Motorized Variable Optical Delay Line (MDL Series)

Description

Rev 11E

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.

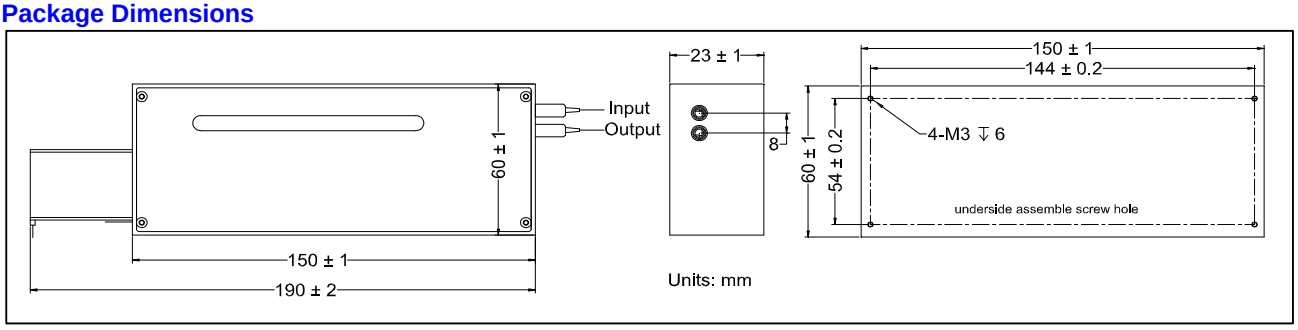
Specifications

Parameter	Unit	Values
Center Wavelength (λc)	nm	1060, 1550
Operation Wavelength	nm	λc ± 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	1.2
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	300
Electrical Interface	-	2 - Phase Stepper Motor Drive Signal 2 Sensor Connections
Operating Temperature	℃	0 to + 40
Storage Temperature	℃	- 20 to + 60
Fiber Type	-	Singlemode or PM Panda Fiber
Dimensions	mm	60 × 150 × 23

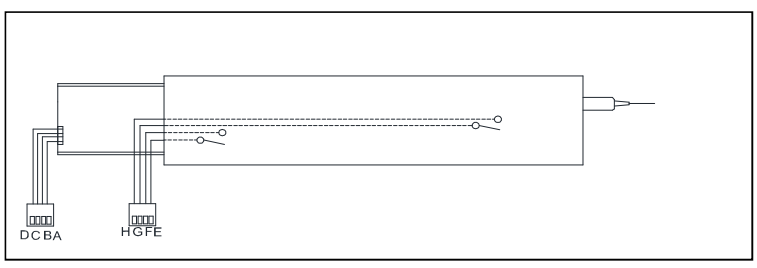
[1]IL is 0.5 dB higher, RL is 5 dB lower and ER is 2 dB lower for each connector added, measured at center wavelength

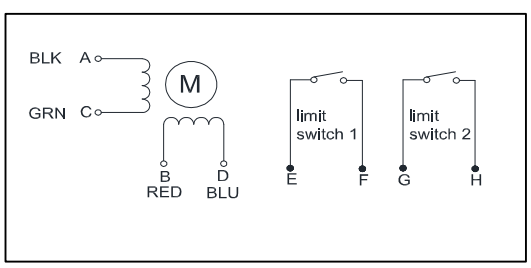
[2]Absolute delay at 0 ps setting measured to the edge of the enclosure (excluding caps, boots, and pigtails).

Package Dimensions



Electrical Interface





Ordering Information

MDL-①①-②②②-③-④-⑤-⑥

①①: Wavelength
06 - 1060 nm
55 - 1550 nm
SS - Specify

②②②: Delay Range
500 - 500 ps
SSS - Specify

③: Connector Type
1 - FC/UPC
2 - FC/APC
3 - SC/UPC
4 - SC/APC
N - None
S - Specify

④: Fiber Jacket
B - 250 μm Bare Fiber
L - 900 μm Loose Tube
3 - 3 mm cable
S - Specify

⑤: Fiber Length
1 - 1.0 m
S - Specify

⑥: Fiber Type
M - Singlemode Fiber
P - PM Fiber