

Swiss low-loss optical attenuators



AI Overview

Swiss Terahertz LLC provides high-precision fiber-optic components with low insertion loss, suitable for direct OEM or industrial procurement.

Overview of Low-Loss Optical Attenuators

Low-loss optical attenuators are designed to reduce optical power while maintaining signal integrity, with minimal insertion loss and polarization-dependent loss. They are critical in applications such as receiver protection, WDM power balancing, high-power laser diagnostics, and optical testing. Attenuators can be fixed (constant loss) or variable (adjustable loss), and fiber-to-fiber designs are preferred for near-lossless performance, sometimes achieving insertion losses as low as 0.005 dB in specialized VOAs (Agiltron) or 0.8 dB in Swiss Terahertz fiber delay lines.

Swiss Manufacturer Option

Swiss Terahertz LLC offers fiber-coupled optical components with the following features:

- Low insertion loss: typically 0.8 dB for sub-nanosecond models
- Low polarization loss: 55 dB
- High extinction ratio: >20 dB
- Customizable fiber and connector options
- Wide operating bandwidth: 1250–1650 nm

Applications:

Terahertz spectroscopy, nonlinear optics, optical coherence tomography, sensing, and interferometry

Lead time: stock to 3 weeks for up to 2 ns stages; longer stages require contact for quotation

Industrial or OEM customers are encouraged to contact Swiss Terahertz directly for pricing and customization, making it suitable for direct manufacturer procurement.

Additional Considerations

For other low-loss attenuator options:

- Agiltron offers fiber-to-fiber VOAs with ultra-low insertion loss (0.005 dB) and high-speed MEMS VOAs for up to 80 dB attenuation.
- SENKO provides premium LC and SC APC attenuators with wide wavelength coverage (1270–1650 nm) and robust construction for network applications.
- RP Photonics provides a comprehensive guide to optical attenuators, including fixed and variable types, fiber-optic plugs, and high-power options.

When sourcing directly from manufacturers, consider wavelength compatibility, insertion loss, polarization sensitivity, and power handling to ensure o...

Article Content

Low-Loss Optical Fiber

Low loss optical fibers are defined as optical fibers that exhibit minimal attenuation, with current records reaching as low as 0.142 dB/km at 1560 nm, which enables efficient long-distance data transmission.

Variable Optical Attenuator

The simple and low-loss optical arrangement with the common imaging lens is often used, with the variable reflectivity mirror replacing the tilting mirror. The variable mirrors can be based on

Polymer waveguide variable optical attenuator and its reliability

A variable optical attenuator (VOA) made of novel low-loss fluorinated polymers is demonstrated showing a low operating power of less than 30 mW, due to the superior thermo-optic

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Fiber Attenuators

Product PortfolioAMS Technologies carries a broad range of fiber attenuators that provide fixed or variable attenuation of optical signals in optical fibers. Variable attenuators are available for manual

DIAMOND SA

DIAMOND SA is a Swiss company with a long tradition in the development, manufacture, and assembly of high-precision fiber optic components. They operate in both national and

46 Attenuator Manufacturers in 2026 | Metoree

46 Attenuator Manufacturers in 2026 This section provides an overview for attenuators as well as their applications and principles. Also, please take a look at the list of 46 attenuator manufacturers and

Fiber Optic Attenuators LC-SC-FC ... 1~30dB Price

What is the types of Fixed Fiber Optic Attenuators 1~30dB prices and technical specifications Producer,Manufacturer,Wholesaler China

Fiber Optical Variable Attenuators

We offer the industry's most extensive selection of fiber variable optical attenuators (VOAs), addressing all application scenarios with best-in-class performance and

Attenuators

VIAVI offers the industry's most complete range of optical attenuators for installation and maintenance of singlemode and multimode fibers and advanced, photonic-layer solutions for lab and production

Variable optical attenuator based on a reflective Mach-Zehnder ...

A low power-consuming variable optical attenuator (VOA) on silicon is demonstrated by using a reflective Mach-Zehnder interferometer (MZI), which consists of broadband highly-efficient

Fiber Optic Solutions for High-Performance | Diamond SA

We're proud to unveil our latest breakthrough: Ultra-Low Loss (ULL) fiber optic connectors. Designed to minimize insertion loss to unmatched levels, these high-performance connectors enable greater

Design and characteristics of a micromachined variable optical ...

The other micromachined optical attenuators employ a reflective shutter between input and output fibers placed face-to-face. These devices, however, require a troublesome metal coating

Optical Attenuators - Buyer's Guide & Suppliers

This buyer's guide for optical attenuators provides technical background, comparison of major types, selection criteria, and an overview of suppliers.

Fiber Optic Attenuators

Thorlabs has a wide variety of single mode (SM), polarization-maintaining (PM), or multimode (MM) fixed and variable optical attenuators (VOAs). We offer SM and

Variable attenuator

The SmartClass OLA-54/-55/-55M Optical Level Attenuators are future-proof, improved variable attenuators for fiber system testing as well as installation,

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Fiber Optic Attenuator

Fiber optic attenuators offer several advantages, including precise signal reduction with minimal distortion, low insertion loss, and high signal stability. They are also

Fiber-optic Attenuators - fixed or variable attenuation,

A fiber-optic attenuator is a passive device used in fiber optics to reduce the power level of an optical signal. It is often used in optical fiber communications to adjust

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Fiber Optic Attenuators Fiber optic attenuators are devices used to reduce or monitor the power level of a fiber optic signal. Basic types of fixed attenuation

Variable Optical Attenuators

Variable optical attenuators, used in fiber communications, vary light attenuation. The article discusses operation principles and various performance parameters.

LC/UPC M-F Fixed Singlemode Attenuator 5DB, 10DB,

LC-LC UPC Male/Female fixed attenuator for singlemode applications to prevent over saturating an optical receiver when the optical power is too high. Using an

Digital Step Attenuators: Precision RF Control

Discover digital step attenuators for precise RF signal control. Explore top-rated options, key applications, and performance factors. Click to find the best fit for your needs.

Variable optical attenuators

Variable optical attenuators. Fast attenuation speed with low insertion loss and built-in power monitoring. Operates in fixed attenuation or constant output power

Low threshold optical attenuator based on electrically tunable liquid ...

The fabrication methods were also complicated and expensive as compared to conventional photolithography. The low threshold voltage and low fabrication cost are the critical

Contact Us

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