

THZ-I-BNC

THz Detectors with Integrated Analog Module



KEY FEATURES

- COVERS THE ENTIRE THZ SPECTRUM**
Get the best precision across the entire wavelength range and relative measurements from 30 THz to 0.1 THz.
- ROOM TEMPERATURE OPERATION**
Easier to use and less expensive than a Golay cell.
- MEASURE POWER FROM nW TO μ W**
With state of the art pyroelectric sensors, measure down to 8 nW with 0.4 nW NEP
- INTEGRATED ANALOG MODULE**
Plug the device directly into your oscilloscope or Lock-In amplifier
- BATTERY OR AC POWERED**
Includes 9V Battery and AC Power Supply
- CALIBRATED AT 0.63 μ m**
All THz detectors are calibrated at a single wavelength (0.63 μ m) and include typical wavelength correction data from 0.25 to 440 μ m. They are used for relative measurements outside that range.
- SDC-500 OPTICAL CHOPPER**
The THZ-I-BNC models require the use of an optical chopper, like our SDC-500, running at 5 Hz.

AVAILABLE MODELS



THZ21-BL-BNC
(2 mm-Organic Black)



THZ51-BL-BNC
(5 mm-Organic Black)

ACCESSORIES



Stand with Delrin Post
(Model Number: 200428)



Removable IR Windows
(Various types available)



SDC-500 Digital
Optical Chopper



Pelican Carrying Case

SEE ALSO

TECHNICAL DRAWINGS	142
ABSORPTION CURVES	144
LIST OF ALL ACCESSORIES	196

APPLICATION NOTES

THZ MEASUREMENT: PYROELECTRIC VS GOLAY CELL	201924
THZ CALIBRATION	202155
SDC-500 DIGITAL OPTICAL CHOPPER	202154
THZ-I-BNC SETUP	202177

THZ-I-BNC



*Also traceable to NRC-CNRC

SPECIFICATIONS

	THZ21-BL-BNC	THZ51-BL-BNC
MAX AVERAGE POWER	70 μ W	140 μ W
EFFECTIVE APERTURE	2 x 2 mm	5 mm \emptyset
INTEGRATED MODULE	Analog (BNC)	Analog (BNC)
MEASUREMENT CAPABILITY		
Spectral Range ^a		
Frequency	0.1 - 30 THz	0.1 - 30 THz
Wavelength	3000 - 10 μ m	3000 - 10 μ m
Max Measurable Power	70 μ W	140 μ W
Noise Equivalent Power ^b	0.4 nW [4.0 x 10 ⁻¹⁰ W/(Hz) ²]	1.0 nW [1.0 x 10 ⁻⁹ W/(Hz) ²]
Rise Time (0-100%)	\leq 0.2s	\leq 0.2s
Sensitivity (Typical) ^b	140 kV/W	70 kV/W
Chopping Frequency	5 Hz (Required)	5 Hz (Required)
Calibration Uncertainty	Contact Us	Contact Us
DAMAGE THRESHOLDS		
Maximum Average Power Density (1064 nm)	50 mW/cm ²	50 mW/cm ²
PHYSICAL CHARACTERISTICS		
Effective Aperture	2 x 2 mm	5 mm \emptyset
Sensor	Pyroelectric	Pyroelectric
Absorber	BL	BL
Analog Output	0-10 V	0-10 V
Dimensions	81.3 \emptyset X 99.3D mm	81.3 \emptyset X 99.3D mm
Weight	500 g	500 g
ORDERING INFORMATION		
Product Name	THZ21-BL-BNC	THZ51-BL-BNC
Product Number	201701	202288

Specifications are subject to change without notice

- a. Projected Spectral Range.
From 10 to 440 μ m, spectrometer measurement.
From 440 to 3000 μ m, relative measurement only.
This spectral range is subject to change.
- b. At 632 nm and a chopping frequency of 5Hz.

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS