

Single Point Gauge

T-Ray® SPG500n



The T-Ray® 5000 SPG single point thickness measurement gauge allows direct measurement of multiple layer objects with the press of a button. The modular nature of the measurement tool allows either straight-on or right-angle measurement tips. The measurement is fundamentally non-contact, but for hand-held use, a measurement tip is used to aid the user in positioning the object at the focus of the THz beam. An easy to use touchscreen display allows selection of measurement configuration and mode of operation.

The SPG500n is compatible with any of the intelligent T-Ray® 5000 Terahertz Control Units (TCU). The TCU52nm uses VGA and USB ports to allow an external monitor and keyboard to be attached if desired. The Controller comprises the short pulse laser, time delay rail, data collection electronics and high speed processor required for a high performance terahertz system. With a waveform acquisition time of 10ms or 1ms, rapid layer thickness measurements can be made reliably.

By using pulse Time-of-Flight (ToF) to make its measurements, the SPG500n has greater insensitivity to environmental and material variations that can lead to calibration inaccuracies, as well as operator inconsistencies.

APPLICATIONS

- Spot check of thickness or layer structure of coatings or multilayer extrusions
- Gauge can determine thickness, basis weight, delamination
- Examine bond lines between molded structures and their substrate

KEY FEATURES

- Compact control unit
- Easy touchscreen control
- Up to 3 measurements displayed on the gauge
- Integrated data processor
- Ergonomic trigger to start measurement

BENEFITS

- Flexibility in deployment
- Selection of predefined measurements
- Rapid multilayer measurement
- No external computer required
- Easy to use without fatigue
- Reach difficult locations



Parameter	Specification	Units	Comments
Type 1 Gauge	> 10	Cg	
Gauge Direction	0, 90	deg	
Standoff	25, 75	mm	Contact cone for stability
Umbilical Lengths	5, 10, 15, 30	m	
Thickness Accuracy	0.03	mil	0.8 microns
Size (W x H xD)	2.5 x 3.0 x 10.5	in	
Weight	4.5	lb	With 5 m umbilical (shown)

ORDERING INFORMATION Included

- 25mm Lens Assembly

Typical Configuration

- Terahertz Controller
- Umbilical (5, 10, 15, or 30 m)
- T-Ray® Basic, T-Gauge®, and SPG Software
- Lens Accessory Kit

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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