

High Speed Swept Laser Engines at 1060, 1310, & 1220 nm

Axsun Swept Lasers

The Axsun laser provides an optimal balance of tuning bandwidth, output power, sweep speed, and coherence length to enable **cutting-edge performance** in next-generation Swept-Source Optical Coherence Tomography (SS-OCT) systems.

A Unique Design

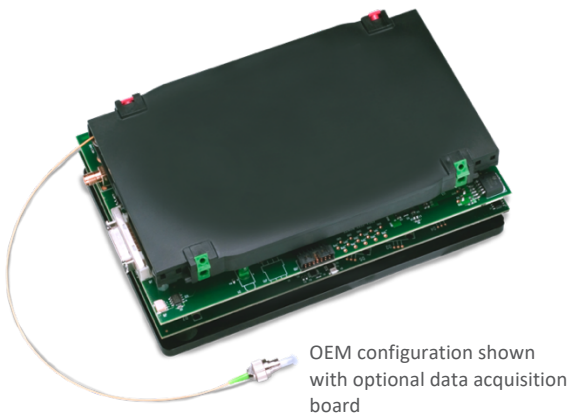
Based on our micro-optical integration capabilities and patented MEMS tunable filter, the highly scalable Axsun laser platform is the **preferred choice** for OCT system vendors in multiple markets.

Integrated Solutions

Axsun laser modules are paired with driver electronics and optional k-clock, balanced photoreceivers, interferometers, and high-speed data acquisition electronics in compact and **highly cost-effective** OEM configurations or benchtop enclosures.

Reliability & Support

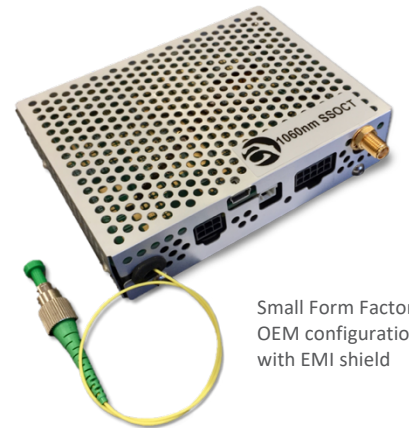
Axsun products have logged billions of hours in telecom and imaging systems around the world since 2001. Our products meet rigorous Telcordia qualification standards and are supported by a team with **decades of expertise** in laser and OCT system technology.



OEM configuration shown with optional data acquisition board



Benchtop enclosure



Small Form Factor OEM configuration with EMI shield

Largest Selection of Laser Specifications Available

Center Wavelength	1310 nm				1060 nm			
Sweep Rate, kHz	50	100	100	200	100	100	200	1-30
Tuning Range, nm (-10 dB)	110	110	140	95	110	140	100	30
Coherence Length, mm ⁽¹⁾	28	20	20	16	12	12	10	50-80
Average Output Power, mW	20	20 ⁽³⁾	20	18	15	15	15	15
Scan Depth in Air, mm ⁽²⁾	5	5	5	5	3.7	3.7	3.7	-
Common Applications	Anterior Segment Ophthalmic Imaging, Endoscopy, Dermatology, Cardiology, Nondestructive Testing, etc...				High Speed Retinal Imaging			Biometry, Topography
(1) Measured as double-sided 6dB fringe contrast roll-off					Typical specifications shown.			
(2) With optional k-clock output					Custom configurations available on request.			
(3) High power (>40mW) option available					Please inquire about 1220 nm swept laser specifications.			

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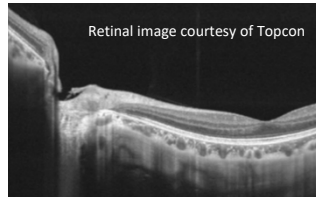
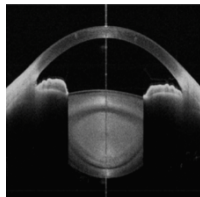
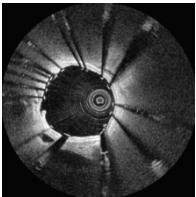
Features & Available Options

