

## Gemini 180

### Double Additive Monochromator

ELEMENTAL ANALYSIS
FLUORESCENCE
GRATINGS & OEM SPECTROMETERS
OPTICAL COMPONENTS
FORENSICS
PARTICLE CHARACTERIZATION
RAMAN
SPECTROSCOPIC ELLIPSOMETRY
SPR IMAGING

Fully automated  
Double additive grating  
scanning monochromator

#### Overview

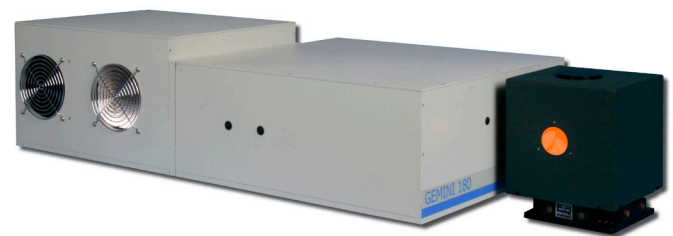
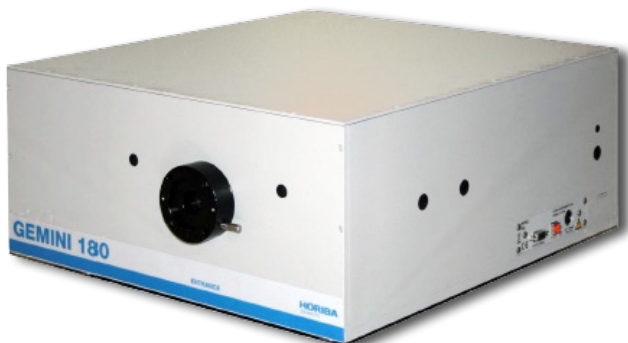
The Gemini 180 is a fully automated, double additive grating scanning monochromator. The incorporation of toroidal optics provides for optimum throughput and spectral resolution. It is ideal for applications that require low stray light including Transmission, Absorbance, Reflectance and Fluorescence. The Gemini 180 also functions as a high power, high purity light source for Fluorescence, detector characterization, and microscope illumination when coupled with one of our Xe Light Sources.

#### Fully Automated

The Gemini 180 is fully automated, including the scanning drive, slits and shutters. The direct digital drive is self-calibrating. A single drive train is used to move each of the kinematically mounted gratings. One grating of the drive is coupled directly to the stepper motor, while the second grating follows the rotation of the first via a metal belt transmission to ensure the best wavelength coupling between the two stages.

#### Key Features

- Direct drive couple-scanning via single stepper motor
- Double Czerny-Turner with toroidal optics providing maximum throughput
- Kinematic grating motors
- Fully automated slits and accessories (fixed slits available for radiometry)
- Built-in computer interfaces (USB 2.0)



High Purity Tunable Light Source



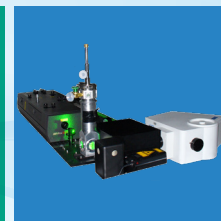
## Specifications

<b>Focal Length</b>	180 mm	
<b>Aperture</b>	f/3.8	
<b>Mechanical Range</b>	0-1400 nm	
<b>Grating Size</b>	50 mm x 50 mm	
<b>Resolution</b>	0.15 nm	
<b>Wavelength Accuracy</b>	± 0.5 nm	
<b>Repeatability</b>	± 0.1 nm	
<b>Spectral Dispersion (@500 nm)</b>	2.1 nm/mm	
<b>Stray Light</b>	1 x 10 <sup>-9</sup>	
<b>Bandpass</b>	Continuously adjustable from 0 to 15 nm (1200 gr/mm grating)	
<b>Wavelength Scanning</b>	Direct digital stepper-motor drive (worm drive)	
<b>Scan Speed</b>	160 nm/s	
<b>Step Size</b>	0.06 nm	
<b>Computer Interface</b>	USB 2.0	
<b>Dimensions</b>	<b>Length</b>	46.2 cm (18.2 in)
	<b>Width</b>	41.7 cm (16.4 in)
	<b>Height</b>	19.1 cm (7.5 in)
<b>Weight</b>	18.1 kg (40 lb)	

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