



OA. Optical Attenuators

- Dedicated low-GVD model for <50 fs ultrashort pulses
- Motorized versions with USB interface or manual adjustment
- Continuous power adjustment
- 250 to 2000 nm possible wavelengths
- Damage threshold up to 10 J/cm²



The OABS-15-M attenuator

Product overview

The OA optical attenuator family is designed to attenuate laser radiation with more than 100:1 ratio. An optical attenuator unit features an optomechanical assembly with a zero-order half-wave plate that is being rotated and a system of polarizers. The type of the polarizers used depends on actual application: thin-film mirror polarizers for the OAFP model, Glan laser prisms for the OAGP model and polarizing beamsplitter cubes (PBS) for the OABS model.

The OAFP model comprises a thin zero-order half-wave phaseplate and two mirror polarizers that select the input pulse according to polarization. This model has been specially developed for pulsed femtosecond radiation (<50 fs) as it introduces as little dispersion to the pulse as possible.

For longer pulse durations we offer the OAGP model, which has better transmission ratio as a Glan prism is used to simplify the scheme, or the OABS model that incorporates a PBS cube.

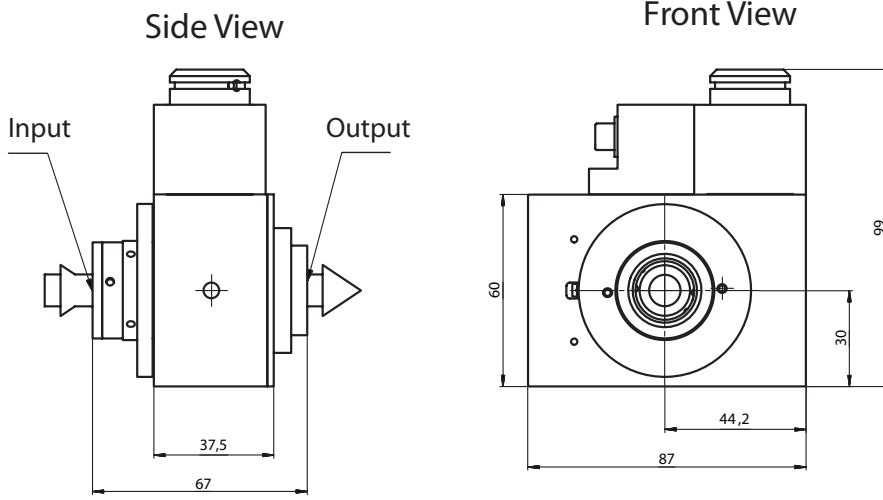
The attenuator comes in manual (-M/MK) or step-motor driven (-S) modification with a USB interface and a controller with Windows PC software.

Attenuator technical specifications

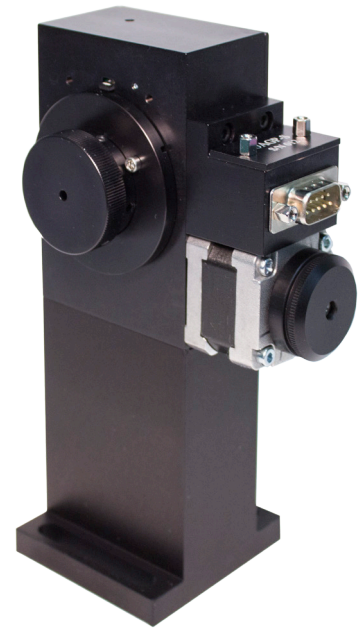
	OAFP-10-S OAFP-10-M OAFP-10-MK	OAGP-6-S OAGP-6-M OAGP-6-MK	OAGP-10-S OAGP-10-M OAGP-10-MK	OABS-9-S OABS-9-M OABS-9-MK	OABS-15-S OABS-15-M OABS-15-MK
Dynamic attenuation range	>10 ²				
Input pulse duration	<50 fs	>50 fs			>70 fs
Central wavelength* (fixed)	800-1100** nm	350-2000 nm		343-350, 450-1600 nm	
Bandwidth*** (% of central wavelength)	5%	10-12%			
Transmission	>92%	>90%		>85%	
Clear aperture	<10 mm	<6 mm	<10 mm	<9 mm	<15 mm
Beam deflection	40 mm (walk-off)	<1 mrad			
Damage threshold	10 J/cm ²	5 J/cm ²		10 J/cm ²	

Note: models with the "-S" index are driven by a step motor, transmission change for motorized models: 0.1% per step; models with the "-M" index are manually driven; models with the "-MK" index are manually driven and have additional side knob.
 * - please specify a certain value from the given range with your request; usual wavelengths are 515, 800, 1030 nm;
 ** - order of thin-film polarizers for wavelengths of 250-800 nm is possible on request;
 *** - depends on central wavelength.

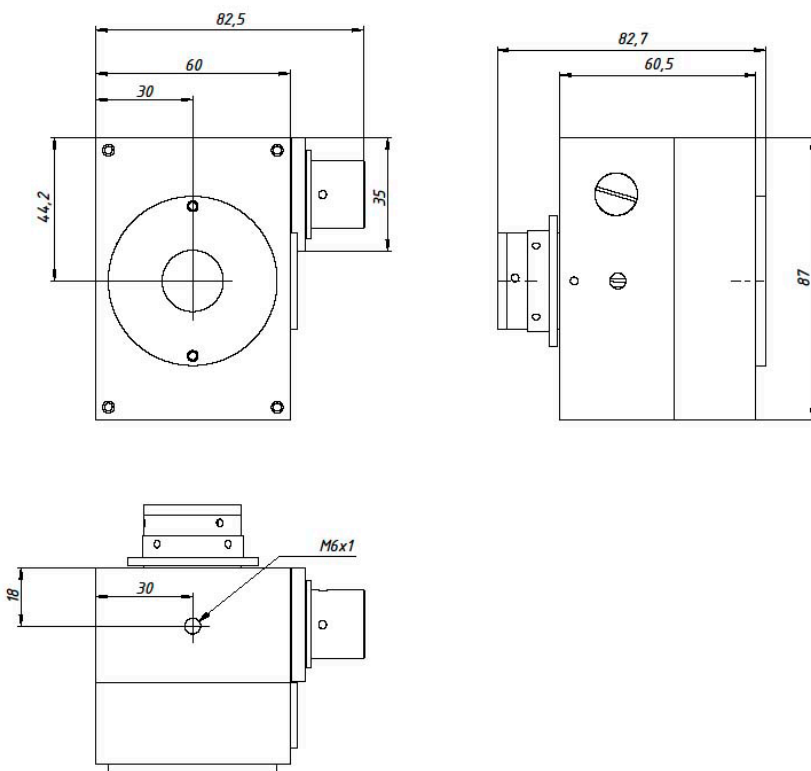




OAGP-10-S dimensions in mm



The OAGP-10-S optical attenuator on a height riser block



OABS-16-MK dimensions in mm



The OABS-16-MK optical attenuator with a beam dump and post holders