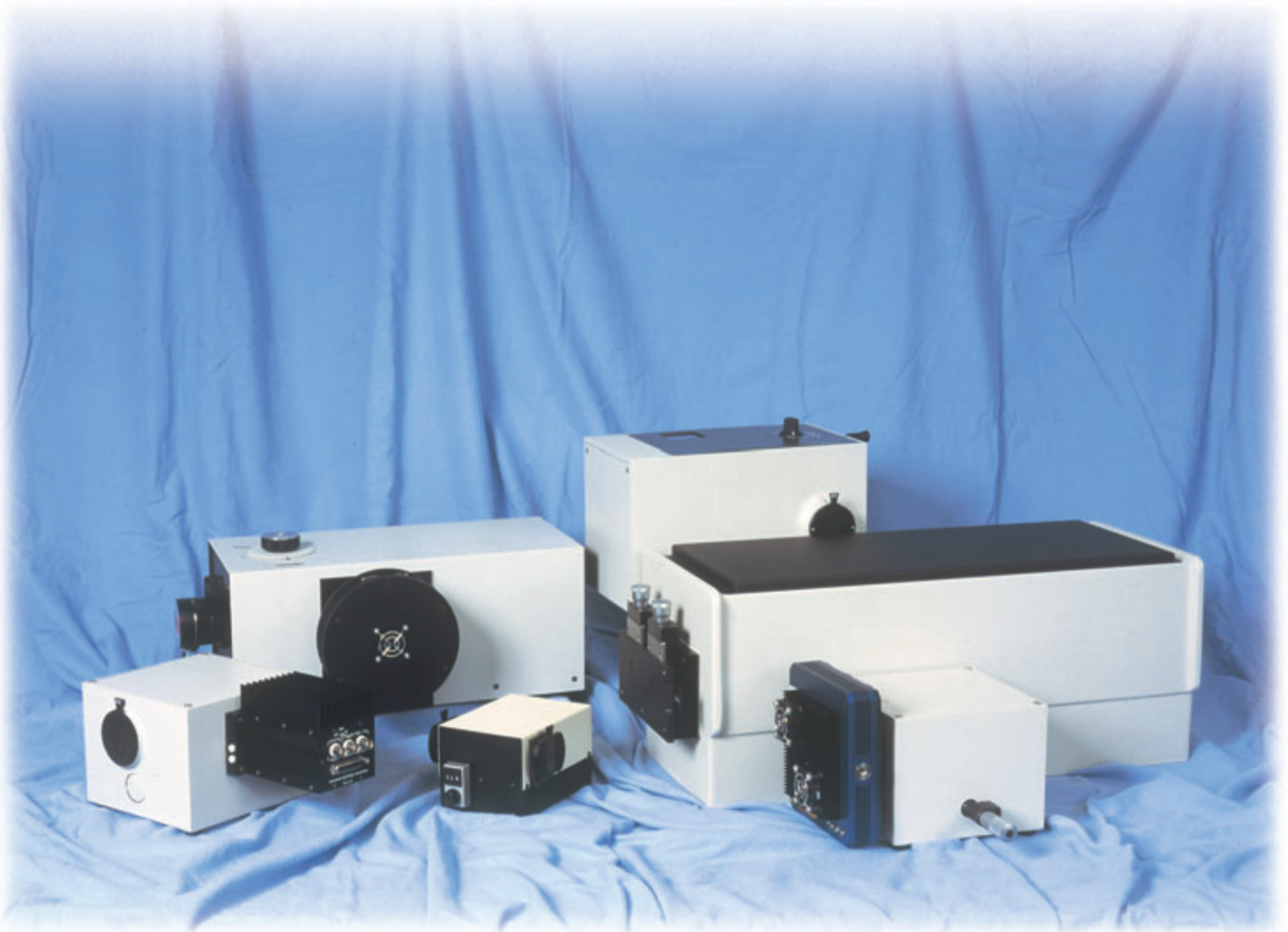


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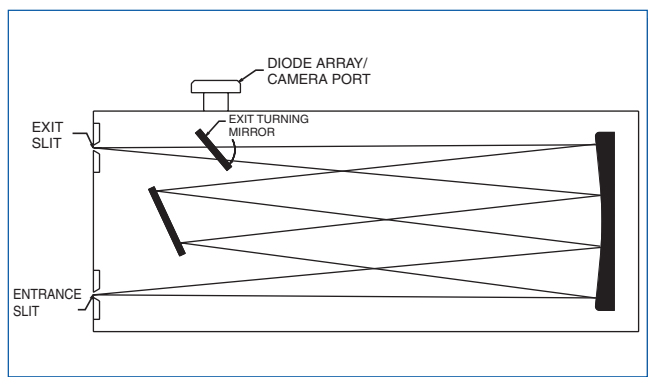


Monochromators/Spectrographs

Jarrell-Ash has been a trusted name in light based research for over 50 years. Genesis Physical Science Products continues the tradition with a full line of Jarrell-Ash monochromators and spectrographs. Ruggedly built with the features you need, you'll get the most from your research dollar, and you can be confident your equipment will last for years. For those of you who have inherited a vintage Jarrell-Ash instrument, we still support them!

