

IntegraSpec™ XLP Spectrometers for Pharmaceutical PAT Applications

DATA SHEET



True Process Spectroscopy for Process Analytical Technologies Applications

Near-infrared analysis is a well-established QA/QC tool. However, traditional FT-NIR analyzers, designed primarily for laboratory use, are too large, too delicate, and too costly to deploy effectively on process lines and for raw-material inspection. And smaller diode-array process systems compromise resolution, speed, calibration transfer, and other aspects of performance. Today, the cost of installation, maintenance,

and operation for process-analytical systems far exceeds the analyzer cost – in some cases, by as much as 700 percent. Axsun's IntegraSpec XLP platform meets the ultimate process challenge – drastically reducing the total cost of measurement. Configured to address the breadth of PAT applications, this powerful platform can be integrated into the process stream without extensive investment in plant maintenance and training, or capital including real estate, fiber cabling, environmental and regulatory compliance, and method development.

Supplied by Axsun's Solution Partners

The IntegraSpec board-level platform is packaged, supplied, and installed through analytical instrument manufacturers, systems integrators, and process-control product and services suppliers. Axsun partners with world-class companies who offer complete solutions for pharmaceutical manufacturers in developing and rolling out PAT applications – from sampling hardware, to process control and analysis software to installation, training, and validation services.

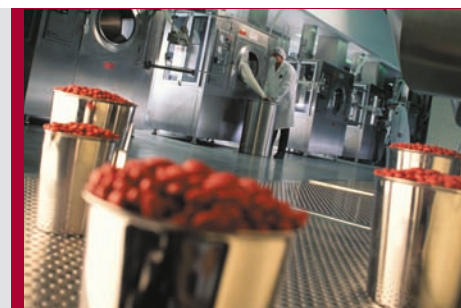
Product Description

The IntegraSpec is a pre-dispersive NIR spectrometer platform with a tunable-laser-based light source, integrated wavelength and amplitude references, and detector. It addresses the breadth of NIR PAT applications in monitoring vapor, liquids, and solids in transmission or diffuse reflection. The flexible platform accommodates both fiber-to-detector and direct-to-detector sampling configurations.

The IntegraSpec XLP also includes a comprehensive set of documentation for our solutions partners to support pharmaceutical manufacturers' GMP regulatory compliance.

Spans Breadth of PAT Applications:

- Blending and Mixing Monitoring
- Drying Monitoring
- Raw-Material Inspection
- Reaction Monitoring
- Tablet Analyses
- Roller-Compaction Monitoring
- Point-of-use QC



FEATURES & BENEFITS

- Rugged, versatile platform – ideal for point-of-use and in-line process applications
- Spectral sensitivity to 1970 nm addresses a larger portfolio of applications and samples with higher performance
- Field-proven semiconductor device technology enables maintenance-free operation
- Low power consumption for longest-life battery operation
- Proprietary WARM™ Wavelength/Amplitude Referencing Module ensures calibration transfer
- High-speed data acquisition for real-time measurements
- Maintenance-free operation, embedded calibration, and universal platform drastically reduce regulatory costs

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PERFORMANCE SPECIFICATIONS

Axsun currently offers seven models, with different spectral ranges

Model	Part No.	Spectral Range (nm)	Absorption Bands
IntegraSpec XLP 110	AXP50073-1P	1350-1540	O-H & N-H 1 st overtones
IntegraSpec XLP 210	AXP50073-2P	1540-1800	C-H 1 st overtone
IntegraSpec XLP 310	AXP50073-3P	1800-1970	C-O & O-H combinations
IntegraSpec XLP 410	AXP50073-4P	1350-1800	O-H, N-H & C-H 1 st overtones
IntegraSpec XLP 510	AXP50073-5P	1550-1970	C-H 1 st overtone; C-O & O-H combinations
IntegraSpec XLP 610	AXP50073-6P	1350-1550; 1800-1970	O-H & N-H 1 st overtones; C-O & O-H combinations
IntegraSpec XLP 910	AXP50073-9P	1350-1970	O-H, N-H, & C-H 1 st overtones; C-O & O-H combinations

General Specifications

Wavelength Accuracy	± 0.025 nm
Wavelength Repeatability	0.01 nm
Baseline Stability (24 hours)	± 0.5%
Spectral Resolution	3.0 cm ⁻¹
SNR (250 msec collect, RMS)	>5500:1
Product Dimensions	178 x 114 x 62 mm
Temperature Range	0 – 55°C
Power Consumption	11 - 22 W
Electrical Interface	USB 2.0, Wireless 802.11b, RS-232, Ethernet 10/100
Optical Interface	Excitation: polarization-maintaining fiber, FC/APC Collection: multimode fiber, SMA905
Software Interface	Microsoft® ActiveX®

(Specifications are subject to change without notice)

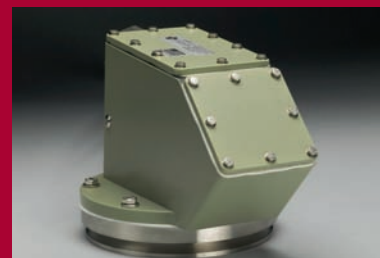
CLASS 1 LASER PRODUCT



A X S U N
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SAMPLING OPTICS SOLUTIONS



PRODUCTS FOR APPLICATION DEVELOPMENT



AXSUN TECHNOLOGIES

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