

THZ-D

THz Detectors for use with our universal displays & PC interfaces



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.
- > **CALIBRATED AT 10.6 μm**
THZ-D detectors are calibrated at a single wavelength 10.6 μm (30 THz) and at 10 Hz chopping frequency for the THZ9D. Both include typical wavelength correction data from 10.6 to 440 μm . They are used for relative measurements outside that range.
- > **LARGE AREA**
Models range from 9 mm $\varnothing$ for the THZ9D and 12 mm $\varnothing$ for the THZ12D.
- > **WIDE RANGE OF MEASUREMENTS**
Measure from 100 μW to 3 W of continuous power with the THZ12D model, the highest in our terahertz range of products, and down to 5 μW to 25 mW with the THZ9D model.
- > **USE WITH A UNIVERSAL DISPLAYS & PC INTERFACE**
No need for an exclusive monitor. These unique THz detectors work with our display & PC interface.
- > **SDC-500 OPTICAL CHOPPER**
The THZ9D model requires the use of an optical chopper, like our SDC-500, running at 10 Hz.

OUTPUT OPTIONS

- > **SMART DB15 CONNECTOR**
Contains all the calibration data
- > **ANALOG OUTPUT**
When used with APM analog power supply module
- > **integra ALL-IN-ONE-METER** (for THZ12D only)
Connects directly to a PC
Two models available:
 - USB output (-INT)
 - RS-232 output (-IDR)

COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



MAESTRO



U-LINK



M-LINK



APM
analog power module
(for THZ9D)

ACCESSORIES



Stand with steel post
(for THZ12D)



Stand with delrin
(for THZ9D)



SDC-500 digital
optical chopper



Pelican carrying case



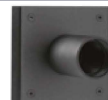
Extension cables
(4, 15, 20 or 25 m)

THZ-D

Specifications



*Also traceable to NRC-CNRC



	THZ9D-20mS-BL	THZ12D-3S-VP
MAX AVERAGE POWER	25mW	3W
EFFECTIVE APERTURE	9 mm Ø	12mm Ø
COMPATIBLE DISPLAYS & PC INTERFACES	MIRO ALTITUDE, MAESTRO, U-LINK, M-LINK & APM	MIRO ALTITUDE, MAESTRO, U-LINK & M-LINK

MEASUREMENT CAPABILITY

Spectral range^a		
Frequency	0.1-30THz	0.1-30THz
Wavelength	3000-10 μ m	3000-10 μ m
Maximum average power		
with MAESTRO	20mW	3W
with U-LINK, M-LINK or MIRO ALTITUDE	25mW	3W
Noise equivalent power ^b	300nW	0.5 μ W
Minimum measurable power ^c	N/A	50-100 μ W
Thermal drift	N/A	12 μ W/°C
Rise time (nominal) ^d	<0.2s	3s
Minimum repetition rate ^e	1000Hz	7Hz
Chopping frequency	10 Hz (required)	N/A
Calibration uncertainty ^f	$\pm 5.0\%$ at 10.6 μ m; $\pm 1\%$ at 10.6 - 440 μ m	$\pm 3.0\%$ at 10.6 μ m $\pm 8.0\%$ at 10.6 - 300 μ m $\pm 1\%$ at 300 - 440 μ m
Repeatability	$\pm 0.5\%$	$\pm 0.5\%$

DAMAGE THRESHOLDS

Maximum average power density ^g	30 mW/cm ²	30W/cm ²
Maximum energy density	<0.1 J/cm ²	<1 J/cm ²

PHYSICAL CHARACTERISTICS

Effective aperture	9 mm Ø	12mm Ø
Absorber	BL (Black Absorber)	VP (Volume Absorber)
Dimensions	38.10 x 26.2 mm	73H x 73W x 28D mm (80D mm with tube)
Weight (head only)	91g	320g

ORDERING INFORMATION

Compatible stand	STAND-D-233	STAND-D-233
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Product page



- a. From 10 to 440 μ m, spectrometer measurement with multiple laser references validation.
From 440 to 600 μ m, spectrometer measurement only.
From 600 to 3000 μ m, relative measurement only.
This spectral range is subject to change.
- b. Nominal value. actual value depends on electrical noise in the measurement system.
- c. Actual value depends on ambient conditions and the measurement system.
- d. With anticipation
- e. Maximum output voltage = sensitivity x maximum power.
- f. Minimum repetition rate for stable average power measurements.
- g. Including linearity with power.
- h. At 1064 nm, 1 W CW.

Specifications are subject to change without notice
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PHOTODETECTORS

ENERGY DETECTORS

DETECTORS

TERAHERTZ DETECTORS

PC INTERFACES

CUSTOM / OEM PRODUCTS