

# Glacier® T

## High Resolution TE-Cooled CCD Spectrometer for Raman Spectroscopy

Spectrometer



The **Glacier® T (BTC162E)** series is a high resolution double pass transmission based TE-Cooled CCD array spectrometer designed for Raman spectroscopy. The **Glacier® T** comes preconfigured for 532 nm or 785 nm excitation with a wide spectral range or high resolution option.

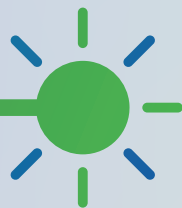
Equipped with 2048 elements, built-in 16-bit digitizer, and high-speed USB 2.0 interface, this TE-Cooled spectrometer will continuously deliver optimized high throughput results.

You can combine the **Glacier® T** spectrometer to its corresponding excitation laser system and Raman Probe to build your very own DIY Raman Building Block to your required specifications. System development and application support are available for OEM applications.

### Features:

- ★ 3.0  $\text{cm}^{-1}$  - 4.5  $\text{cm}^{-1}$  Resolution\*
- ★ 0  $\text{cm}^{-1}$  up to 4000  $\text{cm}^{-1}$  Raman Shift\*\*
- ★ Fast F/2 Spectrograph
- ★ 14°C TE-Cooled Detector
- ★ 16-bit Digitizer
- ★ DIY Raman Building Block

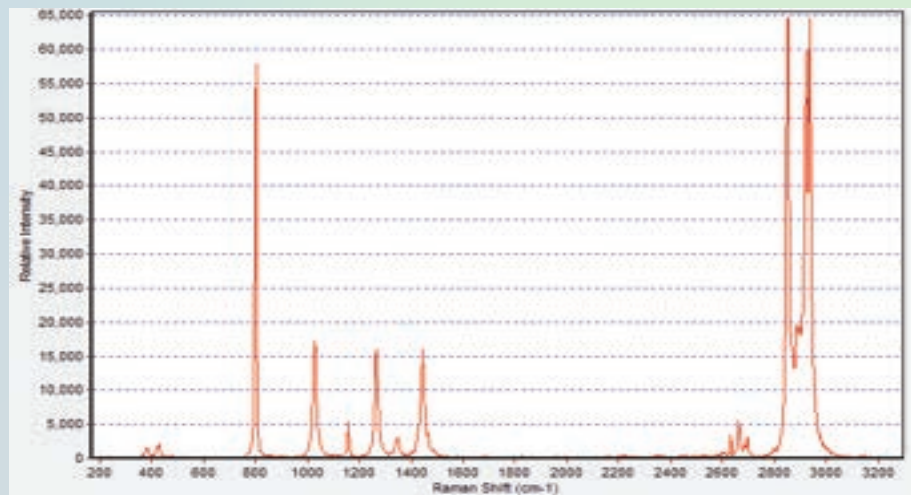
\* Depends on the Configuration  
\*\* Depends on the selected probe



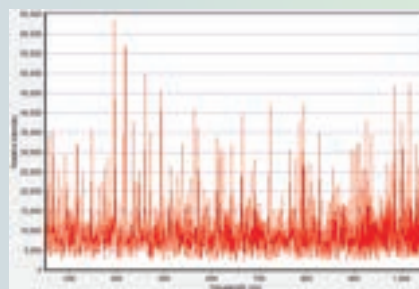
### Accessories:

- ★ Lab Grade Probe
- ★ Industrial Grade Probe
- ★ 532 nm Laser
- ★ 785 nm Laser

Raman Spectrum: Cyclohexane



Dark Current: Uncooled vs. Cooled CCD Detectors at 30 Seconds



Room Temperature



Cooled to 14°C

# More about our Glacier® T

## Specifications:

Model No.	BTC162E
DC Power Input	5V DC @ < 1.5 Amps
AC Adapter Input	100 - 240 VAC 50/60 Hz, 0.5A @ 120 VAC
Detector Type	Response Enhanced Linear CCD Array
Pixels	2048 x 1 elements @ 14 µm x 200 µm per element
Spectrograph F#	2.0
Dynamic Range	300 : 1
Spectrograph Optical Layout	Dual-Pass Transmission
Digitizer Resolution	16-bit or 65,535:1
Readout Speed	500 kHz
Data Transfer Speed	Up to 180 spectra per second via USB 2.0
Integration Time	5 ~ 65,535 ms x multiplier
External Trigger	Aux Port
Operating Temperature	15° C - 35° C
Operational Relative Humidity	85% Noncondensing
TE Cooling	14° C
Weight	~1.8 kg (3.9 lbs)
Dimensions	191 mm x 94 mm x 90 mm (7.5 in x 3.7 in x 3.5 in)
Computer Interface	USB 2.0 / 1.1
Operating Systems	Windows: 7, 8, 10, 11

## Entrance Slit:

Slit Option	Dimensions	Wavelength Range
10 µm	10 µm wide X 1 mm high	532 nm
20 µm	20 µm wide X 1 mm high	785 nm

\* Note: Custom slit widths available

## Available Models:

Model # (Part Number)	Spectral Range	Spectral Resolution
BTC162E-532S (810000407)	532 - 676 nm	~ 0.15 nm
BTC162E-532H (810000408)	532 - 645 nm	~ 0.11nm
BTC162E-785S (810000248)	785 - 1050 nm	~ 0.37 nm
BTC162E-785H (810000406)	785 - 996 nm	~ 0.29 nm

## Accessories:

### Raman Probes:

Model #	Grade	For Excitation
BAC100B-532	Lab	532 nm
BAC100B-785	Lab	785 nm
BAC102-532	Lab (Trigger)	532 nm
BAC102-785	Lab (Trigger)	785 nm
BAC101-532	Industrial	532 nm
BAC101-785	Industrial	785 nm

\* Note: The start range of the Raman shift depends on the selected probe

### Lasers:

Model #	Wavelength	Power
BWG-532	532 +/- 1 nm	Up to 100mW
BRM-785	785 +/- 0.5 nm	Up to 475mW

### Recommended Sampling Accessories:

Model #	Description
BAC151C	Raman Video Microsampling system
BAC150	Raman Probe Holder
BCR100A	Raman Cuvette Holder

