

IntegraSpec® XL Spectrometers for Process Control Applications

Leading Edge Performance

The Axsun IntegraSpec® NIR Spectrometer Engine delivers unmatched measurement speed, high spectral resolution and accuracy, all in the most compact MEMs based spectrometer footprint available.

Proven Technology

The Axsun IntegraSpec Spectrometer Engine leverages our proven technology, intellectual property, and volume manufacturing infrastructure to provide a reliable, compact and cost-effective NIR Spectrometer Engine with the highest level of performance, enabling true in-line process measurements in a compact and reliable package. The IntegraSpec is designed for seamless integration into your spectroscopy system.

A Unique Design

Based on the Axsun micro-optic integration platform and MEMS tunable filter, the IntegraSpec XL platform is a pre-dispersive NIR spectrometer with fully integrated tunable laser-based light sources, wavelength and amplitude references, and photodetector.

This flexible platform accommodates both fiber-to-detector and direct-to detector sampling configurations and can be configured with either single or multiplexed detectors.

Reliability & Support

Axsun has shipped tens of thousands of tunable lasers since 2009. Our products meet rigorous Telcordia qualification standards and are supported by a team with decades of expertise in laser and photonic systems technology.

Axsun IntegraSpec® NIR Spectrometer Engine



Parameter	Units	Minimum	Maximum
Wavelength Range (XL-420)	nm	1355	1795
Spectral Resolution	cm ⁻¹ nm		3.5 1
Absolute Wavelength Accuracy	nm	-0.100	0.100
Wavelength Reproducibility	nm	-0.01	0.01
Photometric Noise	mAU		0.2
Signal-to-Noise Ratio (250ms Scan)			5500:1
Baseline Stability	%	-0.5	0.5

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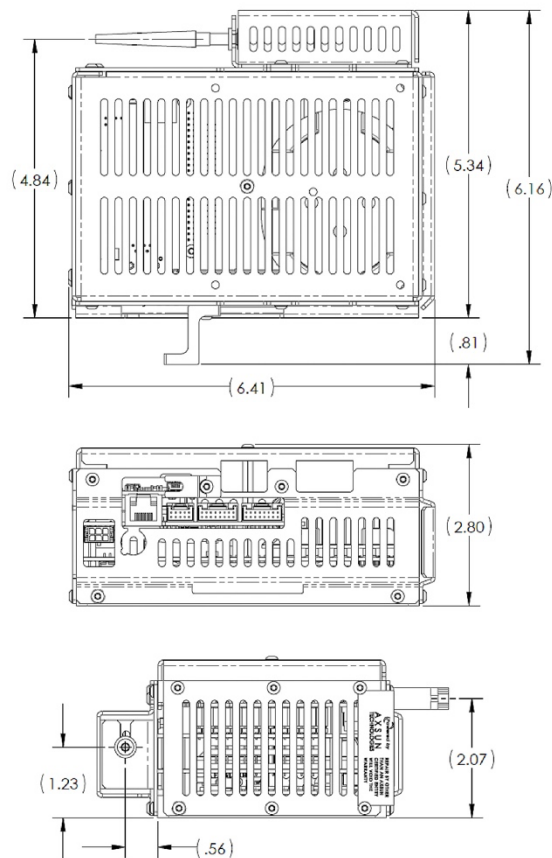
Features & Benefits

Rugged, compact and versatile Spectrometer Engine, ideal for in-line process applications
Field proven semiconductor device technology enables maintenance free operation
Spectral Sensitivity and High SNR at longer wavelength addresses a wide range of applications and samples with high performance
Low power consumption for long life battery operation
Proprietary integrated wavelength and amplitude reference module enables calibration transfer
High speed data acquisition electronics enables real time in-line measurements

Interface Specifications

Optical Connectivity	Light Source: FC/APC Polarization Maintaining (Panda) Fiber
	Detector: SMA905 Connector or Direct to Detector Armored cable standard
Detector Options	1mm or 3mm Active Area InGaAs OEM
	Fiber Optic Adaptor
Environmental Requirements	Storage Temp. Range: -20 to 70 Deg. C Operating Temp. Range: 0 to 55 Deg. C
	Relative Humidity Storage: 95% non-condensing Relative Humidity Operating: 90% non-condensing
USB 2.0 Control & Diagnostics (Optional Ethernet Interface)	OEM: mini-B receptacle
	Windows DLL and SDK
Power Consumption	25 W typical at 25°C, 12 V _{DC} nominal supply
Dimensions	OEM: 5.34"x6.41"x2.8" mm (135.6 x 162.8 x 71.1mm)
	Detector: 1.73" x 0.55" x 2.53"
Hazardous Location Qualification	Spectrometer engine: Class I, Division 2 (non-incendive)

Mechanical Dimensions IntegraSpec® XL420



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About Excelitas Technologies

Excelitas Technologies® Corp. is a leading industrial technology manufacturer focused on delivering innovative, market-driven photonic solutions to meet the lighting, optical, optronic, and detection needs of our OEM customers. Serving a vast array of applications across biomedical, scientific, safety, security, consumer products, semiconductor, industrial manufacturing, defense and aerospace sectors, Excelitas stands committed to enabling our customers' success in their end-markets.

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