

Model

# 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

## Laser Technology Inc.

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# Inspection Applications:

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



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

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### 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<1/20  $\lambda$  and surface RMS<2 Å. 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*).



#### 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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