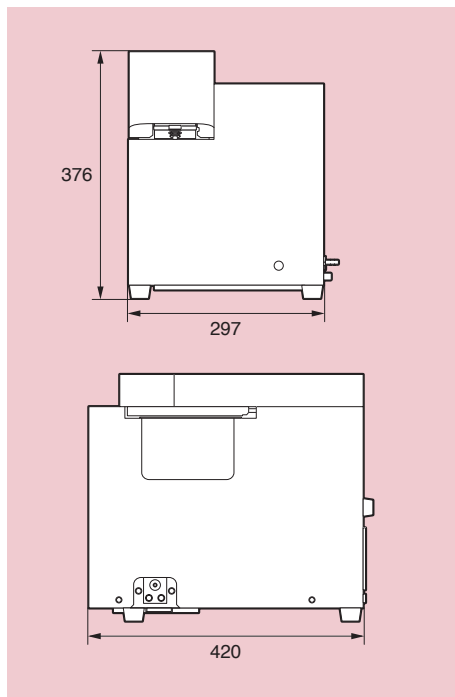
The analysis guarantees that your production quality and development process will be accurate.

- Dynamic wide measurement range : 0.1-1000 microns
- Measurement accuracy support : ±1.4% guaranteed data accuracy with specified NIST traceable standard materials.
- ISO13320 compliant supporting criteria incorporated by HORIBA factory inspection procedure for each system.

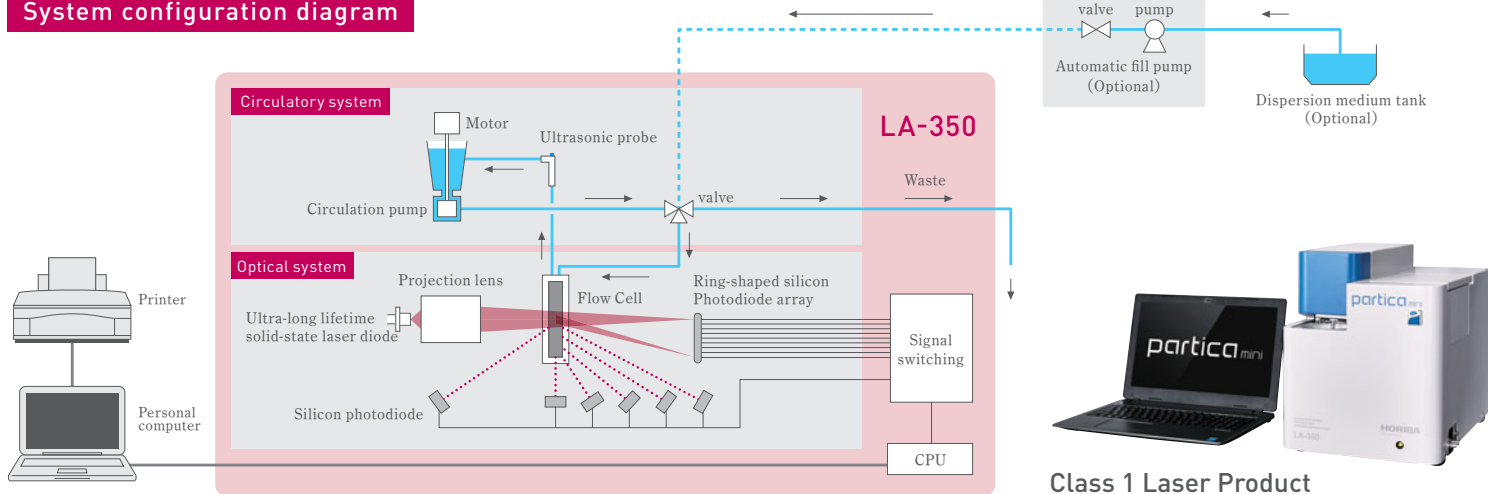
## Specifications

Measurement principle	Laser Diffraction and Mie Light Scattering Theory
Analysis materials	Powders, slurries, emulsions etc.
Measurement output	Particle diameters and size distribution, size related theoretical calculated values
Size measurement range	0.1-1000 $\mu$ m
Analysis time	Typical measurement takes about 10 seconds from "Measure" to display the result.
Measurement method	Wet method: liquid dispersed particles with the flow sampling system
Required sample amount	10mg-5g (depending on the sample size, distribution and materials)
Wet flow system liquid volume	approximately 130-230mL
Organic solvent compatibility	Available in solvent resistant flow sampling version or fraction cell system (Optional)
Measurement performance guarantee	HORIBA selected standard material use conditional support.
Operation	USB data communication with PC.
Data Processing/Results Display	Desktop or laptop PC/LCD; Printer
Operation conditions	15°C~35°C, 85% RH or less (Non-condensing)
Power	AC100/120/230V 50/60Hz, 150VA
Dimensions	W297mm×D420mm×H376mm (excluding the computer)
Mass	approximately 23kg
Optics	Light source: Laser diode 5mW, $\lambda$ =650nm Analyzer Classification: Class 1A laser product Detectors: 64 ring detectors×1 Silicon photo detectors×6
Wet sampling system	Ultrasonic: Ultrasonic probe inside of the flow system, 7 step power adjustment Circulation pumping system: Centrifugal pump, 15 steps of speed control Drain: Solenoid valve Flow cell material: Bolosilicate glass
Optional accessories	Fraction cell, Auto fill pump, Solvent resistant circulation system

## External Dimensions (mm)



## System configuration diagram



**Class 1 Laser Product**

**⚠ Please read the operation manual before using this product to assure safe and proper handling of the product.**

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Bulletin:HRE-3684A

Printed in Japan 1510SK53