

Compact Digital Shearography Camera

LTI-2100 below is showing the optional Field Controller, TES-200 Thermal Stress Unit and Remote-Control Pan/Tilt



SYSTEM FEATURES:

- Compact and rugged shearography camera supports all stress modes
- Exceptional image quality from 5 MP 12-bit CMOS sensor and diffraction limited optics
- Intuitive LaserNDT 2.0 software with powerful image analysis tools
- For large area inspection, mount the 2100 on tripods, scan gantries, robots or crawlers
- Built-in single frequency 532 nm lasers with 150, 300 or 450 mw CW output
- Lightweight and easy to use
- Extensive options include Pan/Tilt, X/Y gantries, robot scanner, test-part stress equipment, and MQTT interface for industrial robot integration

Image, Measure and Locate:

- Delamination
- Disbonds
- Impact Damage
- Repair Defects
- Fiber Wrinkles
- Cracks
- Crushed core
- Porosity

Inspection Applications:

- Composite laminate
- Metal and composite sandwich
- Thermal Protection Materials
- COPV & CPV
- Metal to Metal Bonds
- Crack Visualization
- Cork & Rubber Bonds



The LTI-2100, shown above, is integrated with an industrial robot for the inspection of large aerospace structures.



Model LTI-2100

Compact Digital Shearography Camera

Laser Technology Inc.
 1055 W. Germantown Pike
 Norristown, PA 19403 USA
 Tel +(610) 631-5043

www.LaserNDT.com

LTI-2100 Product Description

The LTI-2100 is a compact, ruggedized, all-mode shearography NDT system designed for the inspection of aerospace, marine, automotive and rail composites, laminates or cored-sandwich structures. The 2100 shearography sensor is a state-of-the-art 5.0 MP, 12-bit CMOS sensor with precision optical elements and mirrors with flatness <math><1/20 \lambda</math> and surface RMS <math><2 \text{ \AA}</math>. Operation is simple using LaserNDT 2.0. It offers both manual and automatic operation, Teach/Learn NDT Procedures, image processing macros, automatic exposure and auto image save in .pmf and .jpg formats. The complete measurement software suite includes *linear dimensions, area, polygon, 3D plot, image integration* and *z axis displacement*. The *Image Calibration* function uses structured laser light projection and automatic software to determine the shear vector and image scale. The *Image Overlay* function allows precise marking of the indication onto the test part.

The 2100 comes with a built-in single frequency laser with user specified 150, 300 or 450 mw @ 532 nm power output. Typical laser life time is 14,000 hours. Also included are the Standard Controller, power cable and 15-foot (4.5 m) interconnect cable, tripod and transit cases. For thermal stress shearography, order with the optional TES-200 Thermal Stress Unit with dual 1 kW adjustable focus quartz thermal lamps. Other options for shearography NDT include our Vacuum, Sonic and Ultrasonic stress equipment.

(See our **Shearography Stress Equipment Data Sheet**).

Optional Accessories (See our **Accessory Equipment Data Sheet** for more details)

TES-200 Thermal Stress Lamps



Tripod Dolly



Table Mount



Remote Control Pan/Tilt



Focus Monitor & Mounting Bracket



Ruggedized Field Controller



Training

LTI provides personnel training and testing to meet ASNT SN-TC-1a, NAS 410 and EN 4179 standards. Our instructors are Level III certified with a minimum of fifteen years experience in shearography inspection and applications development. Please check the LTI website or call for schedule, syllabus and accommodations.

Specifications - Subject to change without notice

Dimensions	Camera	12x6x5 in. / 31x15x13 cm
	Std. Controller	11x14x4 in. / 28x36x11 cm
Weight	Camera	18.5 lbs / 8.4 kg
	Std. Controller	14.0 lbs / 6.4 kg
Power Requirements	100-240 VAC 50/60 hz, 20 amps	
Sensor Frame Rate	5.0 MP, 12-bit CMOS, 14-50 fps variable	
Laser Illumination	150, 300 or 450 mw @ 532 nm	
Image Calibration Lasers	10 mw @ 640 nm	
System Software	LaserNDT 2.0	



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The LTI-2100 is manufactured in the USA under US and foreign patents 6,717,681; 5,257,088; 5,094,528. Additional patents pending. Specifications are subject to change.