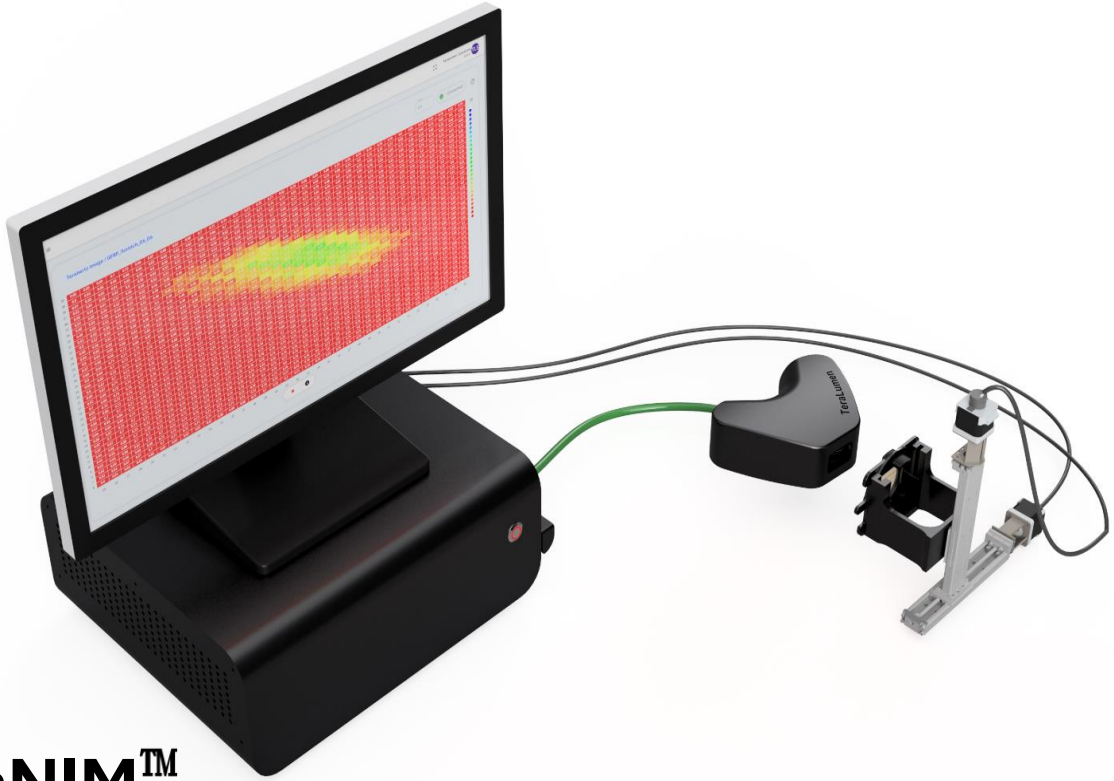




TeraNIM™

Compact THz System

A compact NDT Industrial Terahertz Device suitable for Aerospace, Automotive and Energy Industries.



Non-Contact Testing

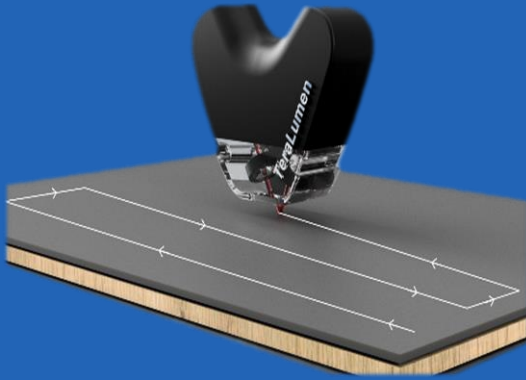
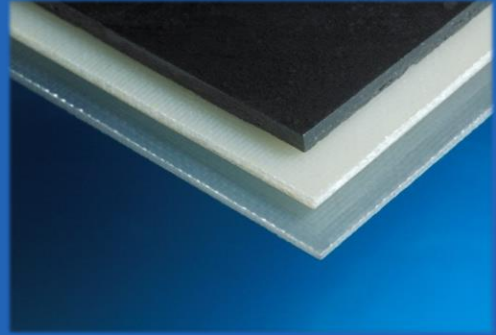
Non-Ionizing Radiation

Real-Time Results

Composite Material Inspection

TeraNIM can inspect various composite materials for

- Internal and External Defect detection
- De-bonding and Delamination
- Moisture Detection
- Material Density Analysis
- Sub-surface defects in Foams and Plastic



Coatings Measurement

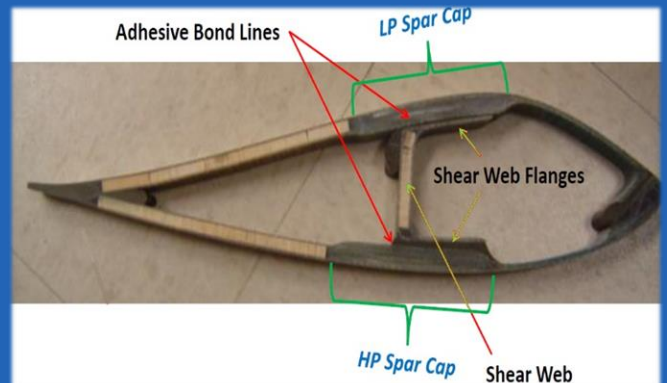
TeraNIM can measure di-electric materials for

