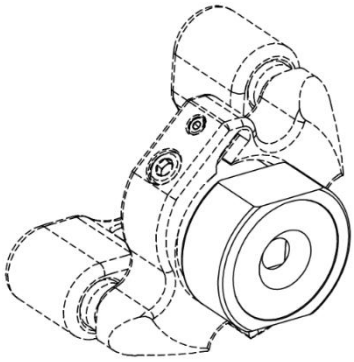
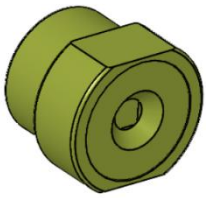
NoiseBlock™ Transmissive Ultra Narrow Bandpass ASE Suppression Filters

For Ultra-Low Frequency Raman spectroscopy with High Signal-to-Noise

The class leading NoiseBlock™ Transmissive Ultra-Narrow Bandpass Filter is engineered to suppress the broad amplified spontaneous emission (ASE) spectrum typically associated with laser diodes, delivering a clean, narrowband lasing output free from ASE background. These filters are optimized for ease of integration in transmission and provide exceptional side mode suppression achieving OD4 at 9 cm^{-1} as a single unit, or exceeding OD8 when used in pairs while maintaining high transmission efficiency.

The filter's precise spectral characteristics are specifically matched to the SureBlock™ Ultra-Narrow-Band Notch Filter, making it an ideal solution for ultra-low frequency Raman spectroscopy applications. This pairing enables maximum Rayleigh line suppression, significantly reducing measurement artifacts. A built-in polarizing element facilitates seamless integration into low-frequency Raman microscopy systems. Beyond ASE suppression of semiconductor diodes, the use of this filter would suppress nearby side modes in DPSS lasers allowing for artifact free spectra.





FEATURES

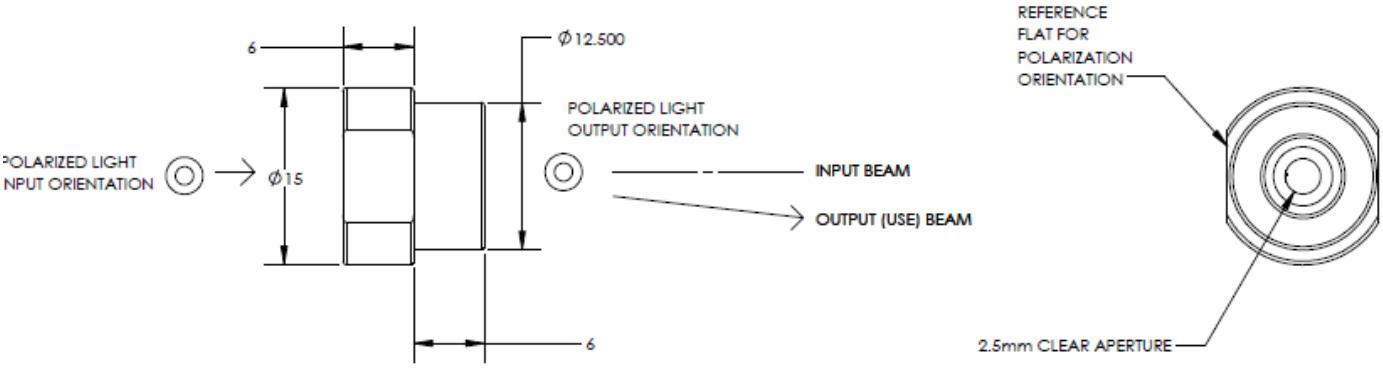
- High transmittance at design wavelength
- Reduce typical broadband ASE levels to more than 70 dB below the laser line
- Narrow spectral bandwidth
- Customizable slant angle for angular separation of beams
- Large angular acceptance
- No degradation under high power illumination conditions
- Environmentally stable at high temperature and humidity with over 12,000 hours of testing at 150°C

APPLICATIONS

- Removal of broadband ASE, fluorescence, and parasitic laser line emission
- ASE noise reduction for Raman spectroscopy,
- ASE removal after optical amplifier stages
- Dense wavelength multiplexing / de-multiplexing
- Spectral combining
- Telecommunication
- Decrease ASE noise in optical quantum applications

ONDAX

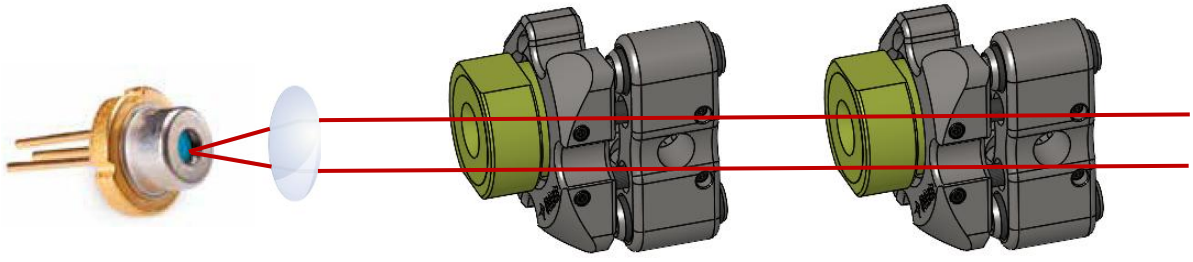
Specifications	Typical		
Centre Wavelength (nm)	532	785	830
Bandwidth (nm nominal FWHM)	0.1	0.22	0.24
Pass Bandwidth (nm OD0.1)	0.06	0.13	0.14
Bandwidth[1] (HWHM) cm^{-1} GHz	 < 10 < 300		
Transmission Efficiency (%)	>85		
Temperature Dependence (nm/°C)	<0.01		
Angle of Incidence	2.5		
Total Deflection Angle (θ) (degrees)	< 1		
Clear Aperture Diameter	2.5 mm in ½" mount. Custom sizes available		
Blocking Level	>OD4 at 10 cm^{-1} (when using two > OD8 at 10 cm^{-1})		



