

THZ-I-BNC

THz Detector, Integrated Analog Module



KEY FEATURES

1. RELATIVE MEASUREMENTS FROM 0.1 TO 30 THz

Broadband, room temperature operation, easier to use and less expensive than a Golay cell

2. MEASURE POWER FROM nW TO mW

With state of the art pyroelectric sensors, measure down to 50 nW with 1 nW resolution

3. INTEGRATED ANALOG MODULE

Plug the device directly into your oscilloscope or Lock-In amplifier

4. BATTERY OR AC POWERED

Includes 9V Battery and AC Power Eliminator

5. CALIBRATED AT 0.63 μm

All THz detectors are calibrated at a single wavelength (0.63 μm) and include typical wavelength correction data from 0.25 to 440 μm . They are used for relative measurements outside that range.

AVAILABLE MODELS



THZ2I-BL-BNC
(2 mm-Organic Black)



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

SEE ALSO

TECHNICAL DRAWINGS	126
ABSORPTION CURVES	128
LIST OF ALL ACCESSORIES	190

APPLICATION NOTES

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

THZ-I-BNC

SPECIFICATIONS



Approved or in the process of being approved*

	THZ2I-BL-BNC	THZ5I-BL-BNC
MAX AVERAGE POWER	70 μ W	140 μ W
EFFECTIVE APERTURE	2 x 2 mm	5 mm $\varnothing$
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 [4.0×10^{-10} W/(Hz) ^{1/2}]	1.0 nW [1.0×10^{-9} W/(Hz) ^{1/2}]
Rise Time (0-100%)	≤ 0.2 s	≤ 0.2 s
Sensitivity (Typical) ^b	140 kV/V	70 kV/V
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 $\varnothing$
Sensor	Pyroelectric	Pyroelectric
Absorber	BL	BL
Analog Output	0-10 V	0-10 V
Dimensions	81.3 $\varnothing$ X 99.3D mm	81.3 $\varnothing$ X 99.3D mm
Weight	500 g	500 g
ORDERING INFORMATION		
Product Name	THZ2I-BL-BNC	THZ5I-BL-BNC
Product Number	201701	

- 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.

Specifications are subject to change without notice