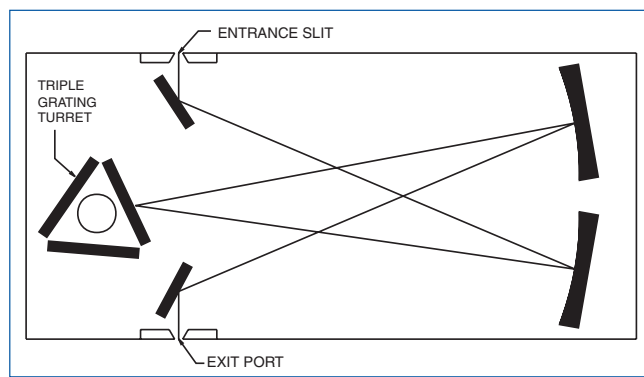
Applications

- ◆ Spectroscopy
- ◆ Fluorescence
- ◆ Reflectance
- ◆ Emission
- ◆ Absorption
- ◆ Raman Scattering
- ◆ Process Monitoring
- ◆ Diode Laser Calibration



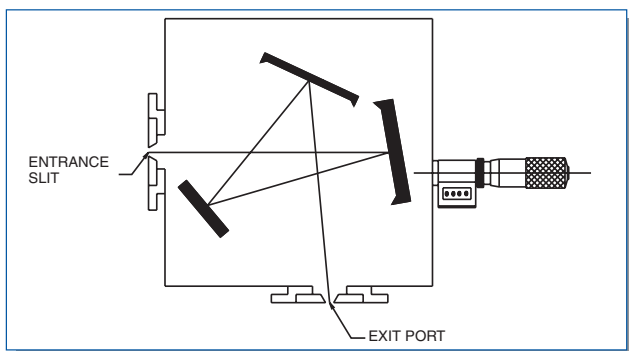
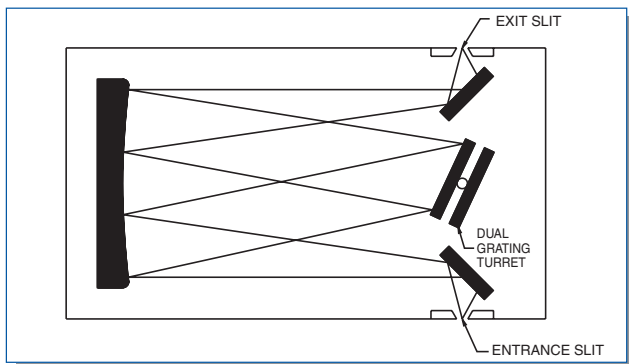
MonoSpec 50

Featuring a symmetrical Ebert design, the half-meter Jarrell-Ash MonoSpec 50 represents the finest in high performance instruments. The single-piece cast aluminum housing ensures the highest possible stability and maximum resolution without sacrificing throughput. Gratings are mounted in a kinematic support, allowing the easy interchange of gratings without the need for optical realignment. With the optional side exit port, the MonoSpec 50 will easily accept a wide variety of detectors to create a high performance, customized spectrographic system to suit your requirements.



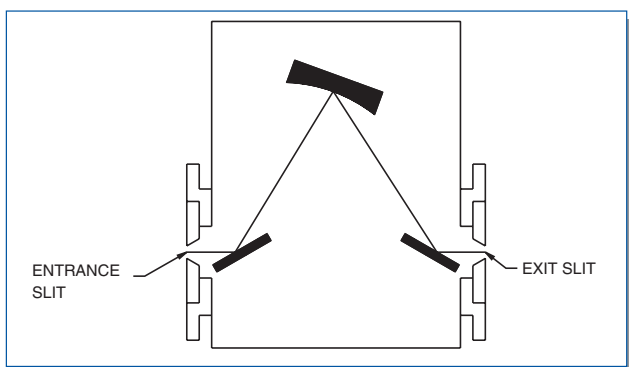
MonoSpec 27

Stray light is at a minimum with the Jarrell-Ash MonoSpec 27 due to the Crossed Czerny-Turner optical design. The MonoSpec 27 features a triple grating turret for holding up to three gratings at the same time. The external control knob allows you to quickly change from grating to grating without removing the cover. Spectrograph models are configured at the exit port with an expanded focal plane measuring 28 mm wide by 18 mm high, with virtually no vignetting. When paired with suitable detectors, the MonoSpec 27 makes a versatile, yet flexible, spectrographic system for a number of applications.



