



Sat-Light Gold Series

Optical Delay Line



Features & Benefits

- Enhanced transmission performance
- Customizable compact fiber spool
- High-quality fiber with a low bend radius
- Versatile use for multiple applications
- Compatible with Foxcom Satellite transmitters

Product Description

Optical Delay Line is implemented for multiple testing purposes, such as diversity sites, radar applications, distance simulation and signal processing. By simulating signal transmissions using our Delay Line, you can enhance the performance between transmitters and receivers. The new Foxcom Optical Delay Line is compatible with the Foxcom Sat-Light/Platinum line.

Foxcom Optical Delay Line is customizable in fiber length and size, and boasts a compact, miniature fiber spool design that is easily incorporated into any situation. This product is made from sophisticated, high-quality fiber with a minimal bend loss and a low bend radius.

Optical Delay Line is available as a standalone unit. You can also consider combining our rack mount Delay Line unit with a receiver and transmitter to produce a complete RF-over-Fiber Delay System.

Optical Specifications

Attenuation	
Attenuation at 1310 nm	≤ 0.35 dB/km
Attenuation at 1383 nm	≤ 0.35 dB/km
Attenuation at 1550 nm	≤ 0.22 dB/km
Attenuation at 1625 nm	≤ 0.24 dB/km

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Cutoff Wavelength

Cable Cutoff wavelength (λ_{ccf})	≤ 1260 nm
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Mode Field Diameter

Wavelength (nm)	MFD (μm)
1310	8.8 ± 0.4
1550	9.8 ± 0.5

Chromatic Dispersion

Wavelength (nm)	Chromatic Dispersion (ps/[nm.km])
Zero Dispersion Wavelength (λ_0)	1300–1324 nm
Slope (S0) at λ_0	≤ 0.092 ps/(nm ² .km)

Typical Values

Miscellaneous

Nominal Zero Dispersion Slope	0.089 ps/(nm ² .km)
Effective group index @ 1310 nm	1.467
Effective group index @ 1550 nm	1.467
Effective group index @ 1625 nm	1.468
Rayleigh Backscatter Coefficient for 1 ns pulse width:	
@ 1310 nm	-79.0 dB
@ 1550 nm	-81.3 dB
@ 1625 nm	-82.0 dB

Environmental and Mechanical Specifications

Attenuation

Environmental Test	Test Conditions	Induced Attenuation at 1310, 1550 nm (dB/km)
Temperature cycling	60°C to 85°C	≤ 0.05
Temperature-humidity cycling	10°C to 85°C, 4–98% RH	≤ 0.05
Unit Size		12 x 8.5 x 3.5cm