



New High Vacuum Spectrometer

The new McPherson Model 207V is an important part of deep-UV and VUV imaging and analytical spectroscopy systems. It works over a broad spectral range, from the deep UV, through the Visible into the long-wave Infrared. Its clean construction is ideal for contaminant free purge and vacuum applications.

Ultraviolet light is used for many things. When we expose our skin to UVB, it stimulates production of vitamin D, which our bodies need. The ability of UV to inactivate bacteria and viruses lets us use it to sterilize air, surfaces and water. Some substances absorb UV light and fluoresce. Ink in highlighter pens contains a fluorescent dye. Currency and secure documents use fluorescence too. UV light can react with the chemicals of a mineral specimen or diamond. Some minerals and gemstones will phosphoresce or fluoresce under shortwave UV light and not under long wave. UV from astronomical objects tells us about the temperature and chemical composition of these remote objects. When the Earth's atmosphere absorbs the UV, we make the measurements from space. The Hubble's Faint Object Spectrograph (FOS) and the Goddard High Resolution Spectrograph (GHRS) collect and analyze UV light. We can now also make measurements in high-vacuum in the lab, with the McPherson Model 207V.

The Model 207V is a 670mm focal length optically fast f/4.7 monochromator with a vacuum tight housing. Stigmatic performance with off axis parabolic optics is available for the 207V too. With stainless steel housing capable of 10E-6 torr vacuum, this instrument works unfettered over a very wide wavelength range. Depending on the grating(s) installed it can go from 110 nanometers to 15 microns! The vacuum construction is useful for both deep ultraviolet and VUV work and also for the Infrared. Vacuum removes atmospheric constituents (gas or vapor) that absorb light wavelengths of interest in both spectral regions.

Features include Snap-In™ diffraction gratings optimized for spectral resolution and/or for wavelength range coverage. The 50-millimeter wide focal plane is great for work with camera systems. Precise and durable slits are provided for coupling free-space or fiber optic signals.

Do you need deep ultraviolet and infrared imaging? Analytical spectroscopy? The Model 207V works with no interference from atmospheric or ambient gases. It is useful for applications in astrophysics, material and life sciences. Consult McPherson and we will help make sure the spectrometer is ready for implementation in your specific application.

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McPherson designs and manufactures scanning monochromators, flat field imaging spectrographs, vacuum monochromators, and measurement systems for reflectance, transmittance, and absorbance testing. It provides accessories, including light sources, detectors, readout systems, data acquisition software, fiber optics, sample chambers, and light collection assemblies (telescopes and collimators). Its monochromators, spectrographs, and spectroscopy systems used for industrial OEM and research applications. The company's unique components and systems are used in research applications ranging from lasers and lithography, solar, and energy to



analytical and biomedical instrumentation. McPherson is a privately held corporation, founded in 1953 and based in Chelmsford, Massachusetts. For more information, visit <http://mcpersoninc.com>

We look forward to partnering with you on your next optical project. Thank you for your continued patronage.

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