

### Introduction:

To reduce signal power in a fiber-optic link. This precision device can adjust the amount of attenuation, by very small amounts. It can also add large loss to an optical circuit.

### Conceptual Usage:

Attenuation is used, where signal power is too high. For example, in a fiber-optic link, a transmitter may overwhelm the receiver with too much power, or the link may be too short for adequate losses. In each case, too much power may damage or saturate the detector (i.e. receiver). Attenuation reduces the power to an acceptable or usable level. Variable attenuators permit the user, to control the level of power reduction.



### Features:

- Complies with Telcordia GR-910
- Beam-blocking technique for higher power handling
- Pigtail fiber cable can be used as a cable assembly
- Connectors Types: SC, SC/APC, LC, LC/APC, ST, FC, etc.

### Standard Configurations:

- Inline-style
- Pigtail fiber at both ends

### Options:

- Fiber types:
  - Multimode (50/125 or 62.5/125)
  - Single-mode (9/125)
- Fiber pigtail lengths
- Connectors: with or without

**Specifications:**
**Variable Fiber Optic In-Line Attenuator with Low Back Reflection -- Blocking Style.**

Back Reflection:	>40dB
Attenuation Range:	2 to 80 dB with 0.01 dB Resolution up to 10 dB, with 0.1 dB Resolution up to 30 dB Attenuation.
Wavelength Dependence:	<0.3dB Change in insertion loss for 1310-1550 nm. <0.05 dB for 1525-1570 nm
Available Wavelengths:	400 - 1625 nm *
Bi-Directional	Yes
Temperature Range:	-35C TO +70C (less than 0.3dB in insertion loss).
Humidity Range:	+/- 0.2 dB Change in 10% to 90% Humidity Range.
Drop Test:	+/- 0.2 dB change after 4 drops from a height of 1 meter onto a hard surface.
Vibration:	Less than 0.05 dB change between 10Hz to 55Hz.
Polarization Sensitivity:	Less Than 0.01 dB change over all input polarization.

**\*Note:** This attenuator is typically utilized for standard 1300/1550nm wavelengths. It can also be used for wavelengths from 1290-1625nm (it is ideal for CWDM, DWDM, L-Band and C-Band applications). For wavelengths >1290 please specify the exact wavelength required.

**Single-mode VOA 1 Meter**

Part Number	Description	Connector
FVOMS110800001M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	No Connector
FVOMS110800101M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	ST/UPC
FVOMS110800701M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	FC/UPC
FVOMS110800A01M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	FC/APC
FVOMS110800601M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	SC/UPC
FVOMS110800B01M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	SC/APC
FVOMS110800L01M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	LC/UPC

## Single-mode VOA 2 Meter

Part Number	Description	Connector
FVOMS110800002M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	No Connector
FVOMS110800102M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	ST/UPC
FVOMS110800702M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	FC/UPC
FVOMS110800A02M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	FC/APC
FVOMS110800602M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	SC/UPC
FVOMS110800B02M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	SC/APC
FVOMS110800L02M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	LC/UPC

## 62.5/125 Multimode VOA 1 Meter

Part Number	Description	Connector
FVOMM110800001M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	No Connector
FVOMM110800101M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	ST Connector
FVOMM110800601M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	SC Connector
FVOMM110800701M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	FC Connector
FVOMM110800L01M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	LC Connector

## 62.5/125 Multimode VOA 2 Meter

Part Number	Description	Connector
FVOMM110800002M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	No Connector
FVOMM110800102M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	ST Connector
FVOMM110800602M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	SC Connector
FVOMM110800702M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	FC Connector
FVOMM110800L02M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	LC Connector

## 50/125 Multimode VOA 1 Meter

Part Number	Description	Connector
FVOMC110800001M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	No Connector
FVOMC110800101M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	ST Connector
FVOMC110800601M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	SC Connector
FVOMC110800701M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	FC Connector
FVOMC110800L01M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 1 Meter	LC Connector

## 50/125 Multimode VOA 2 Meter

Part Number	Description	Connector
FVOMC110800002M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	No Connector
FVOMC110800102M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	ST Connector
FVOMC110800602M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	SC Connector
FVOMC110800702M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	FC Connector
FVOMC110800L02M	Variable Fiber Optic In-Line Attenuator 2-80dB attenuation range, 2 Meter	LC Connector

**Custom Lengths:**

The Fiberdyne Labs, Inc. VOA is available with 1 meter or 2-meter total length of cable. Due to the manufacturing process, it is difficult to make the In-Lin VOA longer, however, Fiberdyne Labs, Inc. can splice on additional cable to facilitate custom requirements.