

Transmitter (Type 1)

T-Ray® 5000 HTS40n1



The T-Ray® 5000 is the first compact pulsed terahertz measurement system that is robust enough to be deployed in an industrial environment and has all of the flexibility provided by our fiber coupled sensor heads in a rack mount package. By having replaceable sensor heads, the T-Ray® 5000 can be configured to fit your specific application.

Operating in either reflection or transmission mode, the fiber coupled sensor heads deliver a picosecond duration time-domain terahertz pulse, allowing high speed, scanned images to be easily produced.

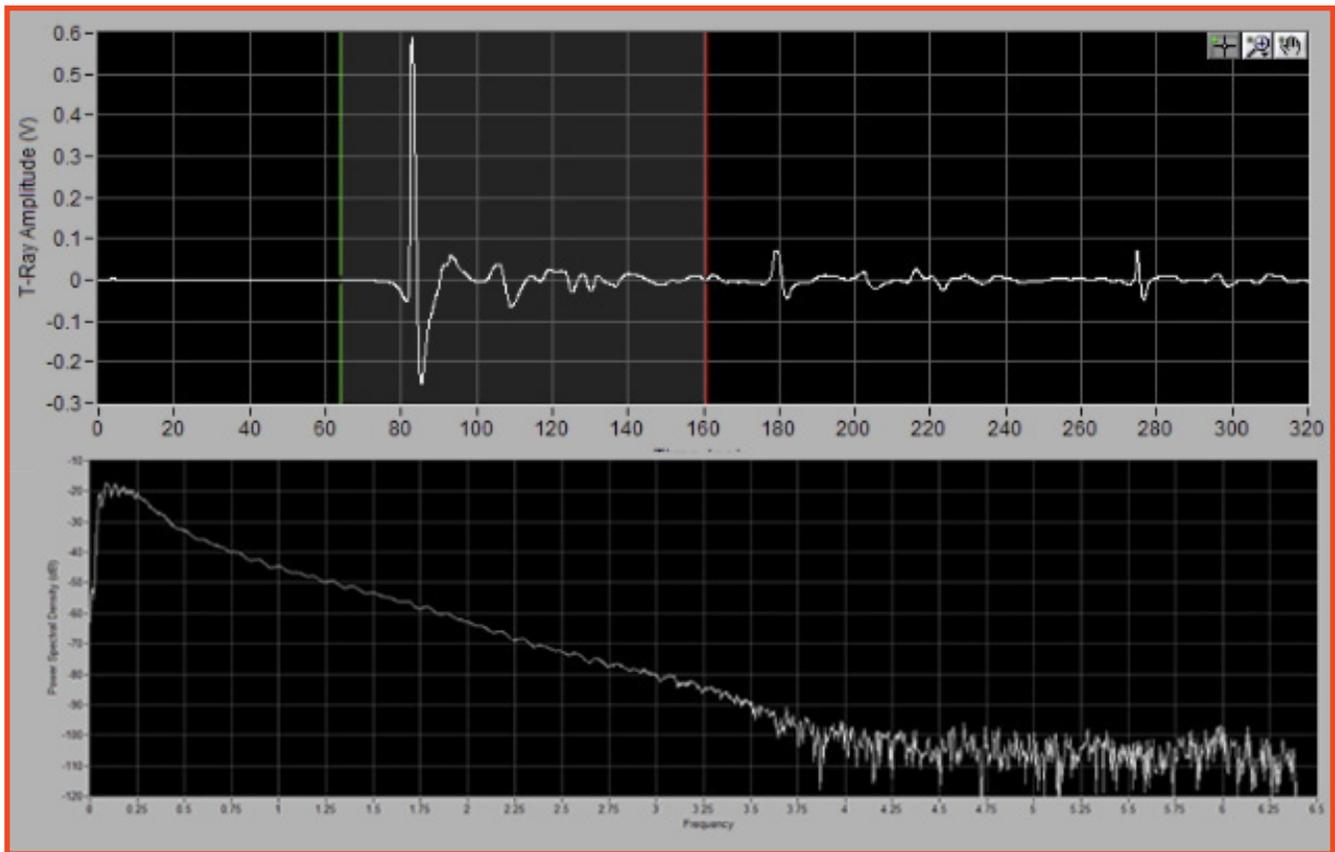
The HTS40n1 Transmitter Type 1 for the T-Ray® 5000 provides high output power with high spectral bandwidth. The enhanced low frequencies provide higher material penetration for imaging voids and disbonds in high frequency scattering media. Coupled with an HRS40n1 receiver, the HTS40n1 transmitter provides bandwidth above 3.5THz and signal to noise ratio above 70 dB. By maximizing low frequency power, the HTS40n1 is ideal for applications where high material penetration is required for imaging, particularly in scattering or absorbing materials.

KEY FEATURES

- Fiber coupled to allow easy movement
- Ultra-broadband measurement
- Transmitted or reflected data collection
- Mates with collinear adapter (AXA40n1)
- High signal to noise ratio
- Hot swappable with other transmitters
- Low noise to enable rapid data collection
- Adjustable lens tube for focusing
- Multiple lenses available

APPLICATIONS

- Gas, liquid and solid spectroscopy
- Nondestructive materials inspection
- Package inspection
- Semiconductor wafer inspection
- Reaction kinetics monitoring
- Medical and biological imaging research
- Remote threat detection
- Sub-surface corrosion detection
- Homeland Security capabilities



| Parameter | Specification | Units | Comments |
|-------------------------------|----------------|-------|---------------------------------|
| Polarization Extinction Ratio | < 20:1 | | Horizontal |
| Standard Lens | 25, 75, 150 | mm | Collimating lens also available |
| Beam Diameter | 38 | mm | |
| Mounting Hardware | 1/4-20 | | Threaded mounting holes |
| Size (W x H x D) | 7.5 x 7.5 x 15 | in | |
| Weight | 275 | gm | |

ORDERING INFORMATION

Included

- 1.5 in. diameter lens (1, 3, or 6 in. working distance)
- Adjustable lens tube

Typical Configuration

- Terahertz Controller
- Umbilical pair (5, 10, or 30 m)
- Umbilical adapter
- Receiver
- T-Ray® Basic and T-Gauge® 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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