

# Variable Attenuator

## SVAB series

Continuously varying the amount of light for high power laser High Transmittance Stability



- Continuously varying the amount of transmitted light for CW/pulse laser by utilizing the polarization feature of laser light.
- Absorb the non-transmitted laser light by diffusers safely and emit as heat.
- The influence of the amount of transmitted light by fever of diffusers is lightly affected.
- Various controllers for remote operation are available as options.
- It is available to change the directions of output polarization both to parallel and to vertical by altering the mounting surface.

Please contact us for change of wavelength and incident effective diameter.

### Specifications

Part Nmuber	NEW SVAB -266A-08	NEW SVAB -355A-08	NEW SVAB -532A-08	NEW SVAB -1064A-08
Wavelength	266nm	355nm	532nm	1064nm
Incident Effective Diameter <sup>※1</sup>	φ 8mm	φ 8mm	φ 8mm	φ 8mm
Incident Beam Diameter	φ 4mm	φ 4mm	φ 4mm	φ 4mm
Laser Durability	1.0J/cm <sup>2</sup>	1.4J/cm <sup>2</sup>	4.0J/cm <sup>2</sup>	5.1J/cm <sup>2</sup>
Corresponding Output	20W	20W	20W	20W
Transmittance adjusting range <sup>※2</sup>	2~88%	2~90%	2~93%	2~94%
Price	¥ 362,000	¥ 362,000	¥ 362,000	¥ 362,000
Availability	Please Contact	Please Contact	Please Contact	Please Contact

※1 It is defined by the diameter of Gaussian beam that is measured with 1/e<sup>2</sup> intensity of peak value. Double effective diameter as incident beam diameter will be required to transmit all of Gaussian distributions.

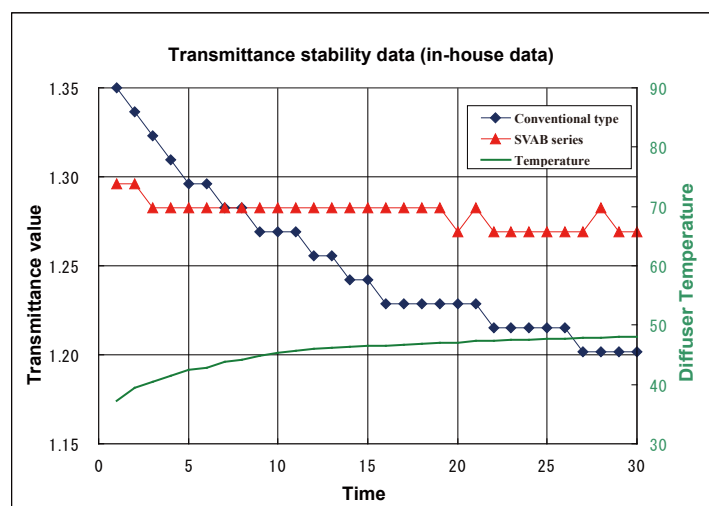
※2 It is dependent on the polarization state of laser light.

### Transmittance Stability

Optical elements vary its features according to the surrounding temperature. Therefore, when conventional type of attenuator attenuates the light of high power laser, transmittance was changed by heat of the diffuser.

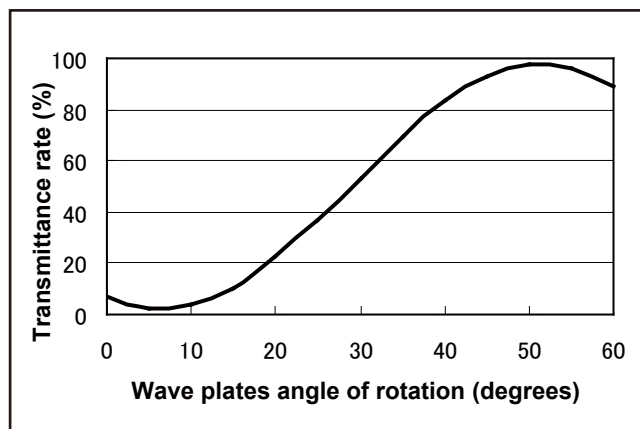
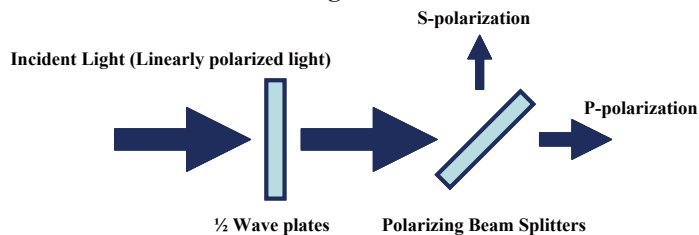
The SVAB series have adopted a special optical part which optical features do not change with the changing temperature and enable us to realize an high transmittance stability attenuator.

