

# CrystaLatch™ Bi-directional 1x4 Solid State Fiberoptic Switch

(Protected by U.S. patents 7224860, 6757101, 6577430 and pending patents)

## Product Description

The CL Series bi-directional 1x4 solid-state fiber optical switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved using patented non-mechanical configurations and activated via an electrical control signal. Latching operation preserves the selected optical path after the drive signal has been removed. These switches are true bidirectional allowing light propagating in both directions simultaneously, a critical feature for sensing applications. Agiltron non-mechanical CL fiberoptic switch features low insertion loss, fast response time, high extinction ratio, and extremely high reliability and repeatability. It is designed to meet the most demanding switching requirements of continuous operation without wear-out, longevity without fail, and live operation under vibration/shock. Electronic driver is available for this series of switches.



## Performance Specifications

CL Series 1x4 Switch		Min	Typical	Max	Unit
Operation Wavelength <sup>1</sup>		1520	1550	1580	nm
		1295	1310	1325	nm
Insertion Loss	Single Stage <sup>2</sup>		1.0	1.5	dB
	Dual Stage <sup>2</sup>		1.2	1.7	
Cross Talk	Single stage	18	25	30	dB
	Dual Stage	35	50	55	
Switch Speed (Rise, Fall)		20	50	200	μs
Repetition Rate			5K		Hz
Polarization Dependent Loss			0.1	0.25	dB
Polarization Mode Dispersion			0.1	0.2	ps
Return Loss <sup>2</sup>		50	55		dB
Drive Voltage		4.5	5	6	V
Drive Current (~2.5V)		± 120	± 140	± 250	mA
Operating Temperature		-5 <sup>3</sup>		70	°C
Optical Power Handling			300	500 <sup>4</sup>	mW
Storage Temperature		-40		85	°C
Fiber Type	Corning SMF-28				
Package Dimension		53.5L x 38.3W x 8.5H			mm

1. Agiltron can achieve same SPEC at L band.

2. Exclude connectors.

3. -40°C version is also available.

4. High power version available.

## Features

- Solid-State High Speed
- Non-Mechanical
- Ultra-High Reliability
- Fail-Safe Latching
- Low Insertion Loss
- Direct Low Voltage Drive
- Compact
- Vibration Tolerance
- Low Cost

## Applications

- Optical Signal Routing
- Network Protection/Restoration
- Burst Switching
- Configurable Add/Drop
- Signal Monitoring
- Instrumentation



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## Ordering Information

CLBD	<input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Type	Wavelength	Switch	Package	Fiber Type		Fiber Length	Connector
		1310=3 1550=5 Special=0	Single stage=1 Dual Stage=2		SMF-28=1 Special=0	Bare fiber=1 900µm loose tube=3 Special=0	0.25m=1 0.5m=2 1.0m=3 Special=0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Duplex LC=8 Special=0