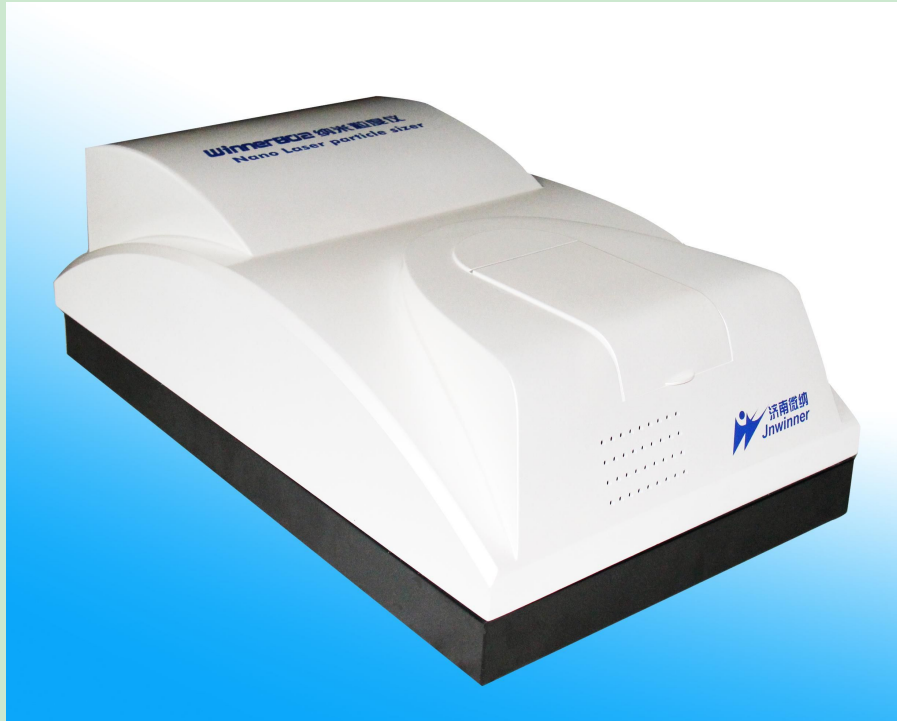


Winner802 Photon Correlation Laser Nanoparticles Size Analyzer



Brief Introduction:

Winner802 is our company's latest laser particle size analyzer which based on the dynamic light scattering principle, and also 1st one which use digital correlator in China. Based on Brownian motion principle, smaller particle, faster speed, bigger particle, more slowly. It adopt great performance of HAMAMATSU photomultiplier and self-developed high speed digital correlator as core parts, Get diffusion coefficient by test scattering light change in some angle, and calculate particle diameter and distribution according to stokes-Einstein equation. So the machine is with characters of fast calculation, high resolution ration, good accuracy and repeatability.

Main Features:

1) Advanced test principle:

Dynamic light scattering principle and photon correlation spectrum technology, according to Brownian motion speed of particle to test particle size, different size of particles have different speed, when laser illuminate these particles, it will make scattering light happen different speed of fluctuations- downs.

Photo correlation spectrum method will analyze these particle size according to Photon fluctuations -downs in particular direction.

2) High resolution:

Using PCR technology test nanometer-scale particle size, must be able to distinguish nanosecond signal fluctuations. The core components of the instrument is CR256 digital correlator developed by our company, with 8ns high resolution speed.

3) High sensitivity and Noise-signal ratio

Detector is composed of imported HAMAMATSU photomultiplier, so ensure good accuracy.

4) High speed data collection and calculation

Self-developed patent product-CR256 digital correlation, It could finish dynamic scattering light intensity collection and autocorrelative function real time calculation, Data processing speed is up to 162M, effectively reflect dynamic scattering light information of different sizes of particles.

5)High stable light system

Photon correlation spectrum detect system adopt optical-fibre technology, smaller size and high anti-interference and reliability.

