

THZ-B

THz Detectors for T-Rad-USB Module

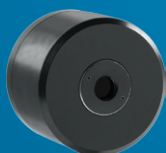


T-Rad-USB Module

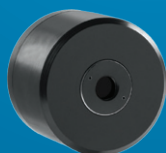
KEY FEATURES

- 1 Measure Sources from 0.1 to 30 THz**
Broadband, room temperature operation, easier to use and less expensive than a Golay cell
- 2 Wide Dynamic Range from nW to mW**
With state of the art pyroelectric sensors, measure down to 50 nW with 1 nW resolution
- 3 Use with T-Rad THz Digital or Analog Power Modules**
Each head can be connected to an oscilloscope using the analog power module (APM) or directly to a PC with the digital power module (T-Rad-USB)
- 4 Large Area Sensors Available**
5 mm and 9 mm diameter pyroelectric sensors make optical alignment easier
- 5 Calibrated Devices**
All THz detectors are calibrated in the 0.25 to 15 μ m (20 THz) region
- 6 User-Friendly Software with Many Features (When used with T-Rad-USB)**
 - Strip Chart, Histogram and Full Statistics
 - Controls and Power display always visible
 - Tuning Needle display includes min/max indicators
 - Data Logging for long term testing

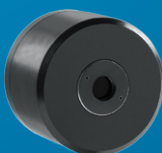
AVAILABLE MODELS



THZ1.5B-MT
(1.5mm-Metallic)



THZ5B-MT
(5mm-Metallic)

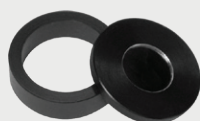


THZ9B-MT
(9mm-Metallic)

ACCESSORIES



Stand with Delrin Post



Removable IR Windows
(Various types available)





SDC-5000 Digital
Optical Chopper



Pelican Carrying Case

SEE ALSO

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COMPATIBLE MODULES	CURRENT PAGE
T-RAD-USB	
APM	 30

MONITORS ENERGY DETECTORS POWER DETECTORS OPTICAL DETECTORS THZ DETECTORS OEM DETECTORS CALORIMETERS DIFFRACTIVE OPTICS BEAM DIAGNOSTICS

THZ-B

SENSOR SPECIFICATIONS



Approved or in the process of being approved*

MODELS	THZ1.5B-MT	THZ5B-MT	THZ9B-MT
MAX AVERAGE POWER	20 mW	200 mW	200 mW
EFFECTIVE APERTURE	1.5 mm Ø	5 mm Ø	9 mm Ø
COMPATIBLE MODULE(S)	APM and T-Rad-USB	APM and T-Rad-USB	APM and T-Rad-USB

MEASUREMENT CAPABILITY	With APM	With T-Rad-USB	With APM	With T-Rad-USB	With APM	With T-Rad-USB
	Spectral Range					
Frequency	0.1 - 30 THz		0.1 - 30 THz		0.1 - 30 THz	
Wavelength	3000 - 10 µm		3000 - 10 µm		3000 - 10 µm	
Max Measurable Power	20 mW		200 mW		200 mW	
Noise Equivalent Power (NEP)	$2.0 \times 10^{-10} \text{ W}/(\text{Hz})^{1/2}$	2 nW	$1.0 \times 10^{-9} \text{ W}/(\text{Hz})^{1/2}$	5 nW	$3.0 \times 10^{-9} \text{ W}/(\text{Hz})^{1/2}$	10 nW
Rise Time (0-95%)	≤ 0.2s		≤ 0.2s		≤ 0.2s	
Sensitivity (Typical)	700 kV/W	N/A	130 kV/W	N/A	40 kV/W	N/A
DAMAGE THRESHOLDS						
Max Average Power Density (@ 1064 nm)	10 mW/cm ²		10 mW/cm ²		10 mW/cm ²	
PHYSICAL CHARACTERISTICS						
Effective Aperture	1.5 mm Ø		5 mm Ø		9 mm Ø	
Sensor	Pyroelectric		Pyroelectric		Pyroelectric	
Absorber	MT		MT		MT	
Dimensions	66.0Ø x 46.5D mm		66.0Ø x 46.5D mm		66.0Ø x 46.5D mm	
Weight	227 g		227 g		227 g	
ORDERING INFORMATION						
Full Product Name	THZ1.5B-MT-BNC	THZ1.5B-MT-USB	THZ5B-MT-BNC	THZ5B-MT-USB	THZ9B-MT-BNC	THZ9B-MT-USB
Product Number	201757	201747	201746	201750	201755	201751

Specifications are subject to change without notice

T-RAD-USB MODULE SPECIFICATIONS

T-RAD-USB
(Front View)



T-RAD-USB
(Rear View)



- USB Power/Connection
- Power On Light
- Detector Input
- Detector Analog Output
- Computer Connection
- Trigger Input (TTL)

T-RAD-USB

- YES (Virtual COM Port)
- YES
- Lemo Connector
- BNC Connector
- USB (Virtual COM Port)
- BNC Connector

* For details, contact your Gentec-EO representative