

# Analytical Instrumentation

*Surf the New Wave in Portable Fiber Optic Spectrometry*

## **EPP2000C Concave Grating Spectrometer - for UV-VIS Applications**

StellarNets' miniature fiber optic spectrometers with concave gratings deliver high performance for spectroscopy applications in the UV-VIS wavelength ranges covering 190-850nm, or optionally 250-900nm. The instruments are exceptionally robust with no moving parts, and are packaged in small rugged metal enclosures (2.75 x4 x6 inch) for portable spectroradiometry and lab or process spectroscopy measurements.

The EPP2000C UV-VIS spectrometers utilize a 40mm diameter concave grating with aberration correction to provide superb spectral imaging. This significantly improves spectral shapes by reducing comma and astigmatism found in plane grating spectrograph designs.

The flat field spectrograph architecture does not utilize mirrors, and therefore provides the lowest possible stray light in the UV with additional assistance from the holographic line grating. A multi-band filter is integrated into the spectrograph to provide order sorting and prevent optical aliasing. The instruments optical input is attached via standard SMA-905 connector, using single strand fiber optic cable with typical silica core diameters of 400um, 600um, 1000um.

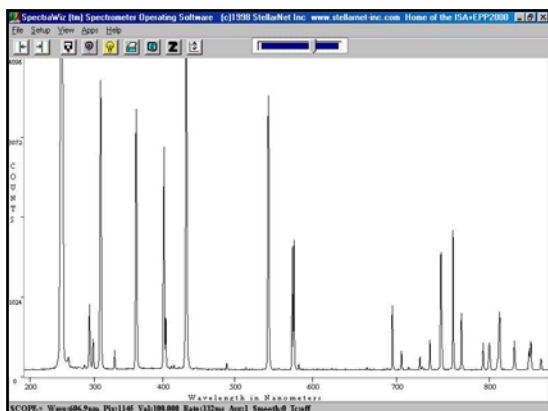


The spectrometers interface to notebook and desktop computers via high speed USB-2 and parallel ports. The SpectraWiz software accurately measures wavelength emissions, reflectance, transmission, absorption, concentrations, and absolute intensities.

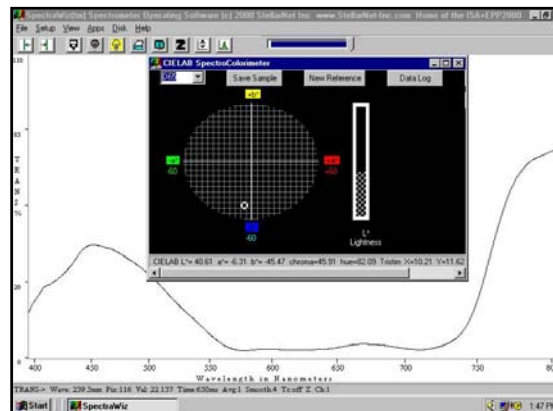
<b>Specifications</b>		<b>EPP2000C-UV-VIS Spectrometer \$2595</b>	
Dynamic range:	2000:1 with 6 decades	Dimensions:	69 x 100 x 150 mm
Optical resolution:	<1nm resolving - 25um slit	Power consumption:	100 mA @ 5 VDC
Detector type:	2048 pixel CCD, PDA opt.	Interface:	Parallel and USB-2
Detector range:	190-850nm or 250-900nm	Data transfer speed:	3x / 40x faster than USB-1
Pixel size:	14um x 200um	Detector Integration:	2ms/1ms [12/14-bit] to 65s
Concave Grating:	Aberration corrected	Slit size options:	14, 25, 50, 100, 200um
Grating type:	Holographic, 590g/mm	Stray light:	.02% at 435nm; .2% at 200nm
Spectrograph:	f/2, Flat field - No mirrors	Fiber optic input:	SMA905 0.22na single fiber
Order sorting filter:	Integrated multi-band	Operating systems:	Win95/98/NT/Me/00/XP
Signal to noise:	1000:1 CCD, PDA 2000:1	Software included:	SpectraWiz program & apps
Digitizer:	12-bit , 14-bit optional	Also <b>free</b> programs for:	LabView/VC/VBA/Delphi



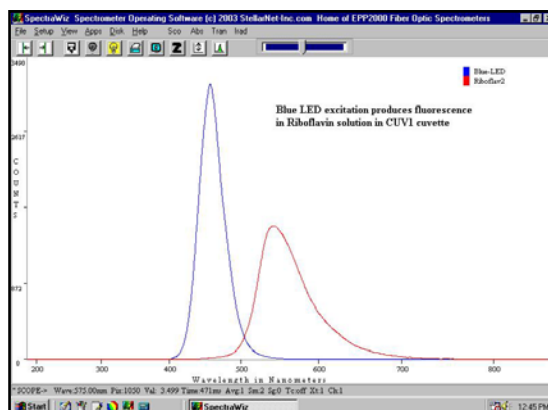
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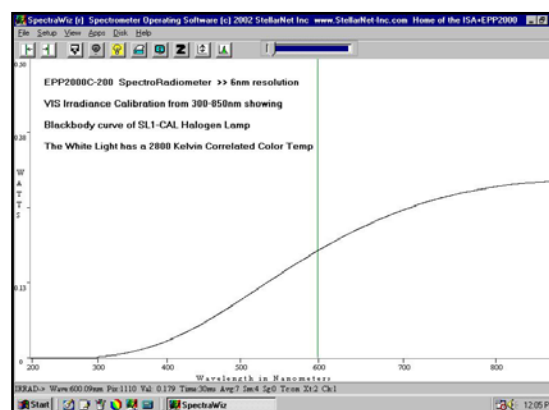
Emission Spectra of Hg+Argon gas



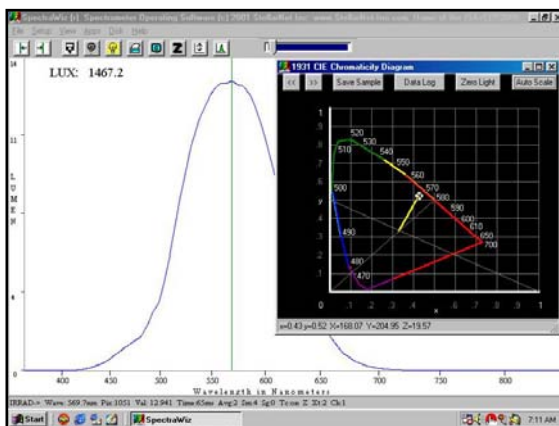
Reflectance spectrum of blue paper



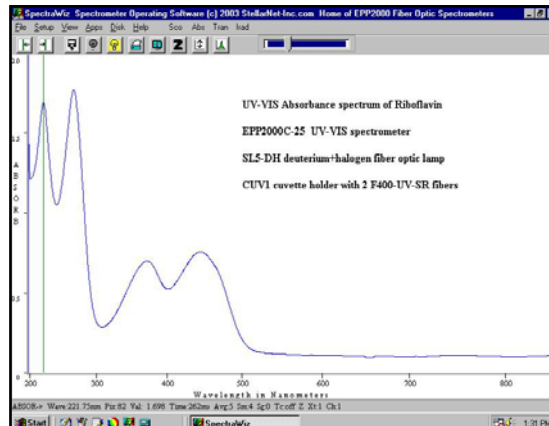
Blue-LED Induced Fluorescence



Halogen Lamp Irradiance Spectrum



LED color xy chromaticity diagram



UV Absorbance Spectrum of Riboflavin



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