

CrystaLatch™ 1x4 Solid State Fiberoptic Switch

Product Description

The CL Series 1x4 fiber optical switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved using patent pending non-mechanical configurations and activated via an electrical control signal. Latching operation preserves the selected optical path after the drive signal has been removed. The solid-state all-crystal

design eliminates the need for mechanical movement and organic materials. The CL fiber optic switches are designed to meet the most demanding switching requirement of ultra-high reliability, fast response time, and continuous switching operation.



Performance Specifications

CL Series 1x4 Switch	Min	Typical	Max	Unit
Operation Wavelength ¹	1520	1550	1580	nm
	1295	1310	1325	nm
Insertion Loss ²	0.8	1.3	1.5	dB
Polarization Dependent Loss		0.1	0.25	dB
Cross Talk	40	45	55	dB
Polarization Mode Dispersion		0.1	0.2	ps
Return Loss ²	50			dB
Switch Time (Rise, Fall)	20	50	200	μs
Repetition Rate		5K		Hz
Operating Temperature	-5 ³		70	°C
Drive Current(2.5V)	±120	±140	±250	mA
Current Pulse Duration	0.1	1	100	ms
Optical Power		300	500	mW
Storage Temperature	-40		85	°C
Switch type	Solid-Status Latching			
Fiber Type	Corning SMF28			
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

Features

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

Applications

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

CrystaLatch™

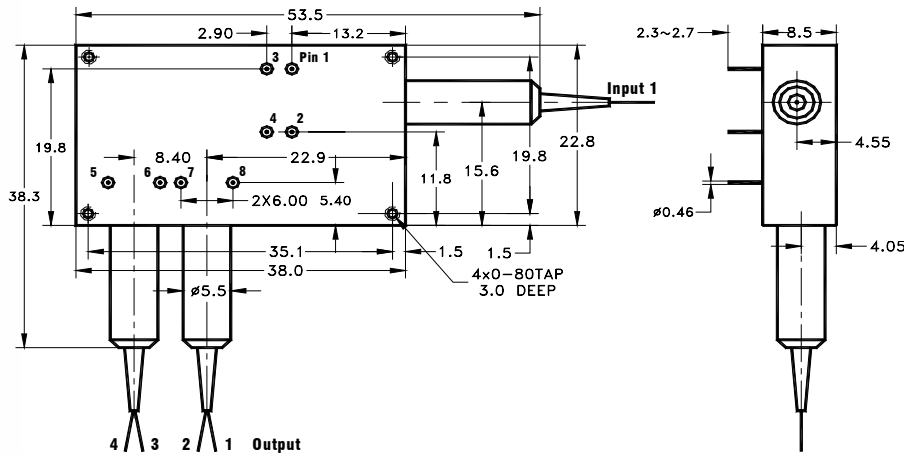
1x4 Solid State Fiberoptic Switch

Electrical Driving Requirements

Evaluation kit with TTL and RS232 interface and Windows™ GUI also available

Parameter	Typical	Minimum	Maximum	Unit
Switch Voltage	2.5	2	3	V
Switch Current	140	120	250	mA
Pulse Duration	1	0.1	100	ms

Mechanical Footprint Dimensions (mm)



Electrical Driving Table (DC2.5V)

CL 1x4 Switch

Optical Path	Pin Group 1		Pin Group 2		Pin Group 3		Pin Group 4	
	1	2	3	4	5	6	7	8
Input → Output 1	+	-	+	-	-	+	+	-
Input → Output 2	-	+	-	+	-	+	+	-
Input → Output 3	+	-	-	+	+	-	-	+
Input → Output 4	-	+	+	-	+	-	-	+

CL 4x1 Switch

Optical Path	Pin Group 1		Pin Group 2		Pin Group 3		Pin Group 4	
	1	2	3	4	5	6	7	8
Input → Output 1	-	+	-	+	+	-	-	+
Input → Output 2	+	-	+	-	+	-	-	+
Input → Output 3	-	+	+	-	-	+	+	-
Input → Output 4	+	-	-	+	+	+	+	-

Ordering Information

CLSW-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/>	1x4=14 4x1=41	1310=3 1550=5 Special=0	Single Stage=1 Dual Stage=2	<input type="checkbox"/>	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 Special = 0