

990-0070

VARIABLE ATTENUATORS FOR LINEARLY POLARIZED LASER BEAM



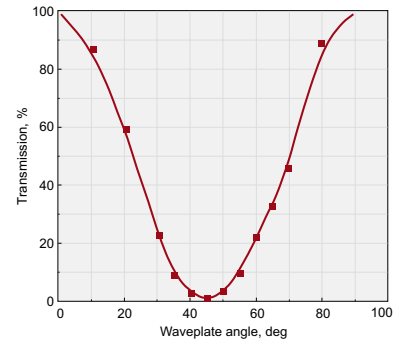
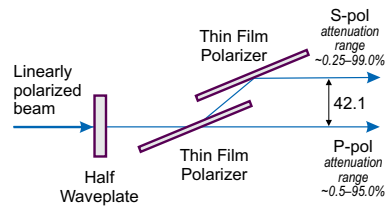
Note: Movable base 820-0090, Rod Holder 820-0050-02 and standard rod should be ordered separately.

- Divides laser beam into two parallel beams of manually adjustable intensity ratio
- Large dynamic range
- Negligible transmitted beam deviation
- High Optical damage threshold
- Weight – 0.35 kg

This variable attenuator/beamsplitter consists of special design opto-mechanical Adapter and precision opto-mechanical holder 840-0197. Two Thin Film Brewster type polarizers, which reflect s-polarized light while transmitting p-polarized light, are housed into Adapter. Quartz Half Waveplates are housed in rotating holder 840-0197.

The intensity ratio of those two beams may be continuously varied without alteration of other beam parameters by rotating the waveplate. The intensity of either exit beam, or their intensity ratio, can be controlled over a wide dynamic range. P-po-

larization could be selected for maximum transmission, or high-purity s-polarization could be reflected when maximum attenuation of the transmitted beam takes place. The holder 840-0197 allows to adjust Angle Of Incidence of the Thin Film Brewster type polarizers by  $\pm 2^\circ$  and to get the maximum polarization contrast.



For Nd:YAG Laser Applications

Aperture diameter	17 mm
Damage threshold	5 J/cm <sup>2</sup> pulsed at 1064 nm, typical
Polarization Contrast (after 1st polarizer)	>1:200
Polarization Contrast (after 2nd polarizer)	>1:500

For Femtosecond Applications

Aperture diameter	17 mm
Damage threshold	>10 mJ/cm <sup>2</sup> , 50 fs pulse at 800 nm, typical >100 mJ/cm <sup>2</sup> , 50 fs pulse at 800 nm, typical for high power laser applications
Time dispersion	<4 fs for 100 fs Ti:Sapphire laser pulses
Polarization Contrast (after 1st polarizer)	>1:200
Polarization Contrast (after 2nd polarizer)	>1:500

For Nd:YAG Laser Applications

Catalogue number	Wavelength, nm	Price, EUR
990-0070-266	266	850
990-0070-355	355	750
990-0070-532	532	650
990-0070-1064	1064	650

Multi order half waveplate is housed in rotating holder 840-0197 for Nd:YAG laser pulses (laser damage threshold: 5 J/cm<sup>2</sup> pulsed at 1064 nm, typical).

RELATED PRODUCTS

Beam dumps  
990-0800,  
990-0820

See page 7.34



For Femtosecond Applications

Catalogue number	Wavelength, nm	Price, EUR
990-0070-343	343	840
990-0070-400	400	740
990-0070-400B	390-410	890
990-0070-515	515	740
990-0070-515B	505-525	890
990-0070-800	800	740
990-0070-800B	780-820	890
990-0070-1030	1030	740
990-0070-1030B	1010-1050	890

Zero order optically contacted half waveplate is housed in rotating holder 840-0197 for femtosecond laser pulses (laser damage threshold: >10 mJ/cm<sup>2</sup>, 50 fsec pulse, 800 nm typical).

For High Power Femtosecond Laser Applications

Catalogue number	Wavelength, nm	Price, EUR
990-0070-266H	266	1020
990-0070-343H	343	915
990-0070-400H	400	815
990-0070-400HB	390-410	965
990-0070-515H	515	815
990-0070-515HB	505-525	965
990-0070-800H	800	815
990-0070-800HB	780-820	965
990-0070-1030H	1030	815
990-0070-1030HB	1010-1050	965

Zero Order Air-Spaced half waveplate is housed in rotating holder 840-0197 for high power femtosecond applications (laser damage threshold: >100 mJ/cm<sup>2</sup>, 50 fsec pulse, 800 nm typical).