



OPTICAL DELAY LINE (PS/MM RANGE) OPTICAL DELAYS



Manage your optical delay from 1 ps to 150 ps with custom optical delay lines

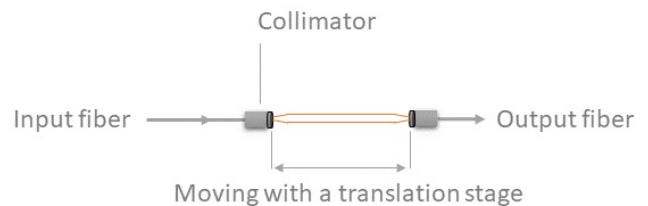
IDIL Fibres Optiques manufactures manual and motorized variable optical delay lines (ODLs). Manual optical delay lines tunability depends on a micrometric screw which allows a higher than 0.1 picoseconds resolution. The translation stage can also be motorized and easily controlled by a computer via an USB interface. In fact, according to the translation stage, we propose a tunability :

- up to 80 ps for ODL 25
- up to 150 ps for ODL 50
- or from 1 ps to 150 ps for Custom ODL

Furthermore, packaging dimensions vary in accordance with customers' requirements regarding delay values: 30 x 80 x 70 mm³, 100 x 81.4 x 40 mm³, 280 x 200 x 76 mm³.

How it works

Fiber Optic Delay Lines (ODL) consist of controlling the delay through the device by varying the distance the light travels between the input and the output fiber collimator. IDIL expertise in single-pass ODL allows a higher than 0.1 ps resolution compared to other supplier. Double-pass are available on request.



Applications

- Telecommunications: coherent receivers, TDM
- Long variable 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

- Variable : manually or motorized
- Good resolution
- No modulation (DC only)

Specifications

ODL			
	CUSTOM ODL	ODL 25 (80ps)	ODL 50 (150 ps)
Travel range	Upon request	25 mm	50 mm
Travel mechanism	Manual or motorized	Manual micrometer	Manual micrometer
Delay range	From 1 ps to hundred ps	80 ps	150 ps
Delay resolution	Depend of the total delay	1.6 ps per turn	1.6 ps per turn
Resolution	< 0.1 ps	< 0.1 ps	< 0.1 ps
Wavelength	UV; IR; Visible	UV; IR; Visible	UV; IR; Visible
Max. Insertion loss	< 1 dB, < 2.5 dB (delay range dependant)	< 1 dB	< 2.5 dB
Loss variation over travel	Depend on the total travel	≤ 1 dB	≤ 1 dB
Return loss	45 dB (typical)	≥ 45 dB	≥ 45 dB
Fiber type	SMF; PMF ; MMF		
Connectors	FC; LC; SC; SMA; ST; MU; E2000; other		
Buffer	900 μm or 2.8 mm		
Dimensions	30 x 80 x 70 mm ³ (with a 50 ps delay)	100 x 81.4 x 40 mm ³	280 x 200 x 76 mm ³
Packaging	Slot, rack, patch cord	Slot, rack, patch cord	Slot, rack, patch cord
Operating temperature	From -5°C to +65°C	From -5°C to +65°C	From -5°C to +65°C
Storage temperature	From -40°C to +85°C	From -40°C to +85°C	From -40°C to +85°C
Optical power handling	Upon request	Upon request	Upon request
Control mode (motorized)	USB, PC interface	/	/
Single mode fibers			
Specifications		SM1550, buffer 900 μm, L= 1m, FC/APC	SM1550, buffer 900 μm, L= 1m, FC/APC x2
Part number to order		COCOM02392	COCOM00781
Polarization maintaining fibers			
Specifications		PM1550, buffer 900 μm, L= 1m, FC/APC	PM1550, buffer 900 μm, L= 1m, FC/APC x2
Part number to order		COCOM04052	COCOM02681

Contents (motorized ODL): User guide, calibration data, USB cable, power supply, integrated collimator, input and output fiber

Related products

- Fiber stretcher and driver (femtosecond/micrometer range)
- Optical delay solutions overview
- Time delay coil (ns/m range)



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