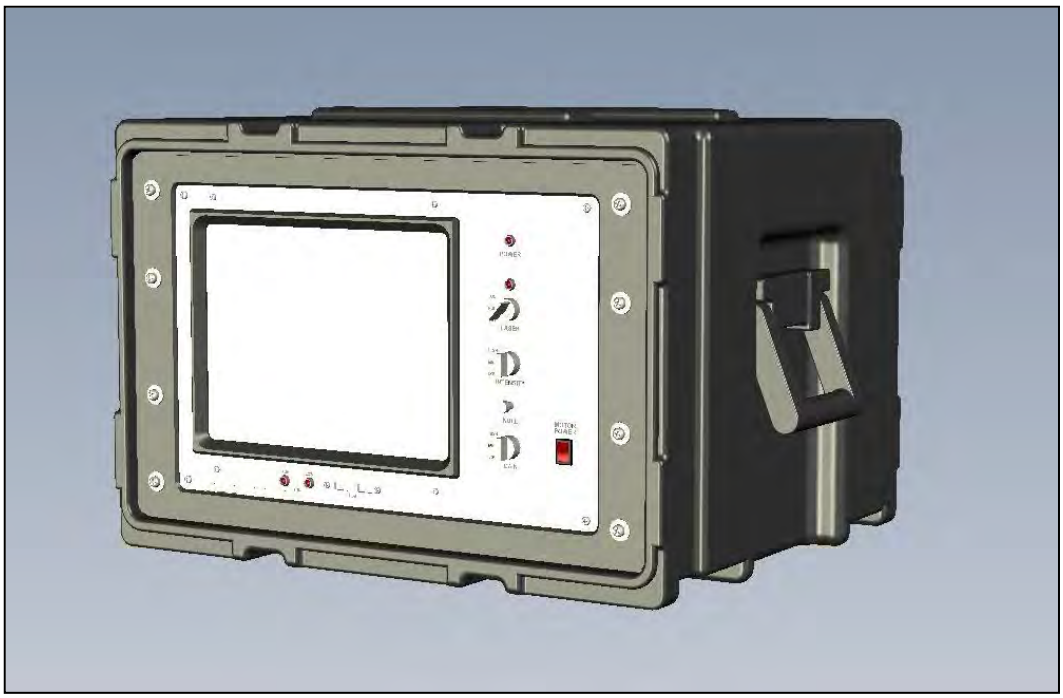
Laser Techniques Co.
LASER-BASED NDT AND QC

LP-4210F™

Data Acquisition and Control Instrument



LP-4210F™ DAC Instrument

The *LP-4210F™* integrates the capabilities of a portable computer, a laser sensor controller and a motion control unit into one multifunction instrument that is capable of supporting a wide variety of applications. The *LP-4210F™* provides operators the ability to control:

- laser sensor operation,
- electronic signal processing,
- sensor motion control, and
- data acquisition, storage, analysis and reporting.

The instrument has a bright, built-in flat-screen monitor and is provided with mouse/keyboard interface. Additional features include laser power control for sensors in both Constant Power (three fixed settings) and Automatic Power Control modes.

The *LP-4210F™* also includes our unique *SmartLaser™* function, a laser safety control feature that causes the laser to pulse at very low average power when a sensor is not within measuring range of a test part. This low-power pulsing mode limits the average laser power emitted from the inspection head to meet normal laser safety guidelines.

The *LP-4210F™* allows operators to adjust the signal amplification gain and provides error indicators for monitoring the quality of data during operation.

LaserViewer™ Software

The *LP-4210F™* is provided with our proprietary *LaserViewer™* data acquisition and reporting software, which is a commercially produced, standard product employing a Windows™-based platform. It is capable of acquiring and mapping multi-channel laser profilometry data, as well as *LaserVideo™* imaging (LVI), laser-scanned FPI and straightness data. The LVI provides an image of the component surface similar to that of a borescope. The LVI, however, is unaffected by the optical distortion that is typical for borescopes. It is a quantitative map of the surface reflectance that allows operators to locate and measure features such as chips, scratches and discoloration.

LP-4210™ is used for many military applications

Customizable Operator Interface

A powerful aspect of the *LaserViewer™* software package is its ability to be configured for customer-specific applications. In this manner, only functions and views that are specifically required for a given task are displayed to the operator. The graphic user interface can be configured for simplicity of operation and application-specific functionality. In addition, a variety of custom data analysis and reporting modules are available with the *LaserViewer™* software program.

Motion Control

LaserViewer™ provides a user-friendly and flexible motion control interface that allows a variety of operator-configurable motion control options including continuous helical and step/increment operation.

