

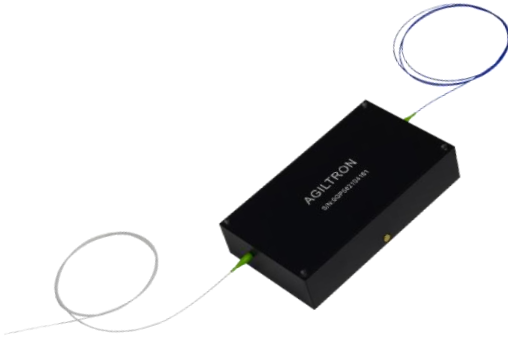
# USB Precision High Speed Optical Attenuator

## (USB Computer Control)



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BUY NOW



The Precision High-Speed Optical Attenuator maintains a constant attenuation or output power, regardless of environmental fluctuations. Once the attenuation is set, the response to input power change is fast. This is achieved by integrating two tap detectors at the fiber input and output of a NanoSpeed™ attenuator and controlling the ratio using a feedback closed-loop circuit. It also has an output power control mode, where the output tap is used in the feedback control. The value is settable via a USB computer interface. The module can also compensate for slow polarization-dependent loss changes and fast optical power surges since the tap monitor can detect these variations, and the feedback will cancel these variations. The non-mechanical device has passed the most stringent mil-spec and space flight qualifications and is designed for over 20 years of continuous operation. The module comes with a wall-plug 12V power supply.

### Applications

- Laser Power Regulation
- Surge Power Prevention
- Power Balance
- Instrumentation

### Features

- No Moving Parts
- High Reliability
- High Speed
- Precision

### Specifications

Parameter	Min	Typical	Max	Unit	
Central Wavelength	760		2000	nm	
Insertion Loss <sup>[1]</sup>	1260 -1650nm	1.4	2.4	dB	
	960 - 1100nm		1.6	2.6	dB
	760 – 960nm		1.8	2.8	dB
Dynamic Range	Single Stage	18	20	25	dB
	Dual Stage	30		35	dB
Return Loss	45	50		dB	
Response Time <sup>[2]</sup>			5	μs	
Attenuation Adjustment Resolution		Continuous		dB	
Operating Optical Power (CW)		0.5	10	W	
Polarization Extinction Ratio	20	25	30	dB	
Electrical Control Signal (SMA Connector)	0		5	V	
Power Supply	11	12	13	V	
Operating Temperature	-5		70	°C	
Storage Temperature	-40		85	°C	

**Notes:**

[1]. Excluding connectors. The connector adds 0.3dB each. Including the power tapping for feedback control.

[2]. This is the response to small optical fluctuation. The USB setting is a slow process. For fast response and surge protection, please consider Optical Power Regulator <https://agiltron.com/category/fiber-optical-attenuatorvoa/ns-high-speed-fiber-optical-attenuators-voas/optical-power-regulator/>

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## Dimension of Module (mm)



\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

## Operation Instruction

- Plug in the accompanied power supply.
- Connect to a computer via a USB cable
- Load accompanied GUI
- Working

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### Ordering Information

Prefix	Input Power	Wavelength	Attenuation Range	Fiber Type	Fiber Cover	Fiber Length	Connector <sup>[1]</sup>
<b>PNSA-</b>	0.25W = U1 0.5W = U2 1W = U3 2W = U4 5W = U5 10W = U6 15W = U7	1060 = 1 2000 = 2 1310 = 3 1480 = 4 1550 = 5 1625 = 6 780 = 7 850 = 8 650 = E 550 = F 400 = G Special = 0	1-18 = 10 1-35 = 20 1-50 = 30	SMF-28 = 1 HI1060 = 2 HI780 = 3 PM1550 = 5 PM850 = 8 PM980 = 9 SM1950 = 6 PM1950 = 7 Special = 0	900um tube = 3 Special = 0	0.25m = 1 0.5m = 2 1.0 m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

[1]: High power connector may be available per request, please contact sales.

RED is Special Order

**NOTE:**

- PM1550 fiber works well for 1310nm