

THZ-I-BNC

THz Detectors with integrated analog module



OUTPUT OPTIONS

- **ANALOG OUTPUT**
Plug the device directly into your oscilloscope or lock-in amplifier with the BNC output

KEY FEATURES

- **COVERS THE ENTIRE THZ SPECTRUM**
Measure accurately from 0.25 to 15 μm and from 30 THz to 0.1 THz in relative terms
- **MEASURE POWER FROM nW TO μW**
Make low-level measurements with an NEP of 1.0 nW
- **MEASURE ENERGY FROM nJ TO μJ**
Can be used with low repetition rate pulsed THz sources to measure pulse energy up to 40 Hz
- **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 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.
- **SDC-500 OPTICAL CHOPPER**
The THZ-I-BNC models require the use of an optical chopper, like our SDC-500, running at 5 Hz.

ACCESSORIES



Stand with delrin post



Removable IR Windows
(Various types available)



SDC-500 digital
optical chopper




Pelican carrying case

THZ-I-BNC

Specifications

CE NIST*
Traceable 
*Also traceable to NRC-CNRC



THZ5I-BL-BNC	
MAX AVERAGE POWER	140 µW
EFFECTIVE APERTURE	5 mm Ø
INTEGRATED MODULE	Analog (BNC)
MEASUREMENT CAPABILITY	
Spectral range^a	
Frequency	0.1 - 30 THz
Wavelength	3000 - 10 µm
Max measurable power	140 µW
Noise equivalent power ^b	1.0 nW [1.0 x 10 ⁻⁹ W/(Hz) ²]
Rise time (0-100%)	≤ 0.2s
Sensitivity (Typical)	70 kV/W
Chopping frequency	5 Hz (Required)
Calibration uncertainty	Contact us
Energy mode	
Maximum measurable energy	100 µJ
Noise equivalent energy	1.0 nJ
Minimum pulse width	1.0 µs
Maximum repetition rate	40 Hz
DAMAGE THRESHOLDS	
Maximum average power density (1064 nm)	50 mW/cm ²
PHYSICAL CHARACTERISTICS	
Effective aperture	5 mm Ø
Sensor	Pyroelectric
Absorber	BL
Analog output	0-10 V
Dimensions	81.3Ø X 99.3D mm
Weight	500 g
ORDERING INFORMATION	
Compatible stand	STAND-D-233
Product page	

- a. Projected spectral range.
From 10 to 440 µm, spectrometer measurement.
From 440 to 3000 µm, 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