Configured in Standard OEM ⁽¹⁾ , Small Form Factor OEM ⁽²⁾ , or Benchtop Enclosure ⁽³⁾
Emission control via hardware line or software (Windows XP or later)
Latching hardware-based emission interlock and LED emission indicator
Quasi-linear laser sweep trajectory; \approx 42-55% sampled duty cycle
Optional K-clock Output for direct A/D sampling ^(1 & 3 only)
Phantom sample clock generated during laser fly-back for compatibility with Axsun's and other common third-party data acquisition boards
Programmable k-clock delay to manage time-of-flight difference between k-clock and main OCT interferometers
Optional Balanced Photoreceivers (single or dual-channel) ^(1 only)
Optional 500MS/s, 12-bit Data Acquisition Board ^(1 only)
2-Channel DAQ with 1G Ethernet, PCIe, and USB 3.0 interface
1-Channel DAQ with CameraLink interface (to PCIe frame grabber)
Optional Power Monitor ^(1 only) , Optional EMI Shield ^(1 & 2 only)
Optional OCT Mach Zehnder Interferometer and reference Variable Delay Line ^(1 only)

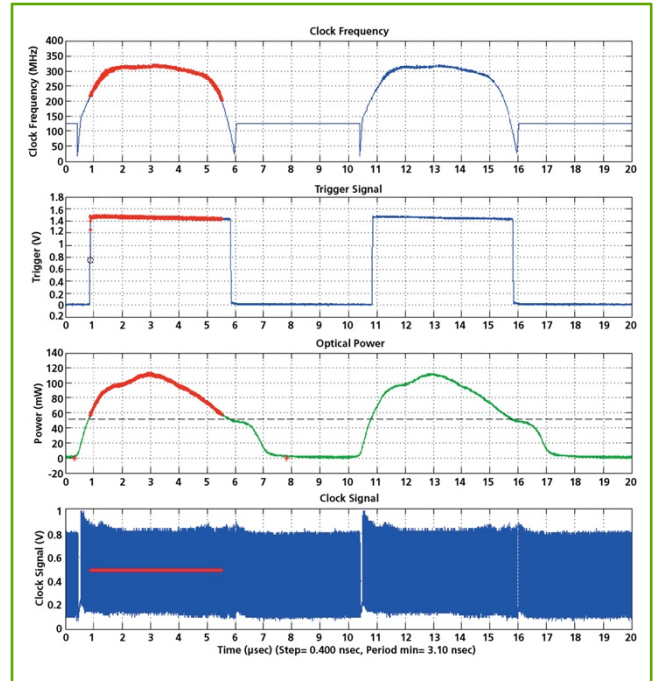
Interface Specifications

Optical Output	OEM: \approx 1m 900 μ m-jacketed fiber, FC/APC connector Benchtop: FC/APC bulkhead
Sweep Trigger Output	Standard OEM: LVDS (1.0-1.4V), 100 Ω termination, SATA* Benchtop & SFF OEM: LVTTTL (0-3.3V), unterminated, SMA
K-clock Output	Standard OEM: ECL (1.6-2.4V), 100 Ω termination, SATA* Benchtop: 0.2-0.8V, 50 Ω termination, SMA
USB 2.0 Control & Diagnostics	OEM: mini-B receptacle Benchtop: type B receptacle
Power Consumption	12 W typical at 25°C, 12 V _{DC} supply included
Dimensions	⁽¹⁾ Standard OEM: 54 x 144 x 178 mm (2.1 x 4.5 x 7") ⁽²⁾ SFF OEM: 25 x 85 x 110 mm (1 x 3.5 x 4.5") ⁽³⁾ Benchtop: 76 x 152 x 208 mm (3.1 x 6 x 8.2")
Environmental Requirements	OEM: maintain heatsink @ 10-45°C, 10-90% humidity NC Benchtop: 10-35°C, 10-90% humidity NC

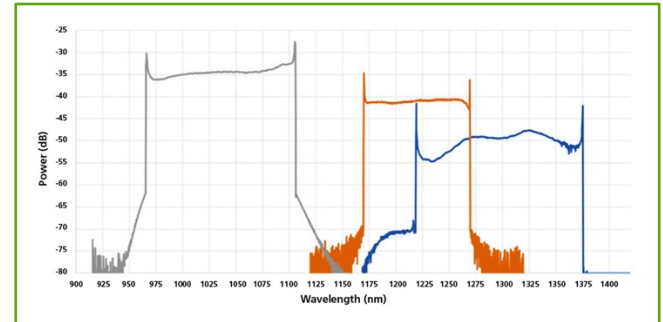
*Benchtop signal levels available on OEM configuration with included interface board



Typical Oscilloscope Capture (100 kHz)



Typical Optical Spectra of Axsun Lasers



Contact Us with Special Requests!

About Excelitas Technologies

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For a complete listing of our global offices, visit www.excelitas.com/locations

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