

OCT VARIABLE OPTICAL DELAY LINE

Small Form-Factor

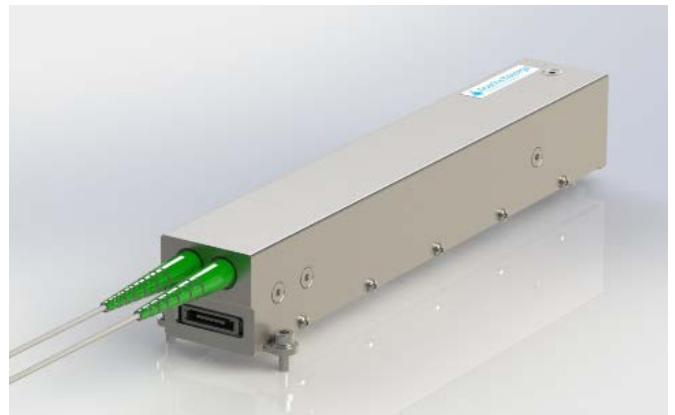
PRODUCT DATASHEET

The Gooch & Housego Variable Optical Delay Line provides fast and accurate optical path length control in a compact housing.

Based on a customisable chassis that can be adapted to incorporate additional optical components, the unit is designed to be easily incorporated into any modular optical coherence tomography (OCT) or similar interferometric system architecture.

Optical interface is through a single or dual fiber pigtailed which can be specified to length and terminated with all commonly used optical connectors. Internal optical sensors can be used as reference location and travel limit switches.

Please contact G&H for further details related to use of the delay line within interferometric applications.



Key Features

- Point-and-return or dual fiber architecture
- Extremely compact design
- Optical wavebands covered:
 - 850 nm
 - 1060 nm
 - 1310 nm
- Low insertion loss
- Simple system integration
- Highly customisable

Applications

- OCT
- Medical diagnostics
- Industrial NDT
- Scientific

Associated Documents

- OCT coupler 850 nm and 1300 nm
- OCT coupler 1060 nm
- Extended wideband OCT coupler
- Fiber collimators

Typical Specifications

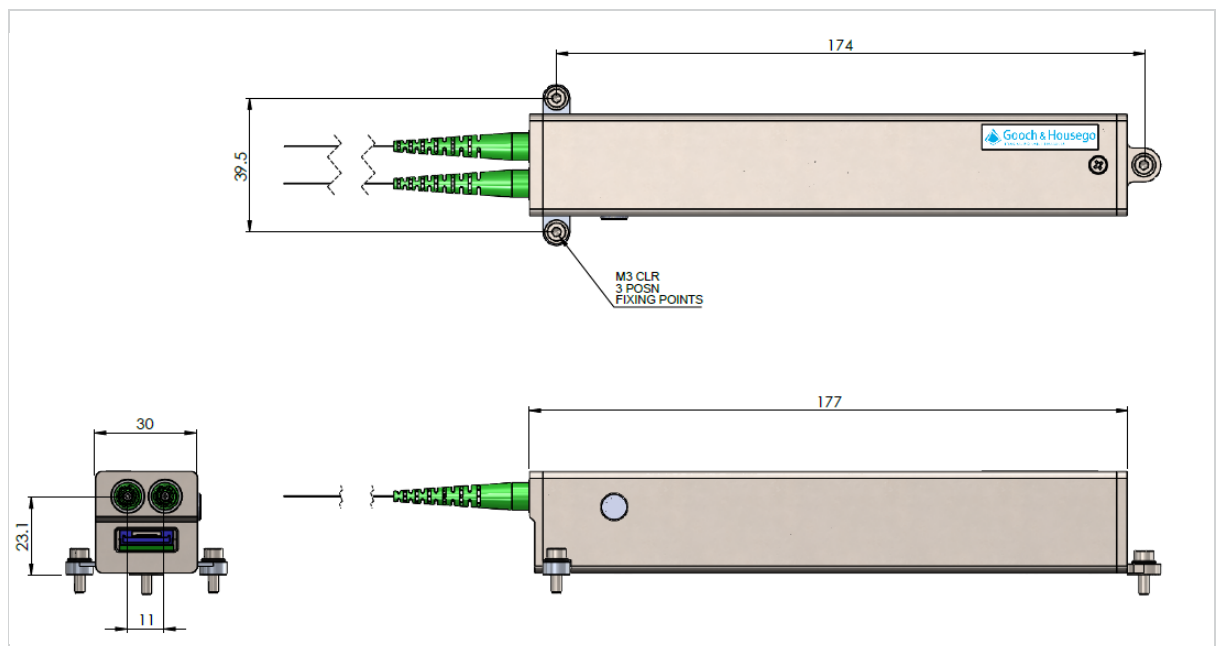
Parameter	Value	Notes
Wavelength range	850, 1060 and 1310 nm	Typical spectral bandwidth ± 50 nm
Optical input power	< 100 mW	Continuous exposure
Mechanical travel range	80 mm	Can be customized according to requirements
Optical delay range	1066 ps ¹ 533 ps ²	80 mm travel range
Travel speed	50 mm/s	Mechanical travel speed
Travel resolution	5 μ m	Can be customized according to requirements
Optical delay resolution	0.03 ps	Dual fiber version
Optical IL	≤ 1.6 dB	Excludes connector loss, waveband dependant
IL over travel range	≤ 0.5 dB	
WDL	≤ 0.6 dB	
Temperature dependent IL	≤ 0.6 dB	
Return loss	> 55 dB	
Operating temperature range	+15°C to +55°C	Typical
Dimensions	177x30x30 mm	Excludes fixing tabs and fiber pigtails

1 For single fiber, point-and-return architecture

2 For dual fiber architecture

Mechanical Outline

Length dimension dependent on optical delay spec.



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Order code

Order codes are comprised of a standard device prefix (e.g. ODL) followed by code letters or numbers which correspond to available options.

Sample: ODL-3AXXX1213 (SFF Delay Line, 1310 nm center wavelength, 50 mm/s travel speed, single fiber port configuration, 2 mm sleeving, 1 m pigtailed, FC/APC connector).

Order code				①	②	③	④	⑤	⑥	⑦	⑧	⑨
O	D	L	-		A	X	X	X				
①	Passband			850		1060 nm			1310			
	Code			8		0			3			
②	Travel speed			50 mm/s								
	Code			A								
③	Blank			X								
	Code			X								
④	Blank			X								
	Code			X								
⑤	Blank			X								
	Code			X								
⑥	Port configuration			Point and return (single fiber)				Dual fiber (input separate from output)				
	Code			1				2				
⑦	Fiber sleeving			Ø.9 mm				Ø2.0 mm				
	Code			1				2				
⑧	Pigtail length¹			0.5 m				1 m				
	Code			0				1				
⑨	Connector¹			None	FC/PC	FC/APC	SC/APC	FC/UPC	SC/UPC	LC		
	Code			0	1	3	5	9	A	B		

¹ Minimum pigtail length. Further pigtail lengths available on request.

Where connectorized, pigtail length is to connector end face.

For further information

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