

Standard optical attenuators are supplied by manufacturers



Overview

Keysight optical attenuators provide precise control of optical signal power for accurate and repeatable optical component testing.

Key Takeaways

Standard optical attenuators are supplied by numerous manufacturers worldwide, including Viavi Solutions, DiCon Fiberoptics, ARCOptix, YOFC, and OTRANS, offering both fixed and variable types for fiber-optic communication systems.

Overview of Optical Attenuators

Optical attenuators are devices designed to reduce the power level of an optical signal to prevent receiver saturation or damage and to balance signal strength in fiber-optic networks. They are commonly used in single-mode systems, long-haul DWDM links, CATV systems, and testing environments to simulate communication conditions or measure system performance. Attenuators work by absorbing, reflecting, scattering, or deflecting light, ensuring the optical signal remains within safe and optimal levels.

Types of Optical Attenuators

Fixed Optical Attenuators: Provide a constant attenuation level and are widely used for standard signal reduction in fiber networks. **Variable Optical Attenuators (VOAs):** Allow adjustable attenuation, useful for testing, power equalization in WDM systems, and margin testing. **Step-wise and Continuously Variable Attenuators:** Offer precise control over signal reduction, suitable for laboratory and field applications.

Form Factors

Optical attenuators are available in multiple form factors, including in-line pigtails, plug-style adapters, bulkhead receptacles, and benchtop instruments. These designs ensure compatibility with different fiber types and connectors while maintaining signal integrity.

Leading Manufacturers

Several companies specialize in producing high-quality optical attenuators: Viavi Solutions, Inc.: Offers a wide range of fiber-optic components including fixed and variable attenuators.

Di

Con Fiberoptics: Known for precision optical components and attenuators for telecom and data center applications.

AR

Coptix S. A.: Swiss manufacturer providing variable attenuators and optical measurement systems.

YOF

C: Chinese company supplying optical transceivers, cables, and attenuators globally.

OTRAN

S: Provides fixed and variable attenuators for PON, DWDM, and telecom networks with low back reflection and high precision.

O

Z Optics: Offers a comprehensive range of fixed and variable attenuators, including MEMS and motor-driven types.

Applications

Optical attenuators are used for: Receiver protection: Preventing photodiode saturation in high-power links. Power equalization: Balancing channel power in WDM systems. Testing and simulation: Measuring bit error rates and system margins under controlled attenuation.

Linearity characterization: Evaluating optical power meters and photodiodes. In summary, standard optical attenuators are widely available from specialized manufacturers, offering both fixed and variable solutions for diverse optical communication needs, ensuring safe, reliable, and precise signal management across fiber-optic networks.

Article Content

Optical Attenuators | Keysight

Keysight optical attenuators provide precise control of optical signal power for accurate and repeatable optical component testing. Attenuators emulate signal loss, balance power levels, and protect

Optical Attenuators – Buyer's Guide & Supplier List | RP Photonics

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

Optical Attenuators

The Keysight 81571A variable optical attenuator features lowest insertion loss and excellent wavelength flatness over a complete attenuation range of 60 dB, for characterizing optical network components

Attenuators | Suppliers | Photonics Buyers' Guide | Photonics

Manufacturer of thin-film pellicles for use as beamsplitters, beam combiners, attenuators, filters, and optical windows. Standard items, uncoated and coated, are available from inventory; special frames,

Standard optical attenuators are supplied by manufacturers

Learn what fiber optic attenuator is, how it reduces the power level of an optical signal, different types of optical attenuators, and when and how to use them.

23 Optical Attenuator Manufacturers in 2026

This section provides an overview for optical attenuators as well as their applications and principles. Also, please take a look at the list of 23 optical attenuator manufacturers and their company rankings.

Attenuators

Available in fixed and variable configurations with UPC or APC connector interfaces, these attenuators integrate directly into standard fiber assemblies and test setups without additional adapters or

Fixed Attenuators | OEM Optical Communication Solutions | Corning

We utilize attenuating fiber that reduces power while preserving performance characteristics, including optical signal quality. We also offer loopback designs, patch couplers, and standard in line versions.

Variable Optical Attenuators – Buyer's Guide & Suppliers

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

Optical Attenuators

The main function of an optical attenuator is to reduce the intensity of an optical signal so that it can be maintained at an appropriate power level within a certain range in a fiber optic communication system.

The Ultimate Guide to Fibre Optic Attenuators

Optronics® is one of the few global manufacturers who have developed a process of quality manufacturing and inspection to meet the stringent specification of the premium optical fibre

Standard optical attenuators are supplied by manufacturers

Optical Attenuators Optical attenuators are usually of two types: fixed attenuation or adjustable attenuation. Fixed attenuation value optical attenuator usually has a fixed attenuation value, such as

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

The Ultimate Guide to Fiber Optic Attenuators

Fiber optic attenuators play a crucial role in managing and controlling the power levels of optical signals in fiber optic networks. They are passive

Optical Attenuators | Precision, Types & Applications

Optical attenuators have a wide range of applications across various industries:
Telecommunications: They are used to regulate signal power in long-haul transmissions to prevent

The Pivotal Role of Optical Attenuators in Fiber Optic Communication ...

In the sophisticated domain of fiber optic communications, optical attenuators are indispensable for preserving the equilibrium and fidelity of signal transmissions. At FiberLife, we

Choosing the Right Fiber Optic Attenuator

Helpful buying guide for fiber optic attenuators. Compare fixed and variable options, understand key parameters to consider and learn application-specific selection tips. Get insights on

Understanding Custom Fiber Optic Attenuators: Standards, Properties ...

Types of Custom Fiber Optic Attenuators A custom fiber optic attenuator is a precision device used in optical communication systems to reduce signal power in a controlled manner. This ensures optimal

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

