

## BROADBAND VARIABLE ATTENUATOR FOR FEMTOSECOND LASER PULSES – 990-0070HBBi70

### Features

- Divides laser beam into two parallel beams of manually adjustable intensity ratio
- Large dynamic range
- Transmitted beam shift ~ 2.6 mm
- High optical damage threshold



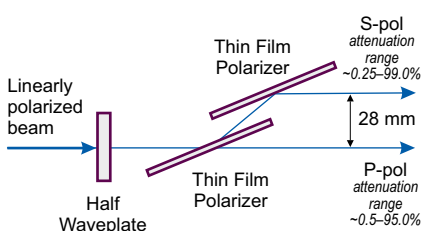
990-0070-800HBBi70



990-0070-800HBBi70M

This variable attenuator/beamsplitter consists of a special design opto-mechanical adapter and a precision opto-mechanical holder 840-0197. Two thin film polarizers, operating at AOI=70° and reflecting s-polarized light while transmitting p-polarized light, are housed into the adapter. A quartz zero order air-spaced half waveplate is housed into the rotating holder 840-0197.

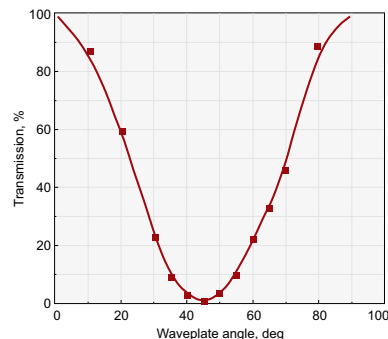
The intensity ratio of outgoing two parallel beams may be continuously varied without alteration of other beam parameters by rotating the waveplate. The intensity of the



exit beam or outgoing beams intensity ratio can be controlled over a wide dynamic range.

P-polarized beam is transmitted straightly with a 2.6 mm shift and s-polarized beam (after 2 reflections) is parallel to the outgoing p-polarized beam, just separated by 28 mm.

The 840-0197 holder allows to adjust angle of incidence of the thin film polarizers by  $\pm 2^\circ$  and to achieve the maximum polarization contrast.



### Specifications

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| Aperture diameter                           | 12 mm                                                  |
| Operating bandwidth                         | 100 nm                                                 |
| Damage threshold                            | 50 mJ/cm <sup>2</sup> pulsed at 800 nm, 50 fsec, 50 Hz |
| Polarization contrast (after 1st polarizer) | >1:200                                                 |
| Polarization contrast (after 2nd polarizer) | >1:500                                                 |

#### Manual attenuators

| Wavelength, nm | Catalogue number    | Price, EUR |
|----------------|---------------------|------------|
| 750-850        | 990-0070-800HBBi70  | 1300       |
| 980-1080       | 990-0070-1030HBBi70 | 1300       |

#### Motorized attenuators

| Wavelength, nm | Catalogue number     | Price, EUR |
|----------------|----------------------|------------|
| 750-850        | 990-0070-800HBBi70M  | 2080       |
| 980-1080       | 990-0070-1030HBBi70M | 2080       |

### Ordering information

**Please note:** these motorized variable attenuators for linearly polarized laser beam are provided without controller and power supply. If you would like to order the complete solution (controller 980-1045 and power supply: PS12-1.5-4), please add CP to code and 695 EUR to price.

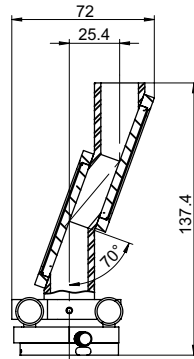
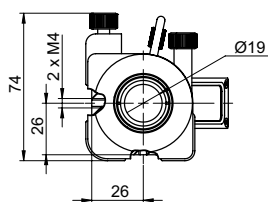
Example:

**990-0070-800HBBi70** – motorized attenuator without controller and power supply.

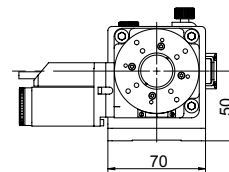
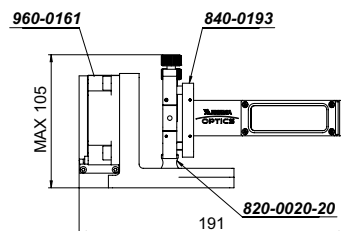
Price – 2080 EUR

**990-0070-800HBBi70+CP** – motorized attenuator with controller and power supply.

Price – 2775 EUR



990-0070-800HBBi70



990-0070-800HBBi70M

