

## 1.1 - 2.2 $\mu\text{m}$ NIR TE Cooled InGaAs Array Spectrometer



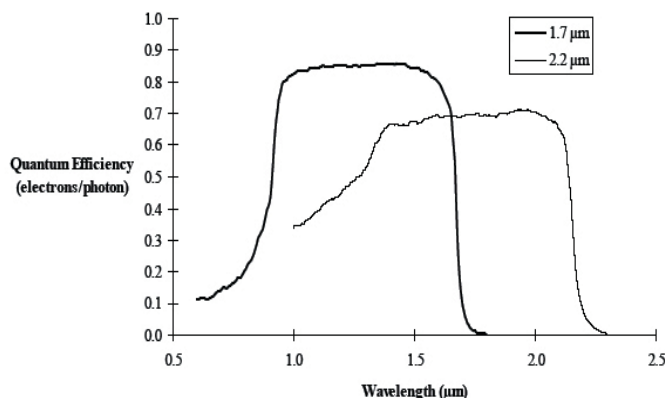
The BTC262E spectrometers are low cost, high performance back-thinned InGaAs based array spectrometers. With TE cooled linear arrays in 256 or 512 pixel configurations, the BTC262E spectrometers provide high throughput and large dynamic range. Each spectrometer includes an SMA905 fiber optic input, built-in 16-bit digitizer, and USB 2.0/1.1 plug-and-play PC compatibility. A user can choose between high sensitivity and high dynamic range using the included software. Covering a wavelength range between 1100 nm and 2200 nm, the BTC262E is available with customized spectral resolution as well as application support.

### Highlights

- 1100 – 2200 nm response range for 256 or 512 pixel InGaAs detector
- 1.5 to 12 nm FWHM spectral resolution, based on user requirements
- 16 bit digitizer built-in
- USB 2.0/1.1 plug-and-play interface
- Optional RS232 interface
- Optional shutter available
- No moving parts for maximum reliability
- Compact size
- Up to 3 ms per spectrum for kinetic studies

### Typical Applications

- Process monitoring
- NIR spectroscopy
- Quality control
- On-line Analyser
- Material Identification



# BTC262E

## 1.1 - 2.2 $\mu\text{m}$ NIR TE Cooled InGaAs Array Spectrometer

### Typical Specifications

<b>Power Input</b>	Powered by accompanying power supply
<b>Operating Temperature</b>	0° to 35° C
<b>Detector</b>	Default TE cooled 256 element linear InGaAs array, optional 512 & 1024 available
<b>Spectral Coverage</b>	1100 - 2150 nm standard, and custom ranges available
<b>Spectrograph f#</b>	About 3.5
<b>Spectrograph optical layout</b>	Crossed Czerny-Turner
<b>Grating</b> <sup>1)</sup>	75 -1200 lines/mm available with variety of blaze wavelengths
<b>Slit</b>	25 to 400 $\mu\text{m}$ depending on resolution requirements (slit height : 1000 $\mu\text{m}$ )
<b>Optical Resolution</b>	1.5 to >12 nm FWHM
<b>Digitizer Resolution</b>	16 bit
<b>Digitizer Speed</b>	1 MHz digitizing speed
<b>Integration Time</b>	1 ms (minimum) - 65.5 s (maximum) with x100 option available
<b>Computer Interface</b>	USB 1.1 / 2.0 or optional RS232
<b>Operating Software</b>	Windows 98 (2nd Edition), Me, 2000, and XP compatible
<b>Dimensions</b>	Spectrometer unit: 180(W) x 109(D) x 68(H) mm Power supply unit: 167(W) x 229(D) x 57(H) mm
<b>Weight</b>	Spectrometer Unit about 3 lbs Power supply unit about 2 lbs
<b>Wavelength Accuracy</b>	Better than 0.5 nm
<b>Data Transfer Speed</b>	3 ms per spectrum in fast acquisition mode
<b>Outputs</b>	AUX port for external trigger and lamp synchronization
<b>Defective Pixels</b>	0%
<b>Software Included</b>	BWSpec for Windows 98 (2nd Edition), Me, 2000, XP

1) Some gratings only work below the 1400 nm region and some gratings are only suitable for work with the 256 element arrays.