Phase Doppler Interferometer

Stable

Compact

Rugged

Turnkey

Automatic Setup

Self-Contained Phase Doppler System

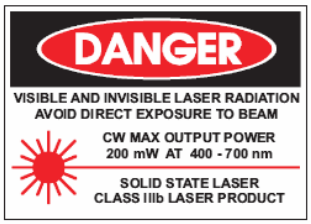
Artium Technologies Inc.

PDI-X00SC

The **self-contained phase Doppler system** offers turnkey operation with a fully automated setup feature. The PDI-X00SC can be used for the real-time, non-intrusive measurement of individual droplet size and 1, 2, or 3 velocity components in a variety of applications. The complete instrument includes the optical transmitter, optical receiver, ASA signal processors, and the AIMS system software. The high powered DPSS lasers used in the transmitter provides stability, compactness, ruggedness, and high reliability; it eliminates the need for inefficient and unreliable fiber optics. The Fourier transform based **Advanced Signal Analyzer (ASA)** incorporates a proprietary signal burst detection technique and adaptive Doppler burst sampling approach to provide improved accuracy in signal detection and measurements. The **Automated Instrument Management System (AIMS)** provides fully automatic setup and operation of the instrument. It also offers remote operation and monitoring via the Internet.

PDI-200SC

Technical Specifications



PDI-200SC

Drop size measurement range	0.5 to 1000 μm or larger
Estimated accuracy	+/- 0.5 μm
Estimated resolution	+/- 0.5 μm
Velocity measurement range	-100 to 200 m/s
Velocity accuracy	to +/- 1%
Volume flux accuracy	to +/- 15%
Receiver focal length	350 mm
Transmitter focal Length	350 mm
Laser type	Diode pumped solid state (DPSS)
Wavelength	415 nm, 532 nm, 660 nm

ASA

Processor bandwidth	5-150 MHz
Input voltage	200 mV to 1V
Minimum transit time	100 ns
Max sampling frequency	Quadrature, 320 MHz
Measurement accuracy	0.02% of the sampling frequency (frequency) 0.5 degree (phase)
Minimum SNR	-6 dB
Maximum data rate	100,000 per second
Number of samples	Adaptive 16 to 4096 quadrature
Burst detection	Phase domain burst detector Quadrature analog burst detector
Run time	32 bit, 0.5 μs resolution
Transit time	16 bit, 0.1 μs resolution

150 W. Iowa Avenue, Suite 202
Sunnyvale, CA 94086

Artium Technologies Inc.

Phone: (408) 737-2364
Fax: (408) 737-2374
E-mail: info@artium.com