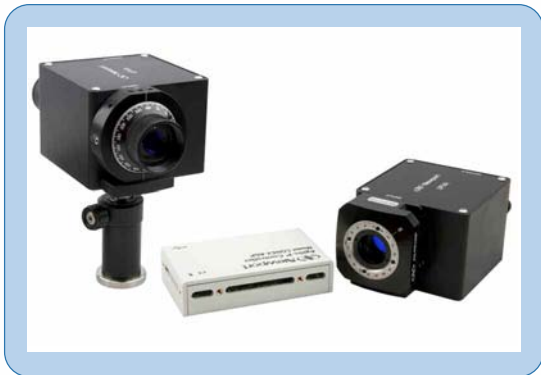


Variable Attenuators (VA Series)



Manual and motorized versions of Newport's variable attenuator series of products.



Output view of VA-532-CONEX

Advantages

- Input beam split into parallel S- and P-polarized outputs with continuously adjustable intensity ratio.
- Negligible beam deviation for P-polarized output; parallel offset (1") of S-polarized output.
- Wavelength ranges of 350-360 nm, 522-542 nm, 780-820 nm or 1034-1094 nm.
- Negligible dispersion over the entire working range.
- High optical damage threshold.
- Threads for mounting on metric or English posts

Newport's VA series of variable attenuators are composed of specially designed thin film polarizers, zero order achromatic waveplates and high-precision opto-mechanics, all incorporated into shuttered housings. The design is compact, robust and easy to use. Ideal for attenuating CW and pulsed fixed wavelength lasers.

The housing ensures the internal optics are free from dust and other contaminants, and eliminates perturbations of the beam due to ambient air conditions; crucial considerations in ultrafast laser applications. A manual shutter and beam dump are included to control the S- and P-polarized output beams.

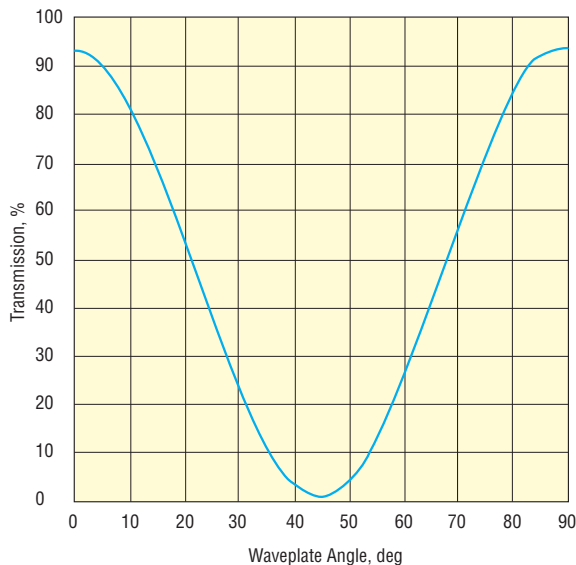
Two thin film polarizers are prealigned in the housing and optimized for wavelength ranges of 350-360 nm, 522-542 nm, 780-820 nm or 1034-1094 nm. The P-polarized output passes through the first thin film polarizer and has negligible beam displacement while the S-polarized output is reflected off the two thin film polarizers and offset in parallel.

The waveplate is mounted in either a manual or motorized piezo stage for rotational control of the variable intensity ratio. By rotating the waveplate, the intensity ratio of the two output beams can be continuously varied while maintaining all other beam parameters. The motorized stage has an integrated CONEX controller/driver, which is powered and communicates with your computer via USB port. A free NSTRUCT applet is available for download to control the stage.

Within each output beam, the intensity ratio has a wide dynamic range. For lasers at the center wavelength, the P-(S-)polarized output beam intensity can be adjusted from < 0.2 % to > 94 % (> 99%). For the entire working range, it becomes < 0.2 % (< 0.3%) to > 94 % (> 98%). Both outputs have high polarization contrast ratios (> 1 : 450). The thin film polarizers require no adjustment over the entire working range.



