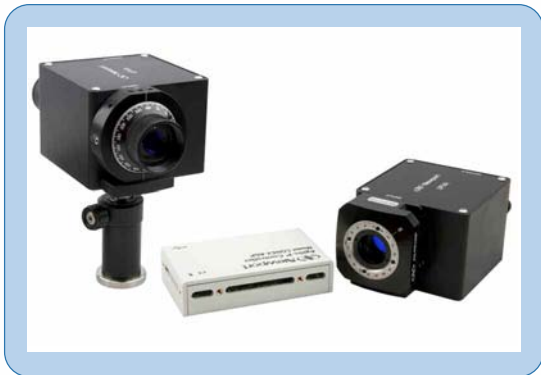


Ultrafast Variable Attenuators



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



Output view of VA-800-CONEX

Advantages

- Input beam split into two parallel S- and P-polarized with adjustable intensity ratio.
- Negligible beam deviation for P-polarized output; parallel displacement (1") of S-polarized output.
- Wide working range of 780 – 820 nm for pulses >50 fs.
- Negligible dispersion over the entire working range.
- High optical damage threshold.
- Threads for mounting on metric or English posts

Newport's variable attenuators are composed of specially designed thin film polarizers, zero order achromatic waveplates and high-precision opto-mechanics, all incorporated into sealed, shuttered housings. The design is compact, robust and easy to use. Ideal for attenuating ultrafast amplified pulses.

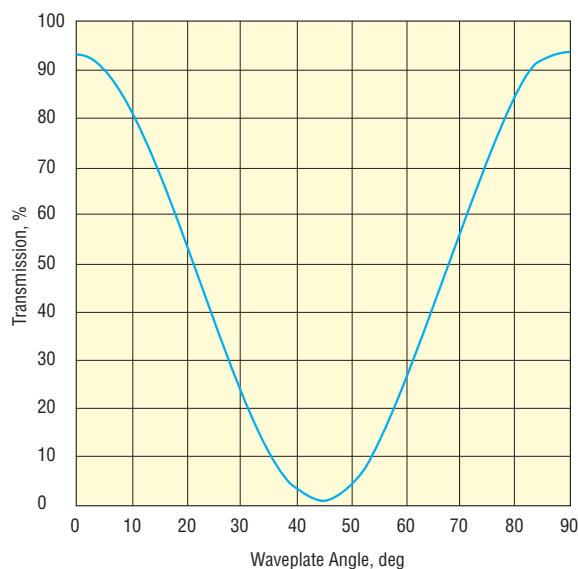
The sealed housing ensures the internal optics are free from dust and other contaminants, and eliminates perturbations of the beam due to ambient air conditions; crucial considerations in ultrafast laser applications. A manual shutter and beam dump are included to control the S- and P-polarized output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

Two thin film polarizers are prealigned in the sealed housing and optimized for wavelengths ranging from 780 nm to 820 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 displaced in parallel exactly one inch.

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 laser pulses centered at 800 nm, 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.

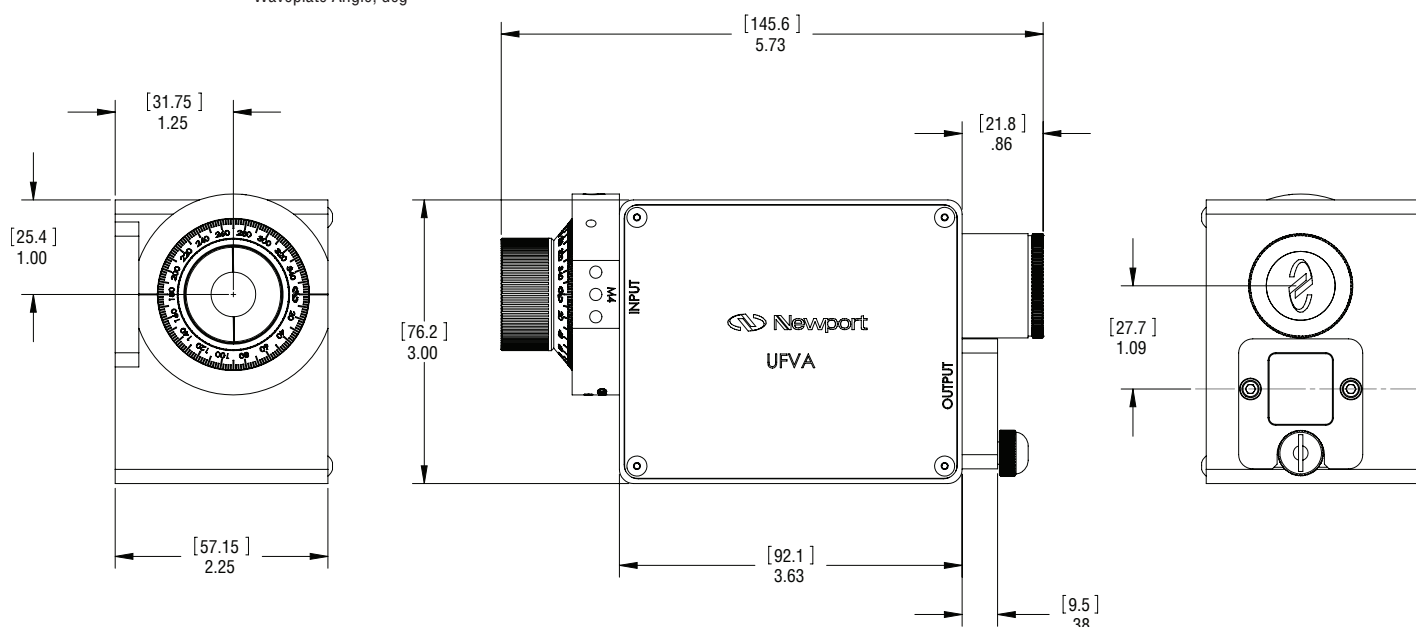
Ultrafast Variable Attenuators



Typical Specifications

S-polarization attenuation range	<0.2%-99%*
P-polarization attenuation range	<0.2%->94%*
Clear Aperture	15 mm diameter
Damage threshold	>75 mJ/cm ² , 100 fs at 800nm
Polarization Contrast after 1st polarizer	>1: 450
Polarization Contrast after 2nd polarizer	>1: 500

*at 800nm



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](#).



Newport Corporation, Global Headquarters
1791 Deere Avenue, Irvine, CA 92606, USA

PHONE: 1-800-222-6440 1-949-863-3144 FAX: 1-949-253-1680 EMAIL: sales@newport.com

Complete listings for all global office locations are available online at www.newport.com/contact

www.newport.com

PHONE

Belgium +32-(0)0800-11 257
China +86-10-6267-0065
France +33-(0)1-60-91-68-68
Japan +81-3-3794-5511
Taiwan +886 -(0)2-2508-4977

EMAIL

belgium@newport.com
china@newport.com
france@newport.com
spectra-physics@splasers.co.jp
sales@newport.com.tw

PHONE

Irvine, CA, USA +1-800-222-6440
Netherlands +31-(0)30 6592111
United Kingdom +44-1235-432-710
Germany / Austria / Switzerland +49-(0)6151-708-0

EMAIL

sales@newport.com
netherlands@newport.com
uk@newport.com
germany@newport.com

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.

DS-041107