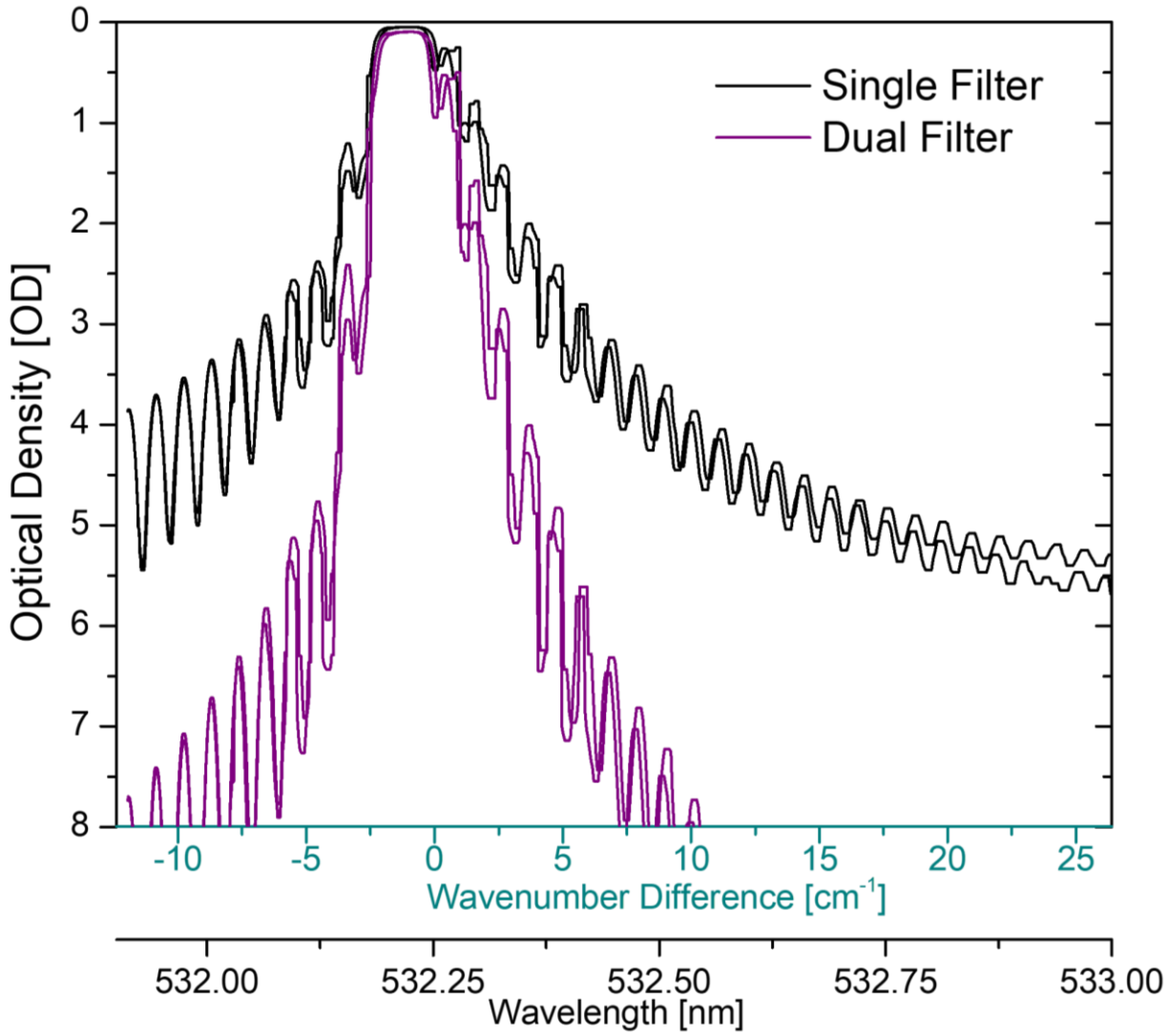
Principle of Operation

NoiseBlock™ ASE filters are designed to absorb ASE emission from a wavelength stabilized laser and transmit only the desired single frequency line. The inter-beam angle is chosen to separate the diffracted beam and the residual surface reflections, resulting in a clean, ASE-free output.

Wavelength-stabilised diode



Reduction of ASE light with NoiseBlock™ Filter



Applications such as low frequency Raman spectroscopy require >70dB attenuation of the residual ASE for artifact free measurement near the excitation wavelength. In these cases, combining two ASE filters, a spectrally matched 90/10 beamsplitter (BS) filter and two SureBlock™ ultra narrow-band notch filters provides for maximum Rayleigh light suppression and high throughput of Raman spectra starting from ~10cm^{-1}.

Ordering Information

Example: Mounted ASE 532 bandpass filter

MN-ASE-532-1

© 2026 Attalon, Inc.
Legal notices: atln.com/legal