

~0.9 - 1.7 μm NIR TE Cooled InGaAs Array Spectrometer



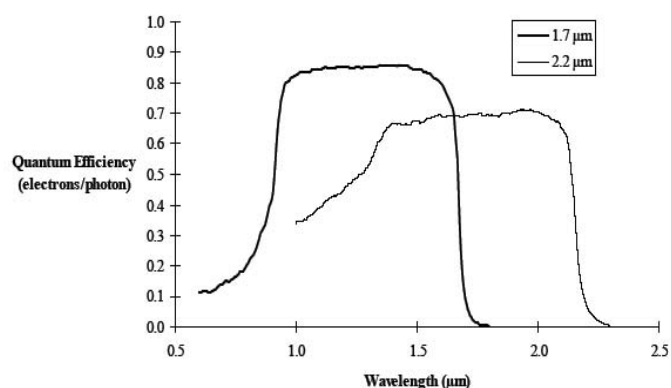
The BTC261E spectrometers are low cost, high performance InGaAs based array spectrometers. With TE cooled linear arrays in 256, 512 or 1024 pixel configurations, the BTC261E spectrometers provide high throughput and large dynamic range. Each spectrometer includes an SMA905 fiber optic input, built-in 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 900 nm and 1700 nm, the BTC261E is available with customized spectral resolution as well as application support.

Highlights

- 900 – 1700 nm response range for 512 pixel InGaAs detector
- 0.8 to 10 nm FWHM spectral resolution, based on user requirements
- 16 bit digitizer built-in
- High dynamic Range and high sensitivity modes are selectable
- 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



BTC261E

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Typical Specifications

Power Input	Powered by accompanying power supply
Operating Temperature	0° to 35° C
Detector	Default TE cooled 512 element linear InGaAs array, optional 256 & 1024 available
Spectral Coverage	~920 - 1700 nm standard, and custom ranges available
Spectrograph f#	About 3.5
Spectrograph optical layout	Crossed Czerny-Turner
Grating ¹⁾	75 -1200 lines/mm available with variety of blaze wavelengths
Slit	25 to 400 μm depending on resolution requirements (slit height : 1000 μm)
Optical Resolution	0.8 to >10 nm FWHM
Digitizer Resolution	16 bit
Signal-to-Noise Ratio, rms	High Dynamic Mode: off peak < 15; on peak 56 High Sensitivity Mode: off peak < 20; on peak 79
Digitizer Speed	1 MHz digitizing speed
Integration Time	1 ms (minimum) - 65.5 s (maximum) with x100 option available
Computer Interface	USB 1.1 / 2.0 or optional RS232
Operating Software	Windows 98 (2nd Edition), Me, 2000, and XP compatible
Dimensions	Spectrometer unit: 180(W) x 109(D) x 68(H) mm Power supply unit: 167(W) x 229(D) x 57(H) mm
Weight	Spectrometer Unit about 3 lbs Power supply unit about 2 lbs
Wavelength Accuracy	Better than 0.5 nm
Data Transfer Speed	3 ms per spectrum in fast acquisition mode
Outputs	AUX port for external trigger and lamp synchronization
Defective Pixels	0%
Software Included	BWSpec for Windows 98 (2nd Edition), Me, 2000, and XP

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