

VARIABLE OPTICAL ATTENUATORS

MEMS Variable Optical Attenuator Module

Electrically controlled MEMS attenuator with more than 55 dB of range and 1.2 dB insertion loss.



Key Features

- Attenuation range ≥ 55 dB on single-mode fiber
- Insertion loss ≤ 1.2 dB at minimum attenuation
- Continuous electrical control, suitable for closed-loop power leveling
- Maximum power consumption 170 mW
- Multimode version with ≥ 50 dB range available

Applications

- Per-channel power balancing in DWDM systems
- Receiver overload protection
- Automated link margin and sensitivity testing
- Closed-loop optical power control

Overview

A MEMS mirror sets attenuation by steering how much light couples into the output fiber. Because the mechanism is a micromachined mirror rather than an absorbing element, insertion loss at minimum attenuation stays low — 1.2 dB on single-mode — while the achievable range extends past 55 dB.

Control is electrical and continuous, so the device can be driven by a power-monitoring loop to hold a channel at a target level. Maximum power draw is 170 mW.

Specifications

Optical Performance

PARAMETER	VALUE	UNIT	CONDITIONS
Attenuation Range	≥ 55	dB	Single-mode
Attenuation Range	≥ 50	dB	Multimode
Insertion Loss	≤ 1.2	dB	Single-mode

Electrical

PARAMETER	VALUE	UNIT
Power Consumption	≤ 170	mW

Order or request a quote

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