

Precisely Xenon™ UV-Vis Spectrophotometer



Overview

The new Precisely Xenon™ Ultraviolet-Visible Spectrophotometer by PerkinElmer is a high-performance module comprised of an integrated spectrometer and a guided-arc pulsed xenon light source with easy to use evaluation software. PerkinElmer's spectrometer is optimized for use with our proprietary guided-arc 10-watt pulsed xenon lamp. This advantageous light source boasts very low average power consumption while providing long lamp life over the UV-Vis (190 to 800 nm) spectrum. As a single, internal wavelength calibrated system, the Precisely Xenon™ spectrophotometer significantly reduces OEMs' development time. The rugged, compact design enables OEMs to begin rolling out the next

generation of instruments for blood analysis, micro-plate readers, spectroscopic process controllers, and other clinical and life science applications.

Precisely Xenon's integrated design and use of high-performance optics minimize stray light and maximize optical performance. The 1024-element deep-well silicon photodiode array detector ensures maximum signal-to-noise ratio to enable greater sensitivity and a wider dynamic range. PerkinElmer's guided-arc pulsed xenon lamps provide the Precisely Xenon™ Spectrophotometer with extremely stable, long life, high-intensity broadband excitation energy. This can only be achieved through years of experience in integrating pulsed xenon light sources into the total light source systems of OEMs.

Key Features and Benefits

- ▶ **Ultraviolet-Visible 190-800 nm.** The Precisely Xenon™ Spectrophotometer covers both the ultraviolet and visible range of the spectrum.
- ▶ **Integrated spectrometer and guided-arc pulsed xenon light source.** Ready for integration into OEM systems.
- ▶ **High resolution.** Enables the resolving of nearby peaks to allow a broad range of applications.
- ▶ **Deep-well silicon photodiode array and 16-bit A/D converter.** Ensures greater sensitivity and wider dynamic range.
- ▶ **Built-in scan control and fast data measurements (35 ms) through USB or RS232 interface (optional).** Close to real-time analysis with high sample rate capability.
- ▶ **Internal wavelength calibration.** No calibration required, enabling faster integration.
- ▶ **Fiber-optic SMA905 interface.** Standard interface offering compatibility ease.
- ▶ **Compact, rugged, solid state design.** Size offers flexibility to integrate in a range of instruments.
- ▶ **Proprietary evaluation software provided.** Facilitates rapid feasibility determination.

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Using PerkinElmer's guided-arc pulsed xenon technology, pulsed light is delivered to the sample via a fiber-optic cable. The returning light is routed to the optics where it is dispersed onto a photodiode array detector. The spectral data is then scanned and converted to a digital output in 0.035 seconds. The Precisely Xenon™ Ultraviolet-

Visible Spectrophotometer provides sample analysis within the ultraviolet and visible range. Its combination of integrated engineering, superior optical design, and proven light source offers better than 2 nm of resolution while achieving a large 16-bit dynamic range for use in a host of applications.

Sample Applications

- ▶ Cleaning Verification
- ▶ Fluid and Gas Analysis
- ▶ Solvent Contamination Analysis
- ▶ Drug Discovery
- ▶ Colorimetry
- ▶ Fluorescence

Precisely Xenon UV-Vis Spectrophotometer Specifications	
Spectral range*	190 – 800 nm
Spectral resolution	Better than 2 nm
Detector	1024 Element Si PDA
Source	10W Pulsed Xenon
A/D converter	16 - bit
Stray light	> 2.2 AU @ 220 nm
Photometric range	0 – 3 AU
Minimum scan speed	0.035 seconds
Wavelength reproducibility	± 0.1 nm
Wavelength accuracy	± 0.5 nm
Outputs*	USB or RS232 (Optional)
Computer capability	700 MHz Pentium or equivalent
Operating system	Windows 2000®, XP®, Windows 98®
Power requirements	12 VDC ± 5% @ 1.3 A typical (1.75 A peak)
Size (including light source)	6.5" (165.1 mm) x 5" (127 mm) x 2.25" (57.15 mm)
Weight	<3 lbs.

Specifications: Subject to change without notice.
 * Configurable for application specific requirements.

