

## Integrated Optical Systems

### SOA-MZI Module XLT-AOS



EXELITE XLT-AOS is a plug-and-play generic optical logic device based on Mach-Zehnder Interferometer structure. XLT-AOS is ideal for high-speed optical signal processing, wavelength conversion, optical regeneration, de-multiplexing and optical logic applications. XLT-AOS exploits state-of-the-art photonic integration and Semiconductor Optical Amplifiers (SOA) as the non-linear switching elements. The module exhibits low fiber-to-fiber loss and requires low switching powers to operate.

The XLT-AOS is offered in a convenient benchtop package, suitable for academic and industrial R&D laboratories. The module includes on/off key switch, separate current controls for the SOAs and two independent phase controls for optimum biasing of the module. The front panel display allows for SOA currents, temperature and phase monitoring. All readings are simultaneously displayed without requiring any user interaction.

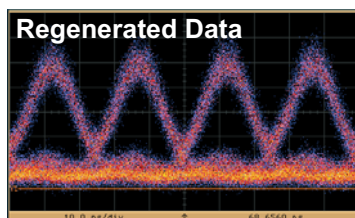
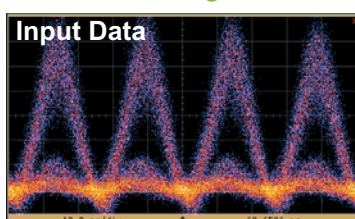
XLT-AOS Series Features	XLT-AOS Series Applications
<ul style="list-style-type: none"> <li>■ High-Speed Operation</li> <li>■ C band Operation</li> <li>■ High Optical Gain</li> <li>■ High Non-linearity</li> <li>■ Benchtop Package</li> <li>■ User-friendly Interface</li> </ul>	<ul style="list-style-type: none"> <li>■ R&amp;D Applications</li> <li>■ Optical Regeneration</li> <li>■ Optical Wavelength Conversion</li> <li>■ Optical Logic</li> <li>■ Optical Switching &amp; Signal Processing</li> </ul>

## XLT-AOS Technical Specifications

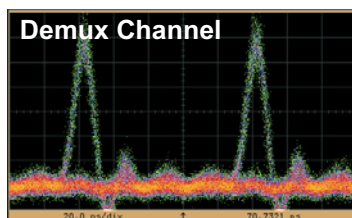
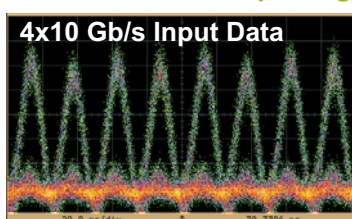
Specification	Value	Units	Notes
<b>Optical</b>			
Wavelength Range	1530-1565	nm	
SOA Small Signal Gain	>28	dB	@ 300 mA and after 0.6 nm filtering
Unsaturated Recovery Time	<70	ps	
Saturated Recovery Time	<15	ps	input power > 7 dBm
Maximum Input Power	+12	dBm	
Output Power	-10	dBm	@ 40 Gb/s after 2 nm filtering
<b>Environmental Conditions</b>			
Operating Temperature	15 - 30	°C	
Storage Temperature	10 - 50	°C	
<b>Electrical &amp; Mechanical Specifications</b>			
Operating Voltage	85 - 264	VAC	@ 47-63 Hz
Power Consumption	<25	W	
Dimensions	27 x 26 x 10	cm	
All information is accurate and subject to change without notice. No responsibility is assumed for their use.			

## XLT-AOS Typical Performance

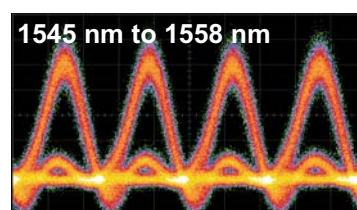
**40 Gb/s 2R Regeneration**



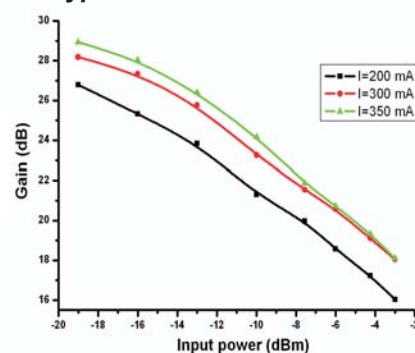
**40:10 Gb/s De-Multiplexing**



**40 Gb/s λ Conversion**



**Typical SOA Gain Curve**



## Contact Information

**EXELITE Innovations**  
 Lochagou Gkanogianni 123 &  
 Meg. Alexandrou 3  
 Zografou, Athens  
 GR-157 73 Greece

[www.exelite-inov.com](http://www.exelite-inov.com)  
[sales@exelite-inov.com](mailto:sales@exelite-inov.com)

Tel: +30 210 77 11 680  
 Fax: +30 210 77 11 761



**LASER RADIATION**  
**AVOID EXPOSURE TO BEAM**  
**CLASS 3B LASER PRODUCT**