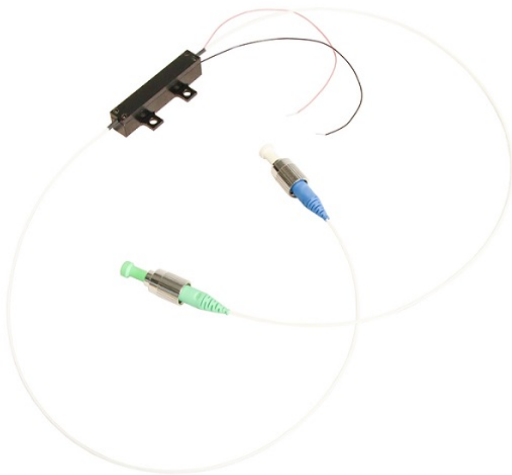




## FIBER STRETCHER COMPONENTS



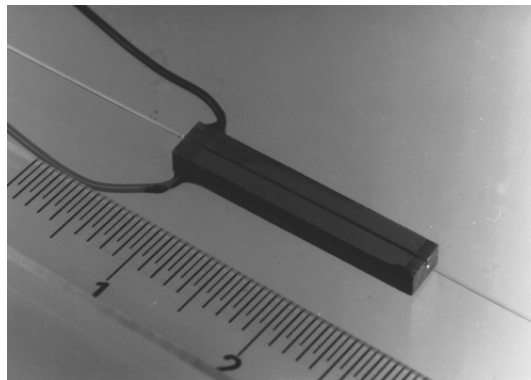
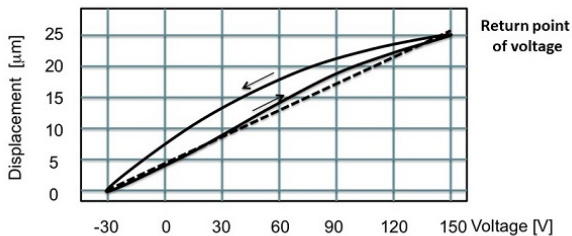
Our compact fiber stretchers (also called phase shifters) offer the attractive feature to modify the optical path from 0 to 0,1ps or 0 to 0.2ps.

The fiber is fixed on a multilayer piezoelectric actuator. The stretcher uses the piezoelectric element to change the optical path and phase. IDIL Fibres Optiques phase shifters are available with all fiber types (SM, MM, PM) and offer a particularly fast and accurate technique.

Its compact packaging makes it suitable for various system applications. Typical applications include variable optical delay, fiber interferometry, ultra-fast dynamics and lasers.

## Piezo

Diagram 1: Example of displacement with voltage



## Applications

- Variable optical delay
- Interferometric measurements
- Ultrafast dynamics
- Lasers & ultra-intense lasers
- Metrology
- Chirped pulsed amplification (CPA)

## Features

- Modulation of the optical path length
- Compact packaging
- All fibers: SM, MM, PM
- Large choice of multiple termination
- High speed
- Can be driven with general purpose electronics

## Specifications

Fiber stretcher		
	Model 1	Model 2
Wavelength range	IR (1 $\mu$ m, 1,3 $\mu$ m, 1,5 $\mu$ m or others)	IR (1 $\mu$ m, 1,3 $\mu$ m, 1,5 $\mu$ m or others)
Optical path displacement	0-20 $\mu$ m (more is available)	0-40 $\mu$ m (more is available)
Time delay	0 - 0,1 ps	0 - 0,2 ps
Insertion loss	$\leq$ 0,1 dB	$\leq$ 0,1 dB
Resonance frequency	76 kHz	34 kHz
Return loss	$\geq$ 50 dB	$\geq$ 50 dB
PDL	$\geq$ 50 dB	$\geq$ 50 dB
Fiber length	Please specify	Please specify
Fiber type	SM, MM, PM	SM, MM, PM
Voltage range to apply	0-150 V (more is available)	0-150 V (more is available)
Connectors	Custom	Custom
Operational temperature	From -20°C to +55°C	From -20°C to +55°C
Packaging dimensions	45 (L) x 7 (l) x 10 (H) mm <sup>3</sup>	67 (L) x 13.3 (l) x 11 (H) mm <sup>3</sup>
Weight	10 g typical	20 g typical

## Related products

- Optical Delay Line
- Tunable Fiber Bragg Gratings (FBG)



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