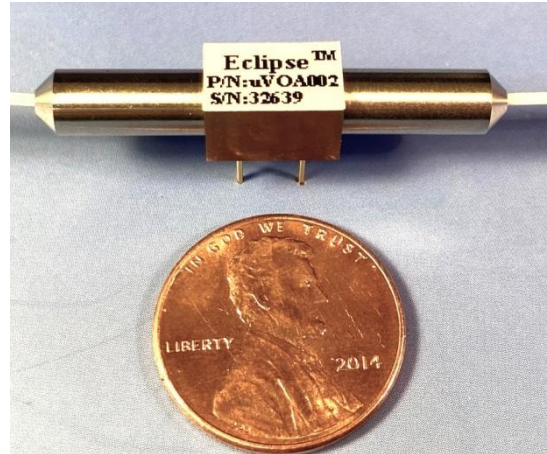


# **Eclipse™ Micro Variable Optical Attenuators/Modulators**

## *High-speed Attenuation Control with Optional Modulator*

Boston Applied Technologies' Micro Variable Optical Attenuator ( $\mu$ VOA) is voltage controlled optical attenuator. Based on the patented proprietary OptoCeramic® technology platform, the Eclipse™  $\mu$ VOA provides high speed, high dynamic range, low insertion loss, low polarization dependence loss and best reliability in a very compact package. The device also enables polarization independent modulation of optical signal traveling over standard single mode fiber while simultaneously maintaining a specified level of attenuation.



### **Features**

- Precise, high-speed attenuation control
- Excellent optical performance
- All solid-state construction in a compact rugged package
- Superb temperature stability
- Meets or exceeds Telcordia GR1221, GR910, and GR1209 specifications
- Optional modulator offers polarization insensitive modulation up to 750KHz
- Enabling hybrid integration for space and cost saving and performance enhancement

### **Applications**

- Channel Equalization/pre-emphasis
- Optical amplification
- Instrumentation
- Metropolitan and long-haul networks
- Wavelength tagging (VOA/modulator only)

## Key Optical Specifications

Attributes <sup>1,2</sup>	Performance	
	μVOA001	μVOA002
Wavelength <sup>3</sup>	1530-1565, 1570-1610 nm	1530-1565, 1570-1610 nm
Insertion Loss	≤ 0.9 dB	≤ 0.6dB(≤ 0.4 dB,A version)
Dynamic Range	≥ 20 dB	≥ 25 dB
Spectral Flatness @ 15 dB Attenuation	0.3 dB typical	0.1 dB typical <sup>4</sup>
Polarization Dependent Loss @ 1550nm and 15dB Attenuation	0.3 dB typical	0.1 dB typical <sup>4</sup>
Response Time (Full Range)	<30 μs	<30 μs
Input Power	≤ 300 mW	≤ 300 mW
Return Loss	≥ 55 dB	≥ 55 dB
Modulation Rate	≤ 1 MHz	≤ 1 MHz
Modulation Depth <sup>5</sup>	5% typical	5% typical
Operating Temperature Range	10°C to 70°C	10°C to 70°C
Storage Temperature Range	-40°C to 85°C	-40°C to 85°C
Dimensions (Approximate)	35 x 6.5 x 6 mm	35 x 6.5 x 6 mm

### Notes:

1. Unless otherwise specified, all measurements are at 25°C.
2. Normally opaque at zero applied voltage for VOA001, normally transparent at zero applied voltage for VOA002.
3. 1310nm and other wavelength also available.
4. For applications attenuating a single wavelength utilizing BATi's feedback circuit. Contact BATi for special multi-wavelength VOA002.
5. Measured at 3 dB attenuation with a sinusoidal signal at 1 MHz.

## Contact Information

For more information about BATi's' leadership in variable optical attenuation and modulation technology and other optical networking modules and components, visit our website at [www.bostonati.com](http://www.bostonati.com).

To obtain additional technical information or to place an order for this product, please contact us at:

Phone: 1-781-935-2800

Fax: 1-781-935-2860

E-mail: [sales@bostonati.com](mailto:sales@bostonati.com)