

Glacier™ X

TE Cooled CCD Array Spectrometer for Fluorescence Spectroscopy



The Glacier™ X series is a high performance, Thermoelectric Cooled (TEC) linear CCD array spectrometer solution. 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.

The Glacier™ X is the smallest TE cooled spectrometer on the market and is ideal for low light level applications such as fluorescence and Raman spectroscopy. B&W Tek's proprietary TE Cooling technology allows the signal to be integrated for sufficient time to accumulate measurable signals for detection, without being saturated with dark noise. The result is a far superior signal-to-noise ratio for long integration times.

For Fluorescence, the Glacier™ X is configured with a 100 micron slit, 350nm – 1050nm wavelength range, and cylindrical lens, which provides up to a 3x boost in sensitivity.

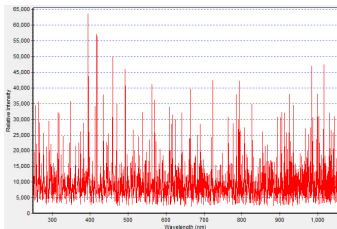
Features:

- High Dynamic Range
- Reduced Dark Noise
- Superior Long-term Stability
- 350nm - 1050nm Spectral Range
- 4.1nm Spectral Resolution (FWHM)

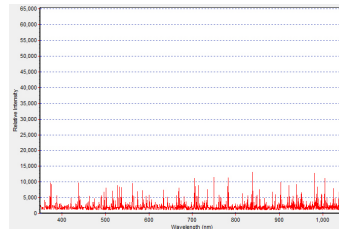
Accessories:

- Fiber Optic Patch Cords
- Light Sources
- Cuvette Holder
- Inline Filter Holder

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



Room Temperature



Cooled to 14°C

Specifications:

DC Power Input	5V DC < 1.5 Amps
AC Adapter Input	100 - 240VAC 50/60 Hz, 0.5A @ 120VAC
Detector Type	Response Enhanced 2048 element linear silicon CCD array
Pixels	2048 x 1 elements @ 14µm x 200µm per element
Spectrograph F#	3.2
Spectrograph Optical Layout	Crossed Czerny-Turner
Spectral Range	350nm - 1050nm
Slit Width	100µm
Dynamic Range	300 typical
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	5ms - 65 seconds x multiplier
External Trigger	Aux Port
Operating Temperature	15°C - 35°C
Operational Relative Humidity	85% Noncondensing
TE Cooling	14°C
Weight	0.60 kg (1.32 lbs)
Dimensions	127.0mm x 39.0mm x 90.7mm (5in x 1.5in x 3.6in)
Computer Interface	USB 2.0 / 1.1
Operating Systems	Windows: XP, Vista (32-bit), 7 (32-bit)