

# 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  $\mu\text{m}$  and from 30 THz to 0.1 THz in relative terms
- **MEASURE POWER FROM nW TO  $\mu\text{W}$**   
Make low-level measurements with an NEP of 1.0 nW
- **MEASURE ENERGY FROM nJ TO  $\mu\text{J}$**   
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  $\mu\text{m}$**   
All THz detectors are calibrated at a single wavelength (0.63  $\mu\text{m}$ ) and include typical wavelength correction data from 0.25 to 440  $\mu\text{m}$ . 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.

## 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	
<b>MAX AVERAGE POWER</b>	62.5 $\mu$ W
<b>EFFECTIVE APERTURE</b>	5 mm $\varnothing$
<b>INTEGRATED MODULE</b>	Analog (BNC)
<b>MEASUREMENT CAPABILITY</b>	
Spectral range <sup>a</sup>	
Frequency	0.1 - 30 THz
Wavelength	3000 - 10 $\mu$ m
Max measurable power	62.5 $\mu$ W
Noise equivalent power <sup>b</sup>	1.0 nW
Rise time (0-100%)	$\leq$ 0.2s
Sensitivity (Typical)	140 kV/W
Chopping frequency	5 Hz (Required)
Calibration uncertainty	Contact us
Energy mode	
Maximum measurable energy	2 $\mu$ J
Noise equivalent energy	1.0 nJ
Minimum pulse width	1.0 $\mu$ s
Maximum repetition rate	40 Hz
<b>DAMAGE THRESHOLDS</b>	
Maximum average power density (1064 nm)	50 mW/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>	
Effective aperture	5 mm $\varnothing$
Sensor	Pyroelectric
Absorber	BL
Analog output	0-10 V
Dimensions	81.3 $\varnothing$ X 99.3D mm
Weight	500 g
<b>ORDERING INFORMATION</b>	
Compatible stand	STAND-D-233
Product page	

- a. Projected spectral range.  
From 10 to 440  $\mu$ m, spectrometer measurement.  
From 440 to 3000  $\mu$ 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