



TIME DELAY COIL (NS/M RANGE) OPTICAL DELAYS



Create a fixed time delay with our fiber optic coil

According to your delay requirement, we advise and provide the most appropriate time delay coil. The optical delay depends on the fiber type and length. For example, a 20 km fiber coil will create a fixed delay up to 100 µs.

How to calculate a delay according to a fiber length? To calculate the required fiber length to obtain a specific time delay, use the following formula: $L = c \cdot t / n$ where c is the speed of light in vacuum, t is the desired time delay, and n is the index of refraction of fused silica at the wavelength of interest (use $n = 1.4677$ at 1310 nm and $n = 1.4682$ at 1550 nm).

Applications

- Telecommunications: coherent receivers, TDM
- Long delays: interferometers, OCT, wavemeters
- Optical phase adjustment (distance change \sim wavelength / 2π phase)
- Autocorrelator: relative timing between 2 ultra-short pulses
- Pump-probe measurement: measure a response to pulse after a given delay

Features

- Fixed delay
- Totally passive
- All types of optical fibers : SM, MM, PM, from UV to IR
- Coating materials (polymer, polyimide)
- Length: up to 50 km
- With or without stand (copper, aluminium, plastic)
- Adjustable fiber tension : from 20 g to 2 kg
- Customizable (fiber end connection, etc.)

Specifications

Totally configurable	
Type of fiber	SM, MM, PM
Operating wavelength	from UV to IR
Coating materials	Please specify (polymer, polyimide, others)
Total length	Up to 50km (SM), up to 8km (MM), up to 2km (PM), +/-5%
Dimensions	ID min.= 60mm
Terminations	Tube, connector
Packaging	None, plate, case, rack, thermalized
Connectors	Please specify
Passive delay - Examples @1550nm	
100µs	20km
10µs	2000m
5µs	1000m
2.5µs	500m
5.24ns	1m

ps-accuracy delay measurement in option

Related products

- Launch fiber
- Fiber optic cables



T. +33 (0)2 96 05 40 20
F. +33 (0)2 96 05 40 25



4 rue Louis de Broglie
22300 Lannion / France



info@idil.fr

www.idil-fibres-optiques.com



Fiber optics
& Components



Lasers
& Amplifiers



Optoelectronic
systems



Fiber sensors



Spectroscopy
& Microscopy



Education
systems