- Coating Thickness
- Thermal Barrier Coating
- Multi-layer Coatings Measurement
- Corrosion or Damage under Coatings.
- Layer Adhesion or Delamination Volumes

Energy Segment Applications

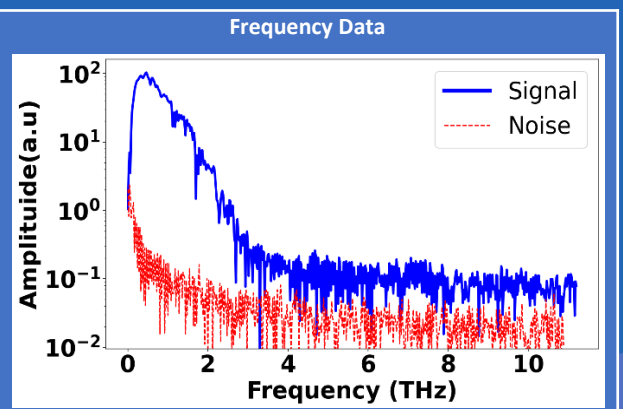
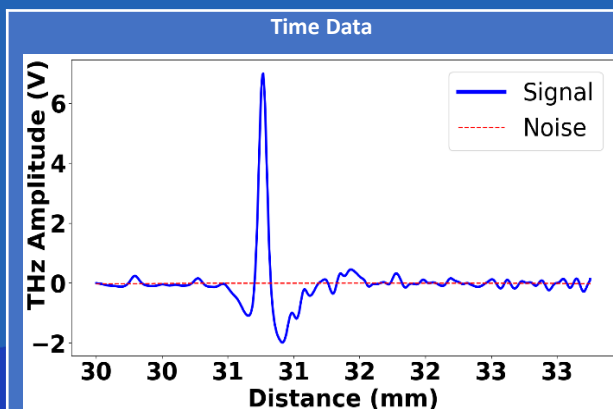
TeraNIM is addressing following challenges

- GFRP Sub-surface and Bonding Inspection
- Extending the Lifespan of wind blades
- Quality Control of Lithium-Ion Battery Electrodes
- Plastic Weld Inspection



An Integrated PC and software package for real-time measurements and data analysis

- Measurement of Dielectric properties and material characteristics.
- Acquisition of both Time Domain and Frequency Domain Signals.
- Capability for Both Spectroscopy and Imaging Measurements.



Multi-Layer Measurement



- All Dielectric materials can be measured
- Measure thickness of each layer individually
- Compact Sensor

Efficacious and Accurate



- Real Time Measurement
- Non-Contact Measurement
- Accuracy with 0.1µm

User-Friendly Integration



- Offline system
- In-line system
- Auto Data saving and report generation

Safety First



- Terahertz waves are harmless to humans
- No protection required
- No moving parts

TeraNIM Specifications

Measuring Materials	Dielectric Materials
Spectral Range	0.5 – 3.5 THz
Technology Type	Terahertz Time Domain System
Equipment Type	Compact
Probe Type	Hand Held
Dynamic Range	> 50 dB
Probe positioning	Inbuilt 8MP Camera
Diameter of Terahertz beam	2 to 8 mm*
Delay Line	330 ps / 660 ps*
Image Resolution	1mm
Mode	Reflection Mode
Measurement Type	Single point
Data Representation	Mode1: Point measurement Mode2: Fully Automated Imaging(optional)
Umbilical Cable	2.5 mts (customizable)
Measurement Resolution	0.1, 0.01 and 0.001
Acquisition Software	TN-Lumen Lite Basic
Enclosure	40 cm x 30 cm x15 mm (L x W x H)
Controller Weight	18 kg
Probe Weight	< 1 kg
External Ports	Ethernet – 1; USB - 1
Automation Integration	Yes
Operating Voltage	230 VAC
Frequency	50 - 60 Hz
Power Consumption	< 250 W
Operating Temperature	15 - 40 °C
Operating Humidity	20 to 80% non-condensing
Storage Temperature	15 - 40 °C

*Note: Turnkey system is customizable based on application requirements.



INDIA's FIRST TERAHERTZ COMPANY. TeraLumen Solutions, with its roots firmly planted in Indian soil, is a beacon of global excellence as a provider of medical-grade Terahertz diagnostic products, industrial-grade Terahertz testing solutions, and research-grade THz systems for a diverse array of markets.

Our mission is to design, develop, and deliver state-of-the-art Terahertz Imaging products and solutions that meet the exacting demands of Non-invasive Inspection across sectors such as Bio-Medical, Aerospace, Automotive, Defense, Energy, Pharma, Semiconductor, and Electronics.

-----MAKING TERAHERTZ ACCESSIBLE AND AFFORDABLE-----

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