

Single Mode In-Line Fixed Fiber Optic Attenuator



Description

The Firsol Single Mode In-Line Fixed Fiber Optic Attenuator is a passive optical device designed to reduce optical signal power by a predetermined attenuation value in single-mode fiber optic systems. Featuring a compact in-line design, it provides stable and reliable optical attenuation without requiring external power or manual adjustment. Available in various fixed attenuation values, it offers low polarization dependent loss (PDL), low back reflection, and consistent optical performance. The attenuator can be integrated directly into fiber optic links through fusion splicing or configured with various fiber optic connectors, such as FC/UPC, FC/APC, LC/UPC, and LC/APC. It is widely used in optical communication networks, CATV systems, FTTx networks, fiber optic testing, optical sensing, and laboratory applications where precise and stable optical power control is required.

Features

- Low Insertion Loss & PDL
- High Return Loss
- High Stability & Reliability
- Epoxy Free Optical Path

Applications

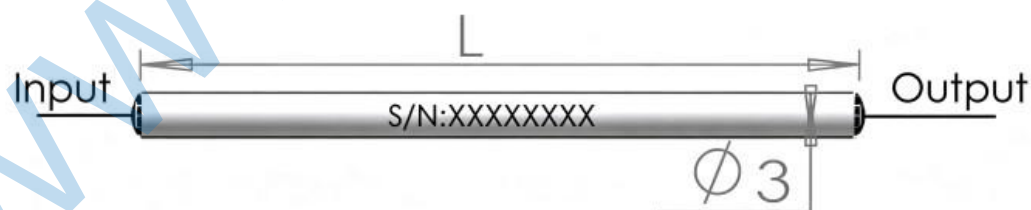
- Optical Power Control and Equalization
- Telecommunication Systems
- Fiber Optic Sensing
- Fiber Optic Communication

Specifications

Parameter	Unit	Value			
Center Wavelength	nm	780/850	980/1030/1064	1310/1480/1550	1950/2000/2050
Operating Wavelength Range	nm	±10		±20	
Attenuation Value	dB	1~20			
Attenuation Tolerance	dB	±10%			
Return Loss	dB	≥50			
Polarization Dependent Loss	dB	≤0.2			
Max Optical Power (CW)	mW	500			
Fiber Type	-	780-HP	1060-XP	SMF-28e	SM1950
Tensile Load (Max.)	N	5			
Package Dimensions	mm	Φ3.0 x L54			
Operating Temperature	°C	-5 to +70			
Storage Temperature	°C	-40 to +85			

Notes: Tested at 25 °C. Specifications exclude connectors. Adding connectors will increase insertion loss by approximately 0.3 dB, reduce return loss by 5 dB.

Product Dimensions



Ordering Information

nm	dB	mW		m	μ m/mm	
Center Wavelength	Attenuation	Max Optical Power (CW)	Fiber Type	Pigtail Length	Pigtail Diameter	Connector
780nm	1dB	500mW	780-HP	0.5m	250 μ m Bare Fiber	None
850nm	2dB		1060-XP	1.0m	900 μ m Loose Tube	LC/UPC
980nm	3dB		SMF-28e	1.5m		LC/APC
1030nm	5dB		SM1950	2.0m		SC/UPC
1064nm	10dB					SC/APC
1310nm	15dB					FC/UPC
1480nm	I					FC/APC
1550nm	20dB					ST/UPC
1950nm						ST/APC
2000nm						
2050nm						