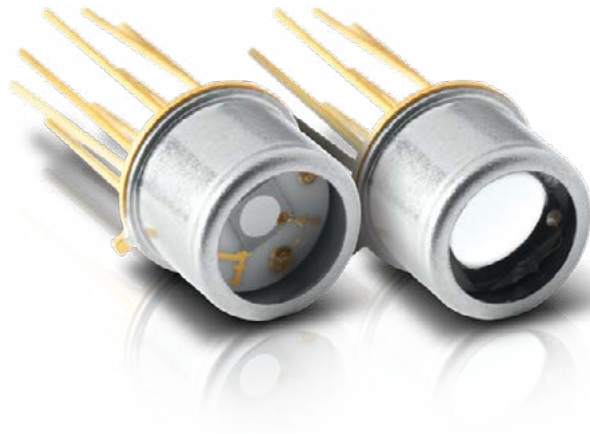


THZ DETECTORS

# QS-THZ

Hybrid THz Detectors



\* Pictures for indicative purposes only

## AVAILABLE MODELS

- 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 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	<b>146</b>
LIST OF ALL ACCESSORIES	<b>206</b>
<b>APPLICATION NOTES</b>	
THZ MEASUREMENT: PYROELECTRIC VS GOLAY CELL	<a href="#">201924</a>
QS-I-TEST SPECIFICATIONS	<a href="#">202187</a>
HOW TO HANDLE PYROS	<a href="#">202181</a>
PIN-OUTS	<a href="#">202931</a>
SDC-500 DIGITAL OPTICAL CHOPPER	<a href="#">202154</a>

# QS-THZ

CE NIST\*  
Traceable   
\*Also traceable to NRC-CNRC

## SPECIFICATIONS

	QS5-THZ-BL	QS9-THZ-BL
<b>VOLTAGE RESPONSIVITY</b>	70 kV/W	30 kV/W
<b>EFFECTIVE APERTURE</b>	5 mm Ø	9 mm Ø
<b>PACKAGE</b>	TO5	TO8
<b>MEASUREMENT CAPABILITY</b>		
Spectral Range <sup>a</sup>		
Frequency	0.1 - 30 THz	0.1 - 30 THz
Wavelength	3000 - 10 µm	3000 - 10 µm
Max Power Density	50 mW/cm <sup>2</sup>	50 mW/cm <sup>2</sup>
Noise Equivalent Power	1.0 x 10 <sup>-9</sup> W/(Hz) <sup>1/2</sup>	3.0 x 10 <sup>-9</sup> W/(Hz) <sup>1/2</sup>
Detectivity <sup>b</sup>	4.10 <sup>9</sup> cm(Hz) <sup>1/2</sup> /W	2.7.10 <sup>9</sup> cm(Hz) <sup>1/2</sup> /W
Voltage Responsivity <sup>b</sup>	70 kV/W	30 kV/W
<b>PHYSICAL CHARACTERISTICS</b>		
Effective Aperture	5 mm Ø	9 mm Ø
Package	TO5	TO8
Sensor	Pyroelectric	Pyroelectric
Absorber	BL	BL
Dimensions (Excluding Pins)	9.10 x 6.40 mm	15.20 x 6.40 mm
Weight	45 g	45 g
<b>ORDERING INFORMATION</b>		
Product Name	QS5-THZ-BL	QS9-THZ-BL
Product Number	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, Resistors	10 <sup>0</sup> - 10 <sup>10</sup> Ω
C, Compensating	YES
Package	101.6H x 127W x 58.4D
Optical Mount	1/4-20 Threaded
Front Bezel	SM1 (1.035-40)
Product Number	201693

\* For details, contact your Gentec-EO representative

Catalogue 2019\_V1.0