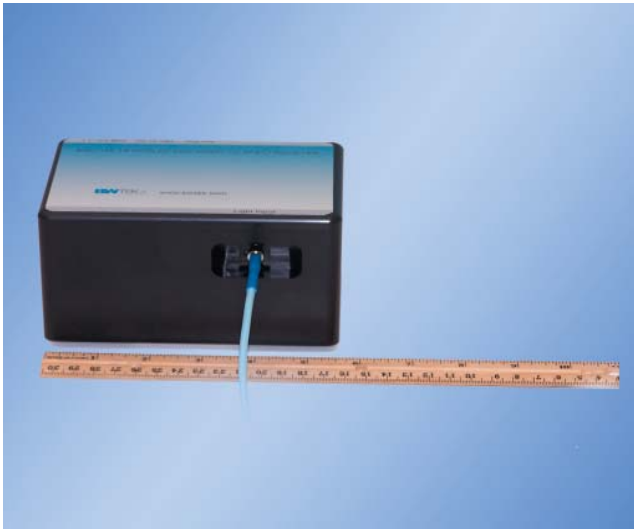


BTU142E

BTU142E Miniature CCD Array UV Spectrometer



The BTU142E Miniature Array UV Spectrometers are a newly developed instrument utilizing a holographic aberration corrected flat field concave grating, reducing stray light and improving throughput.

Offering a resolution of 0.75 nm with a 50 um slit and a 2048 elements detector, the BTU142E is perfect for fluorescence spectroscopy applications, low level light detection, and DNA sequencing.

Optical input options include single or bundle fiber using a SMA 905 connector, or a free space option is available.

Highlights

- *High Resolution*
- *Concave Grating*
- *Zero Order Light Terminator*
- *Detachable Fiber Bundle Option*

Applications

- *Fluorescence Spectrometer*
- *Low Light Level Detection*
- *DNA sequencer*

Figure 1 : Mercury Lamp Spectrum measured by BTU142E

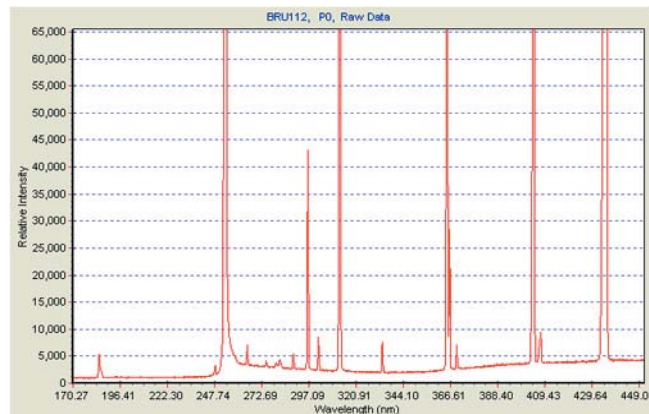
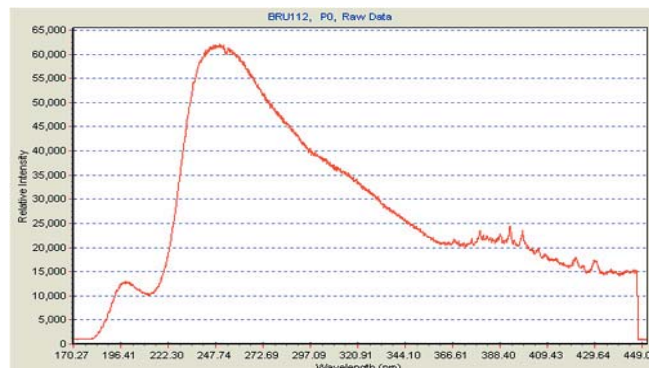


Figure 2 : Deuterium Lamp Curve measured by BTU142E



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Typical Specifications

Optical Entrance	Option 1 Single Fiber	$\phi 0.2$ mm NA = 0.2 single fiber with 50 μ m slit
		Connector: SMA905
	Option 2 Bundled Fiber	Input: $\phi 0.4$ mm, NA = 0.2 Output: Linear 70 μ m x 1250 μ m
		Connector: SMA 905
	Option 3 Free Space	Free Space, slit width 10 - 300 μ m, NA = 0.2
Grating	Flat-Field, Aberration corrected, Concave Holographic	
	945.8 l/mm (Center)	
Spectral Range	180 nm – 450 nm	
Spectral Length on Detector	25 mm	
Spectral Resolution	0.75 nm with 50 μ m slit	
Pixel Resolution	0.25 nm	
Mini. Integration Time	5 ms	
Wavelength Accuracy	0.2 nm	
Stray Light	< 0.20% @ 240 nm, Deuterium Lamp	
A/D Resolution	16 bit	
Detector	2048 elements@14 μ m x 200 μ m per element	
Power Input	5 V DC @ < 3 A (Power Consumption Rate : 4 - 5 W)	
Computer Interface	USB 1.1/2.0	
Dimensions	164.7(L)x103(W)x69(H)mm	
Weight	5 kg	

