

THZ-I-BNC

THz Detectors with Integrated Analog Module



AVAILABLE MODELS



THZ5I-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

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 EXTERNAL POWER**
Includes 9V Battery and an external 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.

SEE ALSO

TECHNICAL DRAWINGS	144
ABSORPTION CURVES	146
LIST OF ALL ACCESSORIES	198

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

CE NIST*
Traceable
*Also traceable to NRC-CNRC

SPECIFICATIONS

THZ5I-BL-BNC

MAX AVERAGE POWER	140 μ W
EFFECTIVE APERTURE	5 mm \varnothing
INTEGRATED MODULE	Analog (BNC)

MEASUREMENT CAPABILITY

Spectral Range ^a	
Frequency	0.1 - 30 THz
Wavelength	3000 - 10 μ m
Max Measurable Power	140 μ W
Noise Equivalent Power ^b	1.0 nW [1.0×10^{-9} W/(Hz) ^{1/2}]
Rise Time (0-100%)	≤ 0.2 s
Sensitivity (Typical) ^b	70 kV/W
Chopping Frequency	5 Hz (Required)
Calibration Uncertainty	Contact Us

DAMAGE THRESHOLDS

Maximum Average Power Density (1064 nm)	50 mW/cm ²
---	-----------------------

PHYSICAL CHARACTERISTICS

Effective Aperture	5 mm \varnothing
Sensor	Pyroelectric
Absorber	BL
Analog Output	0-10 V
Dimensions	81.30 X 99.30 mm
Weight	500 g

ORDERING INFORMATION

Product Name	THZ5I-BL-BNC-D0
Product Number (without stand)	202288

Specifications are subject to change without notice // Compatible stand: P/N 200428

- 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.