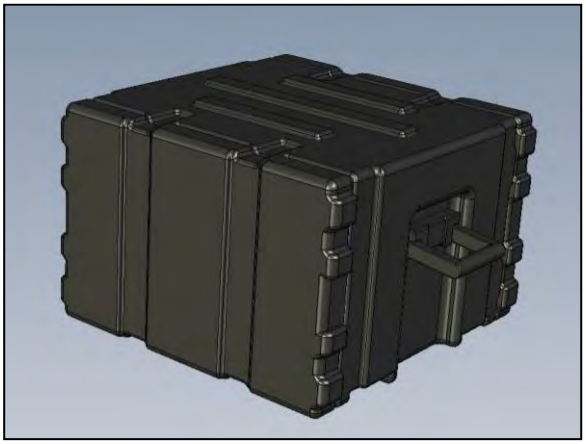
Display, Analysis and Reporting

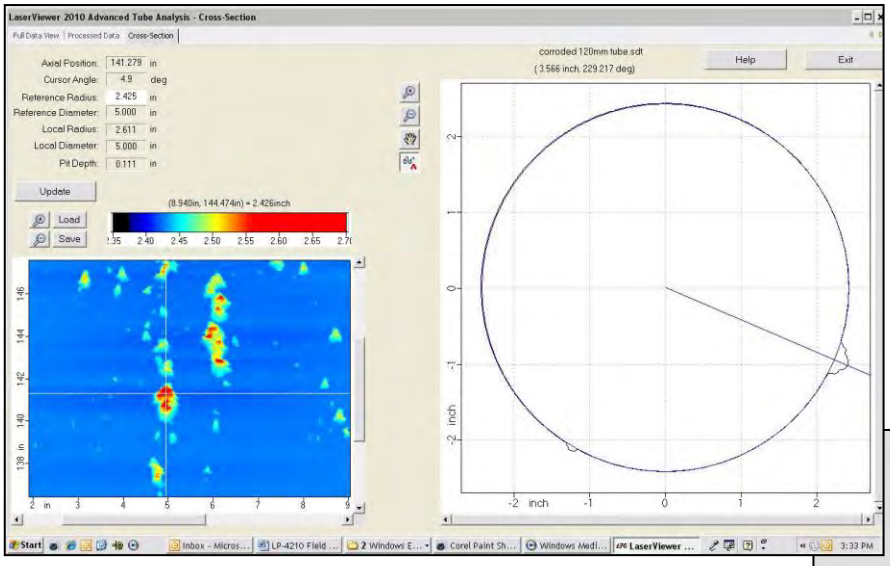
Our proprietary *LaserViewer*™ software allows operators to quickly and accurately access the condition of test articles. Features include:

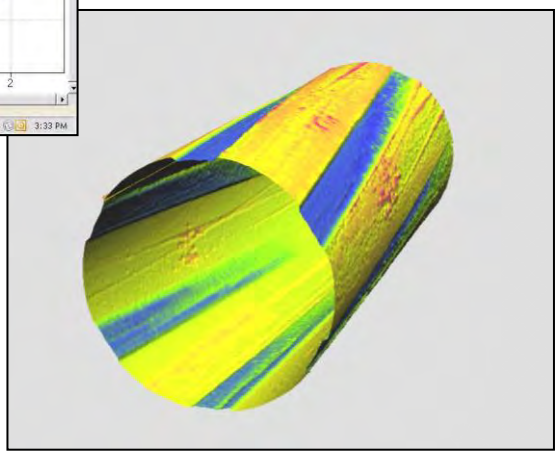
- Color Plot (C-scan) image of calibrated profile and LVI data
- Cross-sectional and axial display of surface profile data
- *LaserVideo*™ image of data displaying fine scratches, heat-checking and discoloration
- Surface contour display with 256 color, Grey-scale, Thermal and Solid Color options for dynamic color pallet
- Several data post processing functions
- File and bitmap image editing, export and printing functions
- Optional custom report generators for special applications

Rugged, Shock mounted Enclosure

The *LP-4210F*™ was built specifically for harsh industrial and military applications. All internal components are shock-mounted and designed to operate under a wide variety of environmental conditions. Rugged end covers provide protection for the front and back panels during local storage and shipment







LaserViewer™ Analysis Software (above)

Optional LaserViewer 3D™ imaging software (right)

LP-4210F™ Controller Specifications

Power:	110/240 VAC 50-60 Hz < 2 Amps
Weight:	58 Lb (26 Kg)
Enclosure:	Heavy-duty rotomolded polyethylene enclosure with carrying handles, dual exhaust fans and filtered intake
Size:	18" X 22" X 15" (457 mm X 558 mm X 381 mm)
Laser Power Control – Local Mode:	Low – 20% full power Med – 50% full power High – 100% full power
Laser Power Control – Remote Mode:	1% to 100% of laser's full power (dynamic)
Class II *SmartLaser*™ Safety Control:	0.2 ms laser pulse at 10 Hz interval when laser is not imaged onto a surface
Signal Gain	1, 2, 5, 10, 20, 50, 100
Monitor	- 12.1" (30.5mm) diagonal TFT Color Display, 1024 x 768 pixel s - Scratch-resistant cover - viewing angle >60˚ V by >120˚H - 262K colors
Processor	Intel Core 2 Quad 3.0 GHz clock speed
Memory	2 GB Ram
Ports/Network	- 4 USB - Ethernet RJ-45
Hard Drive	160 GB
Operating System	Windows XP Pro
Software	*LaserViewer*™ Data Acquisition Software

For more information call us or visit our website:

Laser Techniques Company, LLC
6742 185th Ave NE – Suite 300.
Redmond, WA 98052
USA

Phone: (425) 885-0607
Fax: (425) 885-0802
Web Site: www.Laser-NDT.com
e-mail: Information@Laser-NDT.com