MonoSpec 18

The one eighth meter Jarrell-Ash MonoSpec 18 is the ultimate in high quality compact instruments. Utilizing a Crossed Czerny-Turner optical design with the entrance and exit ports 90° apart, this compact design provides excellent resolution and throughput with negligible stray light. The rugged one-piece cast aluminum housing ensures a highly stabilized optical system and a long, maintenance-free lifetime of service. Easily converted to a spectrograph, the MonoSpec 18 when fitted with one of a wide variety of detectors provides a robust system that doesn't take up your valuable workbench space.



MonoSpec 10

The Jarrell-Ash MonoSpec 10, the smallest member of the MonoSpec line, follows in the tradition of quality of Jarrell-Ash monochromators. This monochromator utilizes a concave, corrected, holographic grating. The resolution with a 1200 g/mm grating is better than 1.0 nm with minimal stray light. Best of all, the unit's small footprint makes it ideal for OEM applications.

MonoSpec 25

The quarter meter Jarrell-Ash MonoSpec 25 features an Ebert optical design with the entrance and exit slits in a straight line configuration with high throughput. A cast aluminum housing makes this a highly stable optical system. The MonoSpec 25 features a dual grating mount for holding up to two gratings at the same time. The external control knob allows you to quickly change from grating to grating without removing the cover. The MonoSpec 25 monochromator may be configured with either adjustable or fixed width slits. The high quality of the MonoSpec 25 has made it the monochromator of choice in thousands of research laboratories world-wide.

Specifications

Instrument	Focal Length (mm)	Design	Aperture	Resolution* (nm) with 100 µm slit	Reciprocal Linear Dispersion* (nm/mm)	Stray Light (%)
MonoSpec 50	500	Ebert	f/8.6	0.02	1.6	< 0.2
MonoSpec 27	275	Crossed Czerny-Turner	f/3.8	0.3	3.0	0.001
MonoSpec 25	250	Ebert	f/3.5	0.2	1.6	< 0.2
MonoSpec 18	156	Crossed Czerny-Turner	f/3.8	0.6	4.5	0.0015
MonoSpec 10	100	Czerny-Turner	f/3.4	0.8	5.5	0.0015

* with 1200g/mm grating

Gratings

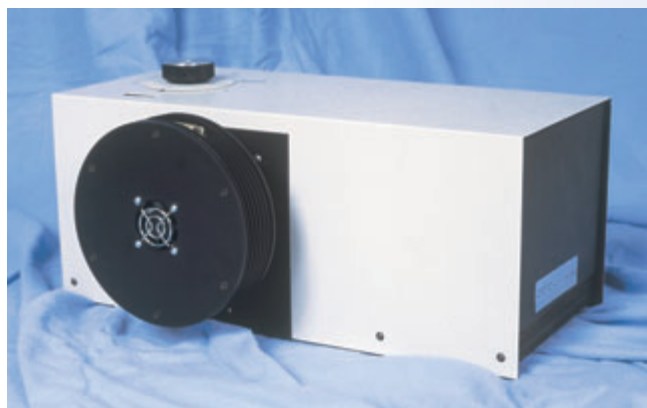
Jarrell-Ash offers a wide selection of gratings for our instruments and your custom applications. Ruled diffraction gratings come in rulings of 30 to 2400 g/mm and blaze wavelengths of 190 nm to 30.0 µm. A variety of holographic and echelle gratings are also available.

Slits

Bayonet-type fixed slits are available in widths from 10 µm to 2000 µm. Adjustable slits are also available opening from 15 µm to 3 mm.



Jarrell-Ash has combined the best in detector systems with the best in spectrographs to provide systems with the power and performance to meet your exacting specifications at a price that will stretch your R&D dollars further. Our MonoSpec 18, 27 and 50 models of spectrographs can be fitted with all of the detectors listed below to create a system with the specific features you need for your application. In addition, a variety of photomultiplier tubes are also available.



