Fiber Optic Delay Line by OptiXs

Product description:

We introduce a new product made by OptiXs – a Fiber Optic Delay Line. This device is designed to allow a precise variation of the optical path length which is widely used in many application areas such as interferometry, signal processing, telecommunications, etc.

Depending on the selected type, our delay line offers an optical delay range of 330 ps or 660 ps with an unprecedented resolution of < 0.33 fs across the whole range. You can choose between operating wavelengths of 1550 nm and 2000 nm. In either case a polarization-maintaining (PM) fibers with FC/APC connectors placed on the front face of the case are used. Single mode (SM) fibers are also available.

The delay line comes with a high-resolution stepper motor and a controller which enables a computer based remote operation of the device. For basic use we include an intuitive customized web interface, while ethernet and USB connections provide options for more advanced communication and automatization. Available as a standalone unit or as modular inserts for a standard 19" rack system. This together with state-of-the-art optical performance makes our delay line ideal for advanced applications in coherent beam combining, optical coherence tomography (OCT), or time division multiplexing (TDM).

Specifications:

Operating wavelength [nm]	1550		2000	
Optical delay range [ps]	330	660	330	660
Typical insertion loss [dB][1]	1.7	2	2.3	2.8
Insertion loss uniformity [dB]	0.25	0.35	0.25	0.35
Fiber type	PM-1550 / SM-1550		PM-1950 / SM-1950	
Fiber connectors	FC/APC			
Optical delay resolution [fs]	< 0.33			
Dimensions [mm]	$81.4 \times 93 \times 236^{2}$ / $81.4 \times 93 \times 291^{3}$			
Power requirements	12/24V, 1.5 A			

[1] Includes connector losses
[2] 330 ps version
[3] 660 ps version

Mechanical drawing:

L = 236 mm (330 ps)
L = 291 mm (660 ps)

4x M4 mounting threads
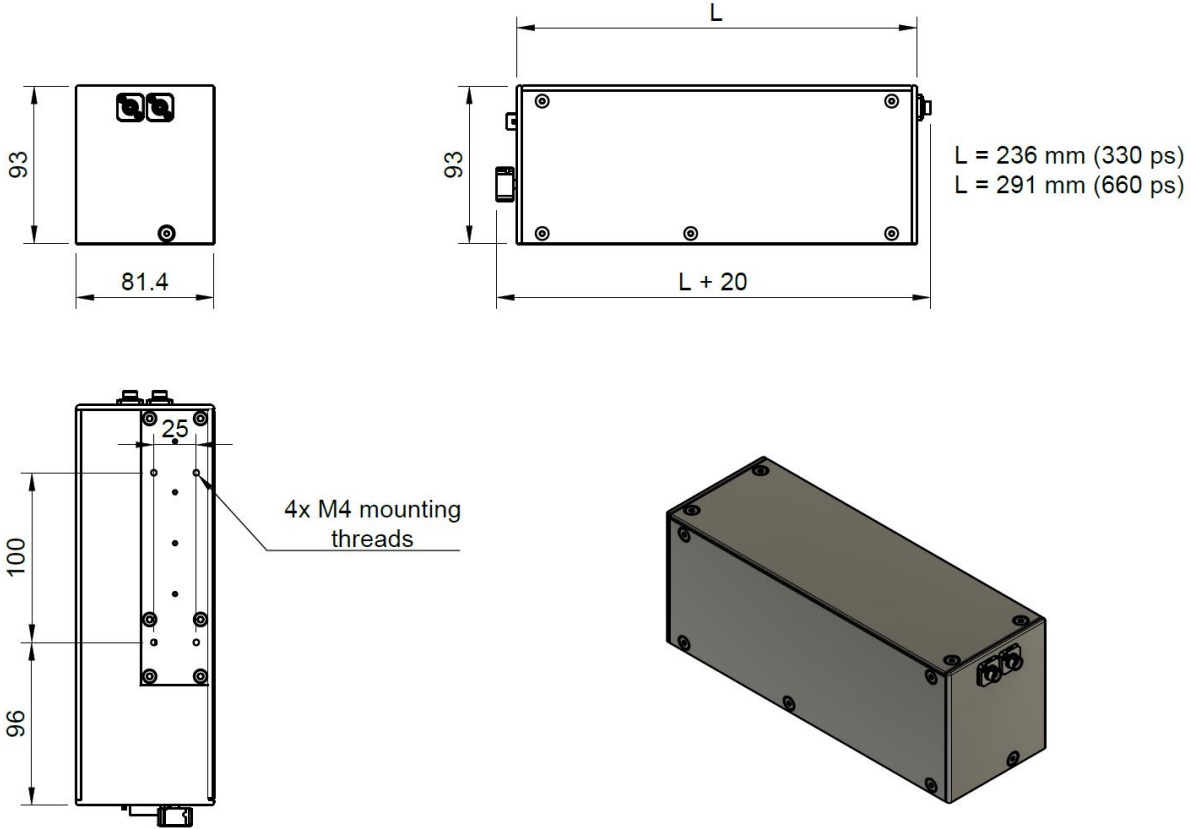
Order information:

Please order by a product number created as follows:

FODL-WWWW-DDD-TT

Example:

Delay line operating at 2000 nm with optical delay range 660 ps and PM fibers

FODL-2000-660-PM

WWWW = operation wavelength:	1550	
	2000	
DDD = optical delay range:	330	
	660	
TT = fiber type:	PM	
	SM	