

## Line Scan Gauge

### T-Ray® 5000 LSG500n

The LSG500n Line Scan Gauge (LSG) for the T-Ray® 5000 provides a handheld solution for high speed scanning of a line 50 or 75mm in length. The line scan image is displayed on the screen of the handheld tool and can be analyzed by dedicated software for specific applications. Current software solutions can provide layer thickness measurements, detection of voids, or alignment of body panels with measurement of the vertical and horizontal offset between them.

The live display allows real time alignment, observation and measurement of surface and sub-surface features.

The gauge scans at rates up to 8 sweeps per second but is adjustable to allow for higher resolution. The gauge is supplied with a 3" lens which provides a 3" scan range. An accessories kit is available which provides a 2" lens stand-offs and a calibration plate.

### APPLICATIONS

- Terahertz Line Scan Imaging: layer structure, layer thickness, panel offset and separation
- Nondestructive Testing: void detection, subsurface defects or inclusions
- Aerospace and Automotive's Final Assembly: measure of step and gap between coated panels
- Art Conservation: identify construction, image through pottery, view previous repairs; non-destructive

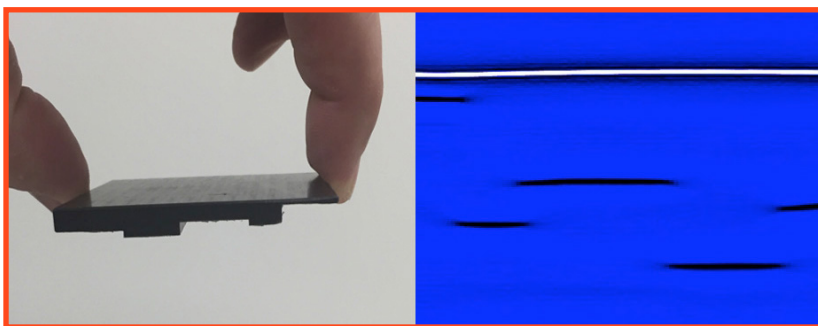
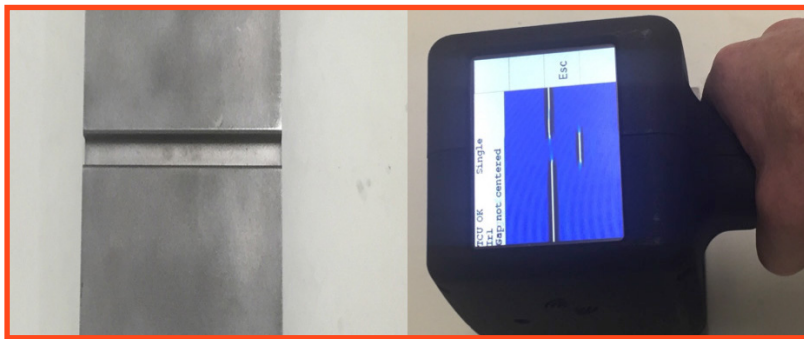


### KEY FEATURES

- Fiber coupled to allow movement (up to 30m)
- Broadband THz measurement
- One-sided reflection data collection
- Use with T-Ray 5000 Terahertz Control Unit (TCU)
- High signal to noise ratio
- Ergonomic trigger to initiate measurement
- Low noise to enable rapid data collection
- Two lenses provide different scan widths
- Pointing lasers to guide tool alignment

### BENEFITS

- Easy to take to measurement location
- Perform THz spectroscopy or examine thin layers
- No need to access both sides of product
- Multiuse control system minimizes costs
- Minimize data acquisition time
- One handed operation
- Easy to align with real time display
- Optimize length for application
- Repeatable measurement



Parameter	Specification	Units	Comments
Polarization Extinction Ratio	> 20:1		Horizontal
Sweep Rate	Up to 8	per second	
Minimum Layer Thickness	50	microns	
Size (W x H x D)	25 x 15 x 15	cm	
Weight	1	kg	

## ORDERING INFORMATION

### Included

- 75 mm scan length lens (75 mm standoff)
- Cushioned feet for ease of alignment

## Typical Configuration

- Terahertz Controller
- Umbilical (5, 10, or 30 m)
- T-Ray® Basic and T-Gauge®, and LSG Software

## Industry Leading Regulatory Compliance

The T-Ray® 5000 intelligent TCU has been certified by Underwriters Laboratories has received the CE mark, is fully compliant with FDA CDRH laser safety regulations, and has been tested to meet FCC part 18 regulations.



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