

VARIABLE OPTICAL ATTENUATOR PRODUCT BRIEF

API Nanotronics Introduces Free Space Variable Optical Attenuators (FS-VOA) from its [NanoOpto](#) Division based on proprietary wafer scale processing nano-optics technology and Atomic Layer Deposition (ALD).

The VOAs are polarization dependent, single channel, electronically controlled components for controlled attenuation of collimated light. Provided as an unpackaged device, it is intended to be mounted to an optical bench or TEC within a housed enclosure.

The FS-VOA seamlessly integrates broad range, fine resolution attenuation in a robust platform without the size, cost, and complexity of existing solutions.

KEY FEATURES AND BENEFITS

Optical Performance

- Attenuation over 30dB available
- Insertion loss <0.5dB available
- Return loss >30dB
- C band, C+L band

Physical Properties

- Small form factor
- High durability with no moving parts

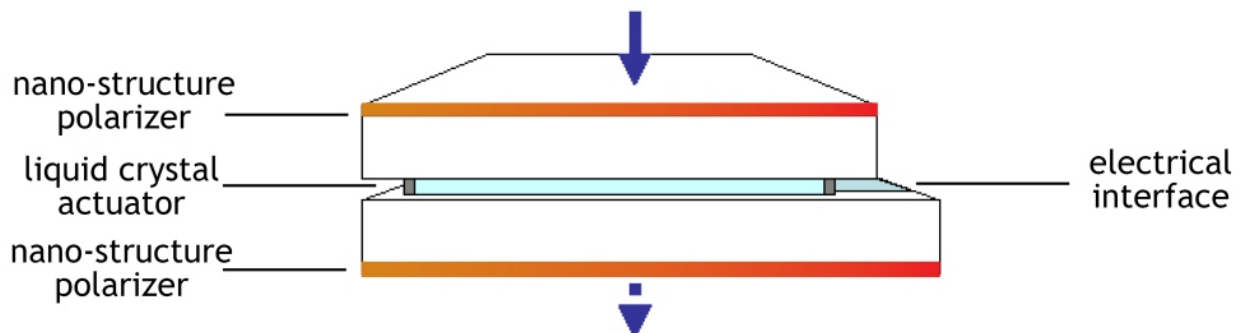
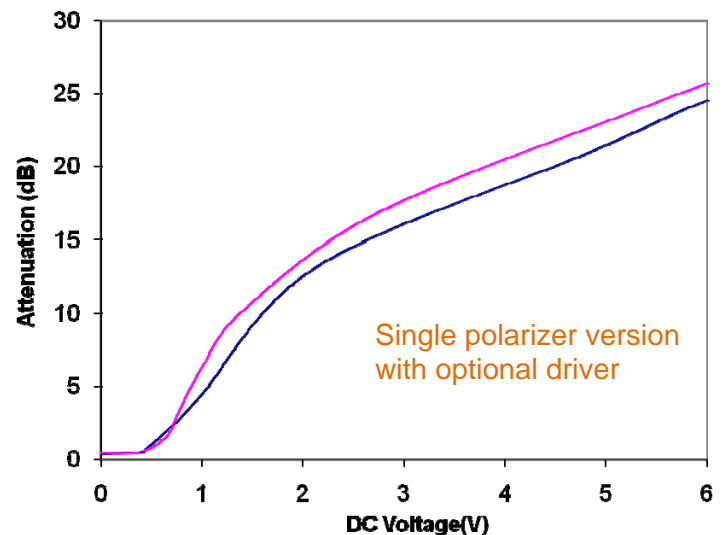
Temperature range

- Operating: 0° to 75°C
- Storage: -40° to 80°C

Applications

- Transceivers
- Transponders
- Tunable lasers

VOA Attenuation vs Bias



Parameter	SPECIFICATIONS	Comments
<i>Optical performance</i>		
Integrated polarizer	Yes	Single and Dual Versions
Optimized wavelength range	C-Band	C + L band available
Maximum attenuation	>20dB	>30db available
Insertion loss	<1.0dB	0.5db available
Return loss	>30db	
Input optical power	>23dBm	>0.3mm beam diameter
<i>Physical specifications</i>		
Clear aperture	1mm x 1mm	
Dimensions	3.0mm x 3.0mm x 1mm	Customizable
Incidence angle	6°	Nominal
Drive voltage	0-5 V DC	With optional driver
<i>Environmental specifications</i>		
Operating temperature	0° to 75° C	
Storage temperature	-40° to 85° C	
Mechanical shock	1500G, 1ms, 3axis	Pass
Vibration	20G, 10-2000Hz	Pass
Durability	No wear out	No mechanical parts

Find out more about NanoOpto at:
www.nanoopto.com

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