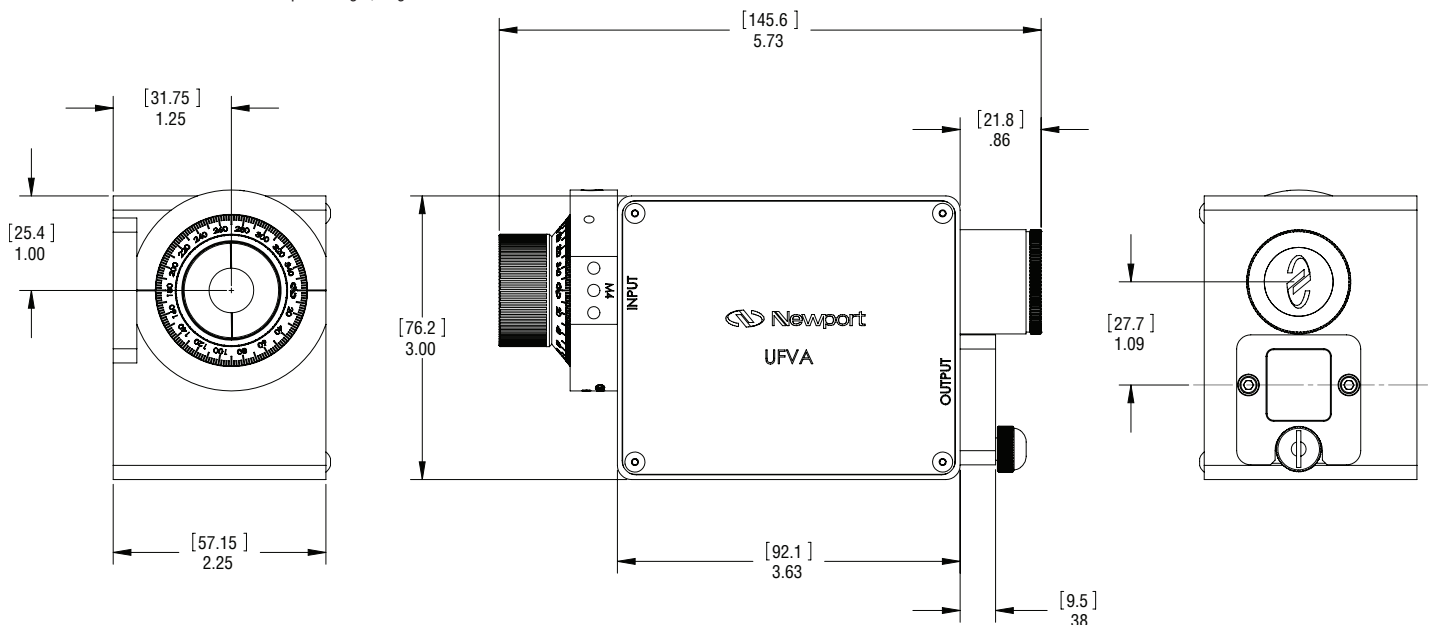
Variable Attenuators (VA Series)



Typical Specifications

S-polarization attenuation range	<0.2%-99%*
P-polarization attenuation range	<0.2%->94%*
Clear Aperture	15 mm diameter
Damage threshold	500 W/cm ² , 0.5 J/cm ² at 1064 nm with 10 nsec pulses at 10 Hz
Polarization Contrast after 1st polarizer	>1: 450
Polarization Contrast after 2nd polarizer	>1: 500

*at center wavelength



For information on these or other standard variable attenuator options, please contact a Newport sales representative toll free at 1-800-222-6440 or e-mail tech@newport.com. For custom needs or an OEM version, please contact Newport's [Technology & Applications Center](#).



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Newport Corporation, Irvine and Santa Clara, California and Franklin, Massachusetts; Evry and Beaune-La-Rolande, France; Stahnsdorf, Germany and Wuxi, China have all been certified compliant with ISO 9001 by the British Standards Institution.

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