Motorized Variable Optical Delay Line



Description:

The 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 um (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.

Features:

- **Optical Delay Range**
- 1060/1550nm Operational wavelength Optional
- Different Range for Optional:
 - 0 100 ps continuous for 100 ps model
 - 0 330 ps continuous for 330 ps model
 - 0 600 ps continuous for 600 ps model
 - 0 1500 ps continuous for 1500 ps model

Application:

- Telecommunication
- **Data Communication**
- Storage area network
- MAN
- PON

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Specifications:

Electrical/Optical Characteristics (Tsub=25°C)

Parameter	Unit	Values
Center Wavelength (λc)	nm	1060, 1550
Operation Wavelength	nm	λc ± 40
Optical Delay Range	ps	0 - 100 ps continuous for 100 ps model
		0 - 330 ps continuous for 330 ps model
		0 - 600 ps continuous for 600 ps model
		0 - 1500 ps continuous for 1500 ps model
Read scale Resolution	ps	0.05
Optical Delay Resolution	-	10 µm or 34 fs per Encoder Count
Max. Insertion Loss	dB	1.2
Max. Insertion Loss Variation	dB	0.5
Max. PDL	dB	0.1
Min. Extinction Ratio (for PM model)	dB	18
Min. Return Loss	dB	50
Max. Optical Power Handling (Continuous Wave)	mW	500
Electrical Interface	-	2 - Phase Stepper Motor Drive Signal
		2 Sensor Connections
Operating Temperature	°C	0 to + 40
Storage Temperature	°C	- 20 to + 60
Fiber Type	-	Singlemode or PM Panda Fiber
Dimensions	mm	113 x 33 x 35 5 mm for 100 ps model
		147 x 33 x 35.5 mm for 330 ps model
		191 x 33 x 35 5 mm for 600 ps model
		191 x 41 x 355 mm for 1500 ps model

1. IL is 0.5 dB higher, RL is 5 dB lower and ER is 2 dB lower for each connector added, measured at center wavelength.

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

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Test Curve:

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Outline Drawing:



Electrical Interface:





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Ordering Info:

OA-MODL-☆-A8▽-W□□□□-XX

- $\stackrel{\scriptscriptstyle \leftrightarrow}{\scriptstyle all}$: Delay Range
- 100: 100ps
- 330: 330ps
- 600:600ps
- 1500:1500ps
- SS:Specify
- \bigtriangledown : Fiber Jacket
- B:Bare Fiber
- L:900um Loose Tube
- DDDD: Wavelength
- 1060: 1060nm
- ****
- 1550: 1550nm
- XX: Fiber and Connector Type
- SASA=(SMF-28E+ FC/APC)+(SMF-28E+ FC/APC)
- SPSP=(SMF-28E+ FC/PC)+(SMF-28E+ FC/PC)
- PAPA=(PM Fiber+ FC/APC)+(PM Fiber+ FC/APC)
- PPPP=(PM Fiber+ FC/PC)+(PM Fiber+ FC/PC)
- PAPA=(PM Fiber+ FC/APC)+(PM Fiber+ FC/APC)





