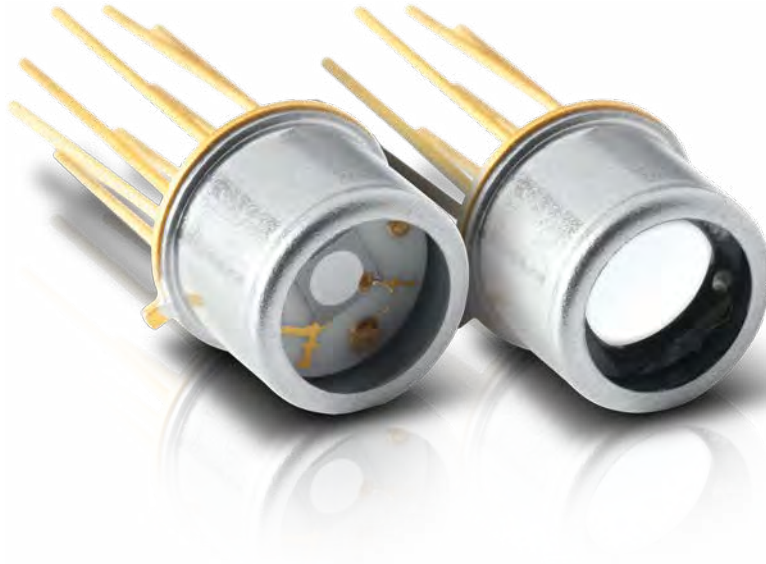


QS-THZ

Hybrid THz Detectors



* Pictures for indicative purposes only

AVAILABLE MODELS

- QS2-THZ-BL 2 x 2 mm, Pyroelectric Sensor with Organic Black Coating in T05 Packaging
- QS5-THZ-BL 5 mm Ø, Pyroelectric Sensor with Organic Black Coating in T05 Packaging
- QS9-THZ-BL 9 mm Ø, Pyroelectric Sensor with Organic Black Coating in T08 Packaging

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. EASY TO INTEGRATE FORMAT**
T05 and T08 packages make the QS-THZ detectors small and easy to integrate in an existing system
- 3. SEVERAL SENSOR SIZES AVAILABLE**
Choice of 2 x 2 mm, 5 and 9 mm Ø
- 4. CALIBRATED AT 0.63 µm**
All THz detectors are calibrated at a single wavelength (0.63 µm) and include a typical wavelength correction data from 0.25 to 440 µm. They are used for relative measurements outside that range.
- 5. TEST BOX AVAILABLE**
Can be used with our QS-I-TEST test box which provides mounting and power supply
- 6. PERMANENT IR WINDOW OPTIONS**
Every model can be fitted with a permanent IR window to narrow the wavelength range:
S5/8: Sapphire (0.3 – 4.5 and 100 - 1000 µm)
Q5/8: Quartz (0.25 – 3.0 and 50 - 1000 µm)
Si5/8: Silicon (1.2 – 8.0 and 50 - 1000 µm)

ACCESSORIES



QS-I-Test
Evaluation Test Box



Permanent IR Windows
(Various types available)



SDC-500 Digital
Optical Chopper



Pelican Carrying Case

SEE ALSO

TECHNICAL DRAWINGS	132
LIST OF ALL ACCESSORIES	186

APPLICATION NOTES

THZ MEASUREMENT: PYROELECTRIC VS GOLAY CELL	201924
QS-I-TEST SPECIFICATIONS	202187
HOW TO HANDLE PYROS	202181
PIN-OUTS	202931
SDC-500 DIGITAL OPTICAL CHOPPER	202154

QS-THZ



Approved or in the process of being approved*

SPECIFICATIONS

	QS2-THZ-BL	QS5-THZ-BL	QS9-THZ-BL
VOLTAGE RESPONSIVITY	140 kV/W	70 kV/W	30 kV/W
EFFECTIVE APERTURE	2 x 2 mm	5 mm Ø	9 mm Ø
PACKAGE	T05	T05	T08

MEASUREMENT CAPABILITY

Spectral Range ^a			
Frequency	0.1 - 30 THz	0.1 - 30 THz	0.1 - 30 THz
Wavelength	3000 - 10 µm	3000 - 10 µm	3000 - 10 µm
Max Power Density	50 mW/cm ²	50 mW/cm ²	50 mW/cm ²
Noise Equivalent Power	4.0 x 10 ⁻¹⁰ W/(Hz) ^½	1.0 x 10 ⁻⁹ W/(Hz) ^½	3.0 x 10 ⁻⁹ W/(Hz) ^½
Detectivity ^b	5.10 ⁹ cm(Hz) ^½ /W	4.10 ⁹ cm(Hz) ^½ /W	2.7.10 ⁹ cm(Hz) ^½ /W
Voltage Responsivity ^b	140 kV/W	70 kV/W	30 kV/W

PHYSICAL CHARACTERISTICS

Effective Aperture	2 x 2 mm	5 mm Ø	9 mm Ø
Package	T05	T05	T08
Sensor	Pyroelectric	Pyroelectric	Pyroelectric
Absorber	BL	BL	BL
Dimensions	3.6Ø x 7.5D mm	3.6Ø x 7.5D mm	3.6Ø x 7.5D mm
Weight	45 g	45 g	45 g

ORDERING INFORMATION

Product Name	QS2-THZ-BL	QS5-THZ-BL	QS9-THZ-BL
Product Number	201691	202289	201690

Specifications are subject to change without notice

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. 630 nm, 5 Hz



QS-I-TEST EVALUATION TEST BOX

QS-I-TEST	
Batteries	+9V/-9V
R _i Resistors	10 ⁵ - 10 ¹⁰ Ω
C _i Compensating	YES
Package	101.6H x 127W x 58.4D
Optical Mount	¼-20 Threaded
Front Bezel	SM1 (1.035-40)
Product Number	201693

* For details, contact your Gentec-EO representative