

Motorized Variable Optical Delay Line

Model #: MDL

Description: Motorized Variable Optical Delay Line provides precision optical path length adjustment of up to 500 ps. Driven by a stepping motor, the MDL has a delay resolution about 10 μm (34 fs). In addition, its advanced motion design guarantees longevity for long-term continuous operation. Low insertion loss and high reliability make this device ideal for integration in optical coherence tomography (OCT) systems, network equipment and test instruments for precision optical path length control or timing alignment.

Application: Test equipment, OCT, precision optical path length matching or timing alignment

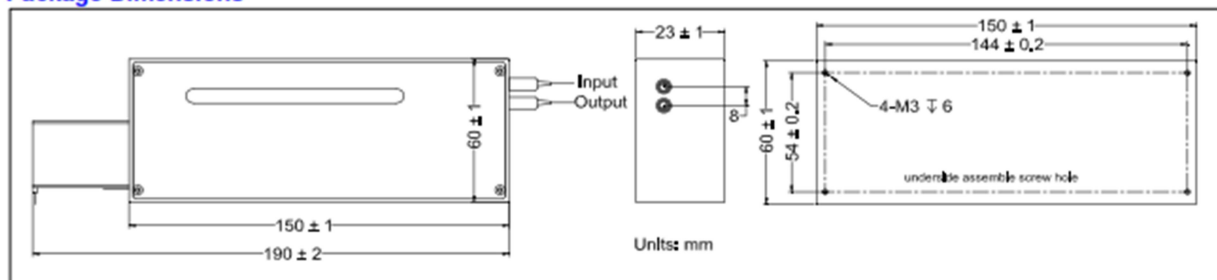
Specifications:

Parameter	Unit	Specifications			
Operating Wavelength	nm	850 \pm 50	1060 \pm 40	1310 \pm 60	1550 \pm 40
Optical Delay Range	ps	0 – 500 ps continuous			
Zero Point Delay Offset**	ps	~ 440			
Optical Delay Resolution		10 μm or 34 fs per encoder count			
Max. Insertion Loss	dB	1.5	1.2	1.2	1.2
Max. Insertion Loss Variation	dB	0.7	0.5	0.3	0.5
Min. Extinction Ratio (for PM version)	dB	18			
Min. Return Loss	dB	50			
Max. Polarization Dependent Loss (for non PM version)	dB	0.1			
Max. Optical Power (CW)	mW	300			
Electrical Interface	N	2-phase stepper motor drive signal, 2 sensor connections			
Operating Temperature	$^{\circ}\text{C}$	0 to +40			
Storage Temperature	$^{\circ}\text{C}$	-20 to + 60			
Dimension	mm	60 x 150 x 23			
Fiber Type		Single mode or PM Panda fiber			

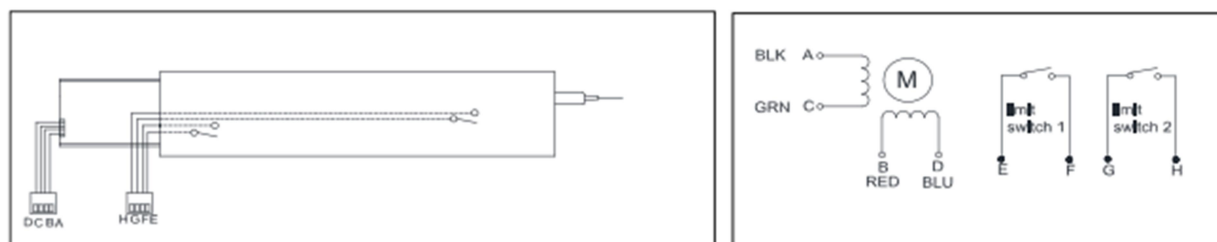
Note: each connector may contribute extra 0.5 dB IL, 5 dB lower RL, 2dB lower polarization extinction ratio.

** Absolute delay at 0 ps setting measured to the edge of the enclosure (excluding caps, boots and pigtails)

Package Dimensions



Electrical Interface



Ordering Information: MDL-AA-BBB-C-D-E-F

AA: wavelength	BB : delay range	C: connector type	D: fiber jacket	E: fiber length	F: fiber type
06 - 1064 nm	500 – 500 ps	1 - FC/UPC	B - 250µm Panda fiber	1 – 1.0 m	S – SM fiber
55 – 1550 nm	XXX - other	2 - FC/APC	L - 900 µm loss tube	X - other	P – PM fiber
31 – 1310 nm		3 - SC/UPC	C – 3 mm cable		
XX - other		4 - SC/APC	X - other		
		N - none			
		X - other			