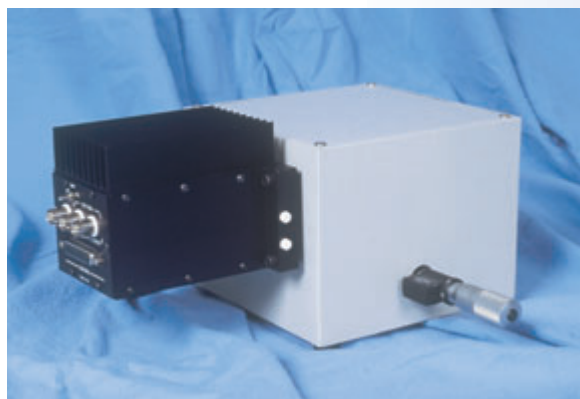
ST-6 CCD

The ST-6 UV CCD camera from Santa Barbara Instruments Group is an excellent low cost CCD detector system. With a two-stage TE cooled 750 x 242 pixel array covering a 8.63 x 6.53 mm area, the ST-6 covers a spectral response range from 200 nm to 1100 nm. Exposure times are fully programmable down to 0.01 seconds, and the signal is clocked in using 16 bit digitization. The KestrelSpec software, available for either the Mac or Windows, is a powerful yet easy to use analysis tool designed specifically for spectroscopic applications.



AP7 CCD

The AP7 from Apogee is the newest addition to the Jarrell-Ash family of detector systems. This 512 by 512 CCD array has the speed and sensitivity for your most critical applications. This TE cooled detector covers a spectral response range from 200 nm to 1100 nm. Exposure times are fully programmable down to 0.03 seconds, and the signal is clocked in using 16 bit digitization. The KestrelSpec software, available for either the Mac or Windows, is a powerful yet easy to use analysis tool designed specifically for spectroscopic applications.



LS-2000/LS-2000c Linear Diode Array

The Jarrell-Ash LS-2000(c) multichannel optical analyzer offers a breakthrough in spectroscopic instrumentation: powerful tools that are flexible and affordable. Accurate real-time detection and analysis is practical for a wide variety of analytical methods, including spectroscopy, Raman scattering, fluorescence, HPLC, color measurement and others. The 2048-element photodiode array detector system provides broad spectral response (200 to 1100 nm) high quantum efficiency, fast scanning rate, low dark noise current, low readout noise, and 12 bit A/D digitizing resolution. Two models are available for your specific applications: the ambient model LS-2000 and the thermoelectrically cooled LS-2000c.

Genesis Physical Science Products



PMT Power Supply

The PMT High Voltage Power Supply is a high-quality power source for photomultiplier tubes that is capable of meeting the most demanding performance standards for power stability and reliability. This portable unit has a line regulation of 0.01 percent and an anode ripple voltage of less than 5 mV peak-to-peak. Its output is adjustable and ranges from 0 to -1,000 volts. The PMT-HVPS also demonstrates outstanding stability at 0.01 percent/hour. Best of all, it all comes in a package 6x4x7 inches!



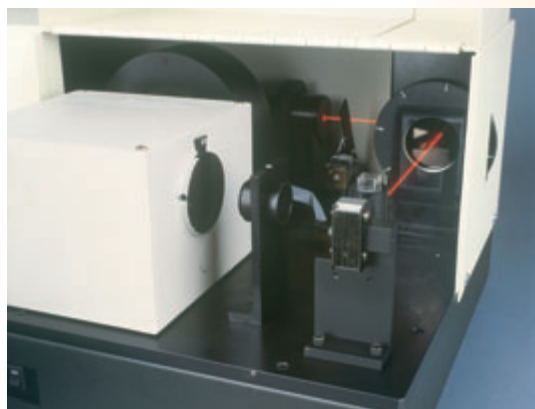
Aladdin HCL Power Supply

Finally, a hollow cathode lamp power supply that won't take up your valuable lab space! The Aladdin HCL Power Supply provides the power to light any element lamp, including deuterium. Best of all, it comes in a package so small you can carry it in a brief case. The easy-to-read digital display, 10 turn current adjustment dial, and low drift (<0.5%) makes it easy to control the output from the lamp for whatever application you may have.



Pen Style Calibration Lamp

This low cost pen style calibration lamp is the perfect tool for applications like instrument calibration or line profiling. It comes with either a mercury, neon, or argon pen lamp so you can choose the lamp which is best for your application. Available for 110 or 220 volt line sources, this compact light source is a must for your research facility.



SpectraMate 18

Introducing the SpectraMate 18. The first Raman spectrograph designed *specifically* for instructional applications. Driven by a 12 mW HeNe laser and utilizing a CCD detector, the SpectraMate 18 has the power and sophistication to handle any classroom demonstration or teaching lab. Based on the MonoSpec 18, the compact Crossed Czerny-Turner optical design is excellent at rejecting stray light. The SpectraMate 18 uses KestrelSpec software, available for either Mac or Windows. In addition, the unit is designed in a modular fashion to allow the laser and spectrograph to be easily removed for other applications.

Genesis Physical Science Products



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