

THZ-I-BNC

THz Detectors with integrated analog module



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.

OUTPUT OPTIONS

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

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



THZSI-BL-BNC	
MAX AVERAGE POWER	140μW
EFFECTIVE APERTURE	5mm(II)
INTEGRATED MODULE	Analog (BNC)

MEASUREMENT CAPABILITY

Spectral range ^a	
Frequency	0.1-30THz
Wavelength	3000-10 μm
Max measurable power	140μW
Noise equivalent power ^b	10 nW/M × 10 ⁻⁶ W/(Hz) ^{1/2}
Rise time (0-100%)	0.25
Sensitivity (Typical)	70kV/W
Chopping frequency	5 Hz (Required)
Calibration uncertainty	Contact us
Energy mode	
Maximum measurable energy	100μJ
Noise equivalent energy	1.0nJ
Minimum pulse width	1.0μs
Maximum repetition rate	40Hz

DAMAGE THRESHOLDS

Maximum average power density (1064 nm)	50 mW/cm ²
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PHYSICAL CHARACTERISTICS

Effective aperture	5mm(II)
Sensor	Pyroelectric
Absorber	BL
Analog output	0-10V
Dimensions	81.3(1) × 99.3D mm
Weight	500g

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