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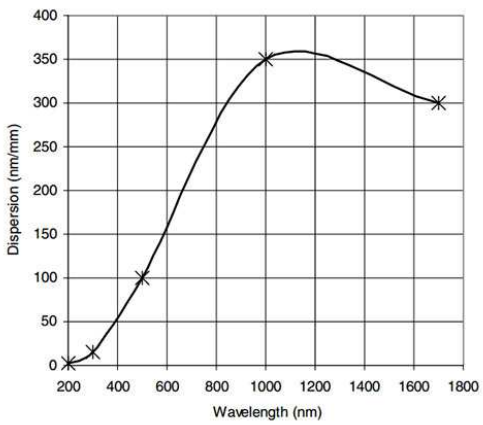
f/4 Prism Monochromator

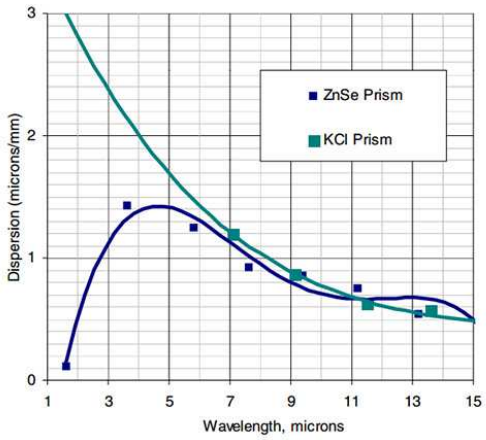
The Model 303 is a 250mm focal length f/4 prism monochromator with good throughput. It is built like a Czerny-Turner and uses a prism in Littrow configuration for refraction. Prisms do not have multiple orders like diffraction gratings and are capable of providing very low dispersion. The 303 monochromator used with slits works as a tunable filter, or cut filter for UV-Raman applications. Used with a wide exit slit (or by removing the exit slit) the focal plane accepts a CCD or bolometer array in the Infrared (for example).

Efficiency is good with a high throughput prism material and the 303's toroidal optics. Dispersion varies with the index of refraction of the prism material and wavelength readout is not linear. We provide a calibrated look up table based on actual and instrument specific data, not theoretical calculations. Prism material is mostly SiO2 and can be ZnSe, NaCl and occasionally KRS-5. For special orders, we work with you to select prism material and wedge angle to meet requirements in the wavelength region of interest.

Exceptional UV dispersion | Imaging optics | Calibrated Drive | Monochromator or spectrograph

Optical Design	Littrow prism in Czerny-Turner
Focal Length	250 mm
Aperture Ratio	f/4 (NA 0.125)
Wavelength Range	depends on prism material
Slits	Adjustable entrance and exit slits (0.01 to 4 mm wide with micrometer)





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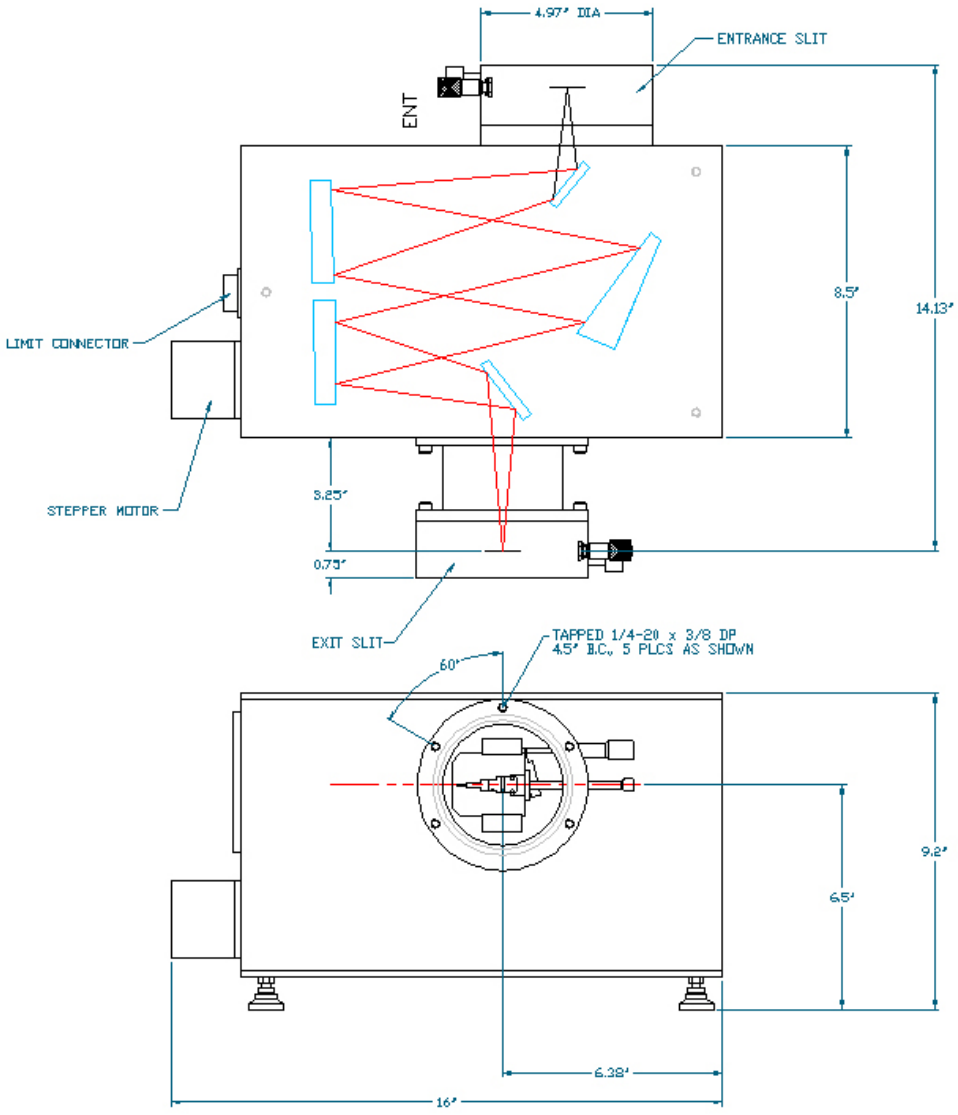

Ordering Information

Part Number: 8183-0303-0 = Model 303 Czerny-Turner prism Spectrometer, f/4, toroidal optics, adjustable entrance and exit slits (requires scan controller and software)

References

Filtered Thomson Scattering in an Argon Plasma
Sohail H. Zaidi; Z. Tang; A. P. Yalin; P. Barker; R. B. Miles

Design and performance of an ultraviolet resonance Raman spectrometer for proteins and nucleic acids
M.P. Russell, S. Vohník, G.J. Thomas Jr

Synthesis, Characterization, and Luminescence of Europium(III) Schiff Base Complexes
Ronald D. Archer, Huiyong Chen, Larry C. Thompson