

Vacuum Compatible High Resolution Czerny-Turner Monochromator

- **Best Resolution in the ~105-nm to IR Range**
- **Scanning, Imaging and CCD Array Spectroscopy**
- **Clean Stainless Steel Construction**
- **O-ring sealed systems achieve 10^{-6} torr vacuum**
- **Optional Ultra High Vacuum (UHV) metal sealed versions for 10^{-10} torr**
- **High Efficiency Broadband Al+MgF₂ Coatings**



This instrument offers all of our great features and options: a wide variety of patented SNAP IN diffraction gratings, efficient broadband reflective coatings, and master polished optics. McPherson Czerny-Turner instruments with focal lengths greater than 0.67-meters allow you to use larger 120-mm x 140-mm grating or a 110-mm x 110-mm grating. The large grating offers almost 40% more area, achieving a faster f/number, and more throughput. In these models the grating can also rotate through an auxiliary 20° for extension of wavelength range. For the 1200-g/mm grating the high wavelength changes from 1300-nm to 1575-nm (more than 20% extra wavelength coverage!)

Specifications & Additional Information:

Specifications	Drawing	Quick Contact	Close all Tabs
Optical Design	McPherson Model 209 1.33-meter focal length f/9.4 Monochromator		
Focal Length	1.33-meter, Czerny Turner design Spectrometer with Patented "Snap-In" gratings		
Aperture Ratio	9.4 (11.6 with smaller grating)		
Wavelength Range	refer to grating of interest for range, in extended position increase top limit 20%		
Wavelength Accuracy	+/-0.05 nm (with 1200 G/mm grating)		
Wavelength Reproducibility	+/- 0.005 nm (with 1200 G/mm grating)		
Grating Size	120 x 140-mm (or 110 x 110-mm) - Echelle gratings up to 220-mm wide		
Slit Locations	Axial and lateral with optional extra entrance and exit port selection mirrors		

Focal Plane 50-mm maximum width, multiply dispersion by the width of your detector for range

Performance with various diffraction gratings:

Grating (G/mm) (others available)	2400	1800	1200	600	300	150	75	20
Wavelength Range from 185 nm to	650nm	860nm	1.3um	2.6um	5.2um	10.4um	20.8um	78um
Resolution (nm) at 313.1 nm	0.005	0.007	0.01	0.02	0.04	0.08	0.16	0.60
Dispersion (nm/mm)	0.31	0.41	0.62	1.24	2.48	4.96	9.92	37.2
First Order Littrow Blaze (nm)	240nm	Holo	250nm	300nm	750nm	1.25um	2.0um	45um
	300nm		300nm	500nm	1.0um	2.5um	3.0um	
	Holo		500nm	750nm	3.0um	4.0um	8.0um	
			750nm	1.0um	4.0um	6.0um	10.0um	
			1.0um	1.85um		8um	12um	

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