6)High precision constant temperature control system

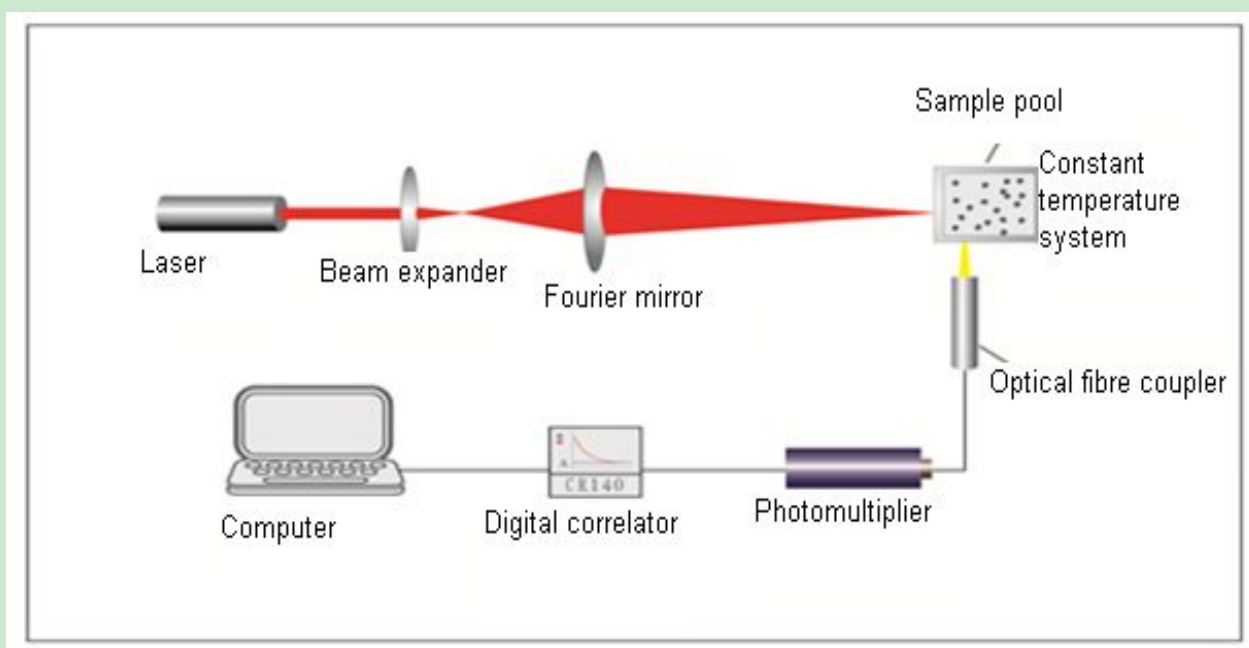
Semiconductor temperature control technology, precision control within $\pm 0.2^{\circ}\text{C}$, make samples be in a constant state throughout the testing process, prevent testing error because temperature change will change liquid viscosity and Brownian movement speed.

7) Output parameters: D50, Dav, D100, D[4,3],D[3,2], D[2,1],D[1,0] and specific surface area.

Main specification:

Model	Winner 802
Standard	GB/T 19627-2005/ISO 13321:1996 GB/T 29022-2012/ISO 22412:2008
Measure range	1-10000nm

Concentration range	0.1mg/ml--100mg/ml
Accuracy	<1%(Average particle size of standard sample)
Repeatability	<1%(Average particle size of standard sample)
Light source	Semiconductor laser $\lambda= 532\text{nm}$
Detector	Imported HAMAMATSU photo-multiplier
Scattering angle	90°
Sample pool	4mL
Temperature control	5-40 °C (temperature controller within 0.1 °C)
Test speed	<5 Min
Outer Dimension	L48cm*W27cm*H17cm
G.W.	12Kg
Digital correlator	256 channels
Operation system	Win XP/Win 7
Analysis	Average particle diameter, particle distribution, photon counting rate etc.



Application:

Nano metallic oxide, Nano metallic powder, Nano ceramic material, protein, polymer latex, preparation of pharmaceutical, water/oil emulsion, paint, coating material, pigment, ink, toner, cosmetics and other fields of research, preparation and application of nano materials.