The right graph shows the diffuser's temperatures and the amount of transmitted light when 27W laser light was attenuated to 95% (Transmittance:5%)

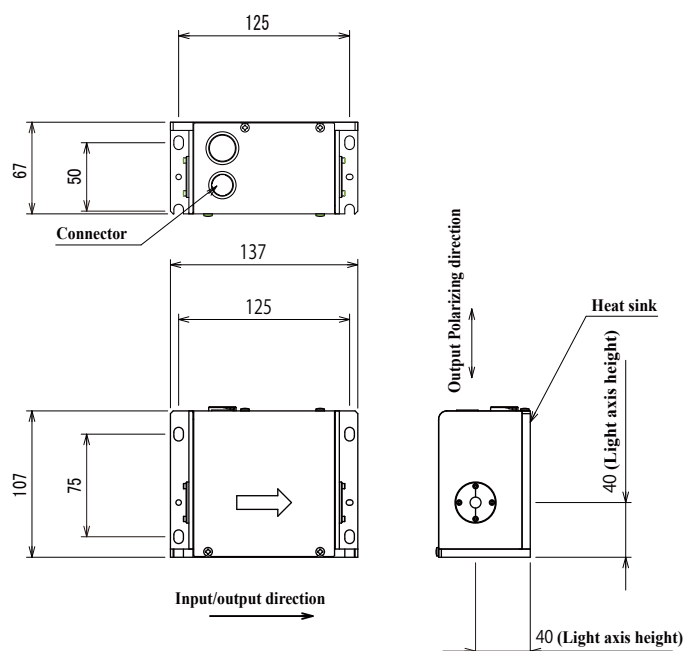


## Principle

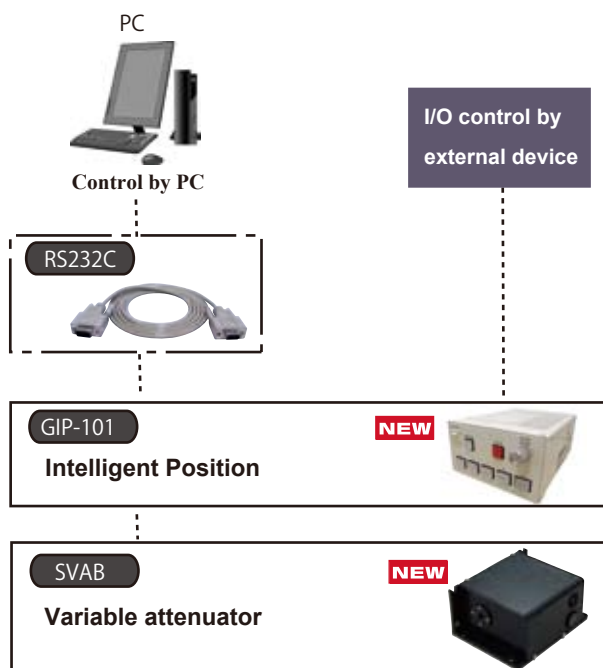
It is made with  $\frac{1}{2}$  wave plate which rotates the direction of polarization of the incident light and polarizing beam splitter which transmit P-polarization and reflect S-polarization. By rotation of  $\frac{1}{2}$  wave plate, it changes the direction of polarization of the incident light into beam splitter from P-polarization to S-polarization and adjust the amount of transmitted light.



## Dimension



## System Composition Example



## Relevant Products

### Coaxial Observation Unit for High Power Laser



### Power Supply for Laser Diode Drive



### Shutter for High Power Laser



### Optics



Dielectric Mirrors for High Power Laser



Near-ultraviolet Objective Lenses



Near-infrared Objective Lenses



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