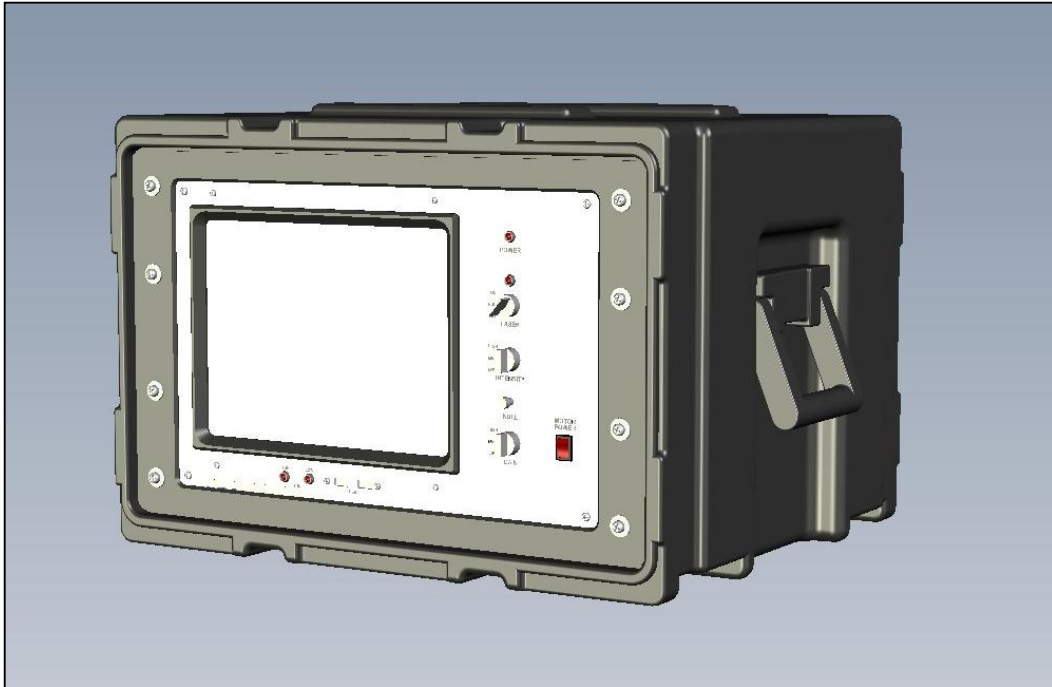


LP-4210F™
Data Acquisition and Control
Instrument



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

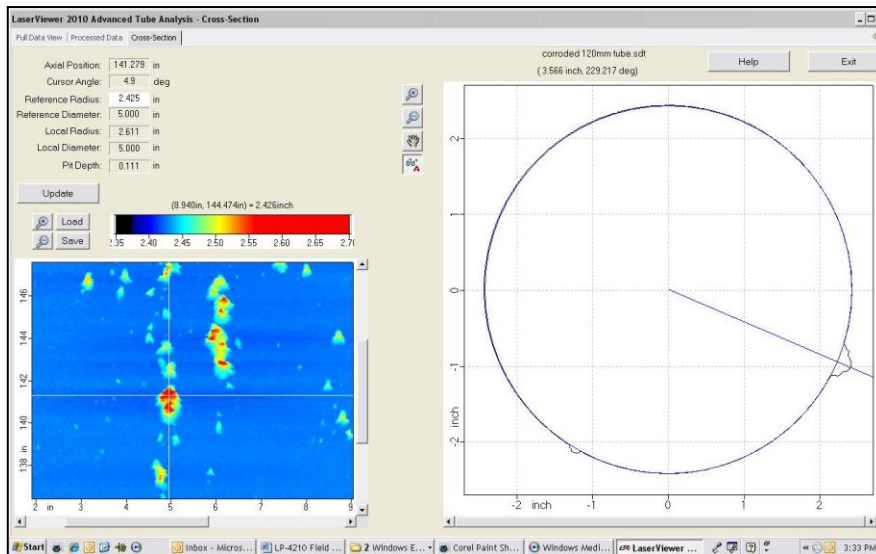
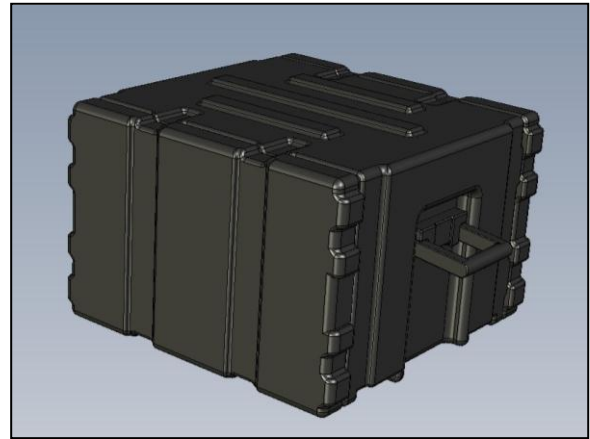
Our proprietary *LaserViewer*TM software allows operators to quickly and accurately access the condition of test articles.

Features include:

- Color Plot (C-scan) image of calibrated profile and LVI data
- Cross-sectional and axial display of surface profile data
- *LaserVideo*TM 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

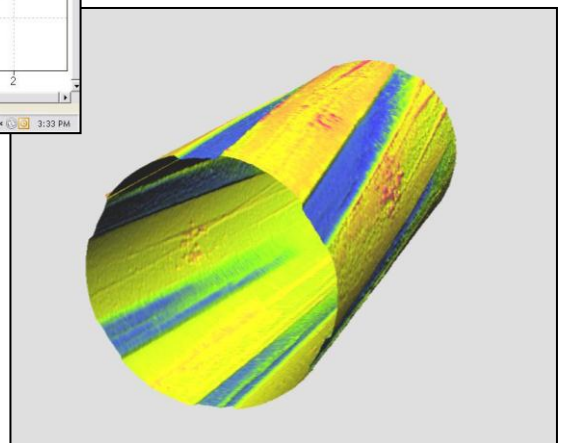
Rugged, Shock mounted Enclosure

The *LP-4210F*TM 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



LaserViewerTM Analysis Software (above)

Optional LaserViewer 3DTM 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 <i>SmartLaser</i> ™ 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	<i>LaserViewer</i> ™ Data Acquisition Software

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