

TeraGauge™

A Revolutionary Measurement Gauge Platform Powered by Terahertz Waves

TeTechS' TeraGauge™ is a non-destructive testing measurement gauge powered by terahertz waves. TeraGauge is proven to be perfectly suited for non-contact and precise thickness measurement of opaque and transparent materials such as plastic bottles, preforms, rubber, ceramics, composites, glass, wood, and plastic web and sheet. Specially designed for industrial use, TeraGauge is used by OEMs as an off-line, at-line and in-line measurement gauge. Multi-layer thickness measurement is just one of its many applications and is most pertinent to the plastics manufacturing industry.

Application Examples:

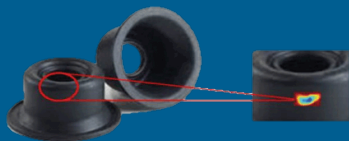
Multi-layer Thickness Measurement of Opaque and Transparent Plastic Bottles and Preforms



Thickness Measurement of Plastic / Foam Web & Sheet



Hidden Void Detection



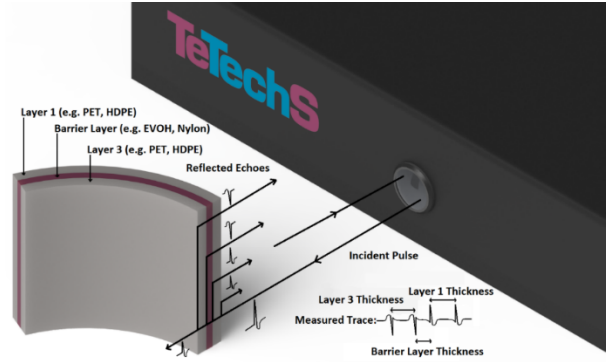
TeraGauge 5000: A compact terahertz measurement gauge



**PlastiMeasure 3000: A turnkey thickness measurement solution powered by
TeraGauge**

Key Features:

- Multi-layer True Thickness Measurement
- Sub-surface Void Detection
- Non-destructive Test
- Measures Opaque and Transparent Materials
- Non-contact, High-speed Measurement
- Non-ionizing Radiation



**TeraGauge Thickness Measurement Principle:
Terahertz Pulse Time-of-Flight**

System Specifications

Parameter	TeraGauge™ 5000
Thickness measurement range	0.008mm - 30mm
Thickness measurement accuracy	1 μm
Thickness measurement repeatability	±0.5 μm
Measurement scan time	500ms or more (user controlled)
Terahertz spectrum range	> 4THz
Terahertz pulse width	0.3ps
Beam spot size diameter	~1mm at the focal point
Sample working distance	127mm (other working distances can be customized)
Angular tolerance	± 5 degree
Data communication interface	Ethernet (standard)
Data output format	.csv (standard, other data formats are also available)
Operating system requirement	PC with Intel Chipset, OS Microsoft Windows® 7/10
Cable length	4m umbilical cord (other lengths can be customized)
Power requirement	Standard wall outlet 100/120/220/240VAC 50/60Hz
Sensor head dimensions & Weight	185mm x 130mm x 60mm (1.5kg)
Control box dimensions (W X L X H) & Weight	482mm x 467mm x 177mm (23kg)