

CrystaLatch™ 1x8 Fiberoptic Switch

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

Product Description

The CL Series 1x8 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. The all solid state CL 1x8 fiberoptic switch features low insertion loss, high extinction ratio, high channel isolation, and extremely high reliability and repeatability. It is designed to meet the most demanding switching requirements of continuous operation without failure, longevity, operation under shock/vibration environment and large temperature variations, and fast response time.

The switch also has build-in Circulator and isolator functions. Electronic driver is available for this series of switches



Performance Specifications

CL Series 1x8 Switch	Min	Typical	Max	Unit
Operation Wavelength ¹	1520	1550	1580	nm
	1295	1310	1325	nm
Insertion Loss ²		1.3	2.5	dB
Uniformity		0.7	1.0	dB
Cross Talk	36	50		dB
Switch Speed (Rise, Fall)		50	200	μs
Repetition Rate			5K	Hz
Polarization Dependent Loss		0.15	0.4	dB
Polarization Mode Dispersion			0.2	ps
Return Loss ²	50			dB
Drive Voltage	2.5		3	V
Operating Temperature ³	-5		65	°C
Optical Power Handling		300	500	mW
Storage Temperature	-40		85	°C
Switch type	Solid-State Latching			
Fiber Type	Corning SMF28			
Package Dimension	82.8L x 37.3W x 8.5H			mm

1. Agiltron can achieve same SPEC at L band
2. Exclude connectors
3. -40°C version is also available

Features

- High Speed
- Non-Mechanical
- High Reliability
- Fail-Safe Latching
- Low Insertion Loss
- Rugged
- Compact
- Cost Effective
- Direct Low Voltage Drive

Applications

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

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1x8 Fiberoptic Switch

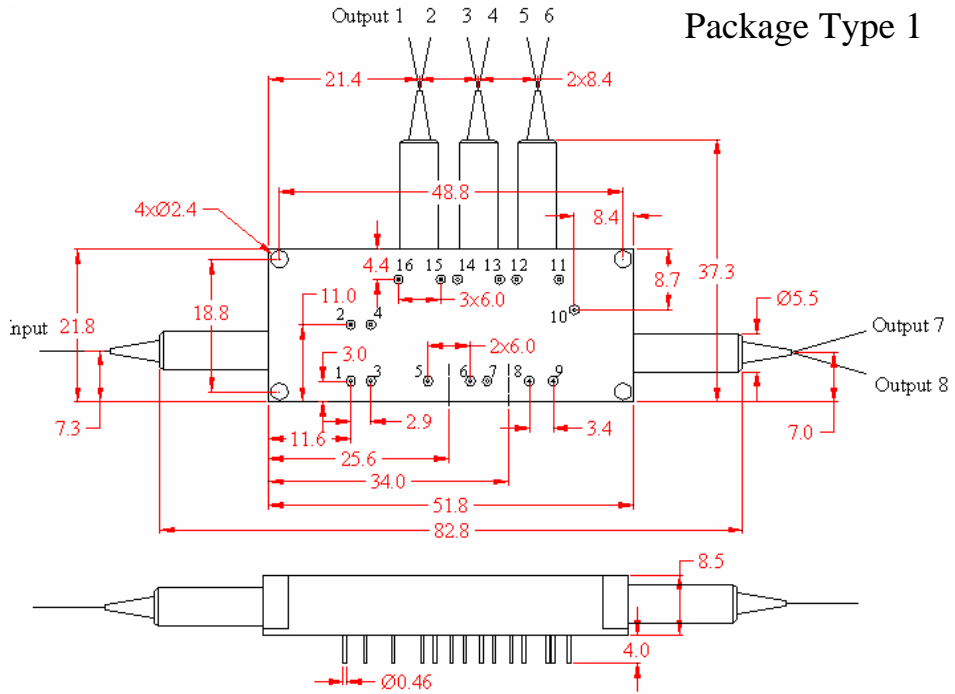
Electrical Driving Information

Each switching point is actuated by applying a voltage pulse. Applying one polarity pulse, one light path will be connected and latched to the position. Applying a reversed polarity pulse, another light path will be connected and latched to the position after pulse removed.

Parameter	Minimum	Typical	Maximum	Unit
Switch Voltage	2.5		3	V
Resistance	15	18	22	Ω
Pulse Duration	0.1	1	10	ms

Driving kit with RS232 and TTL interfaces and Windows™ GUI is available.

Mechanical Footprint Dimensions (Unit:mm)



Electric Driving Table

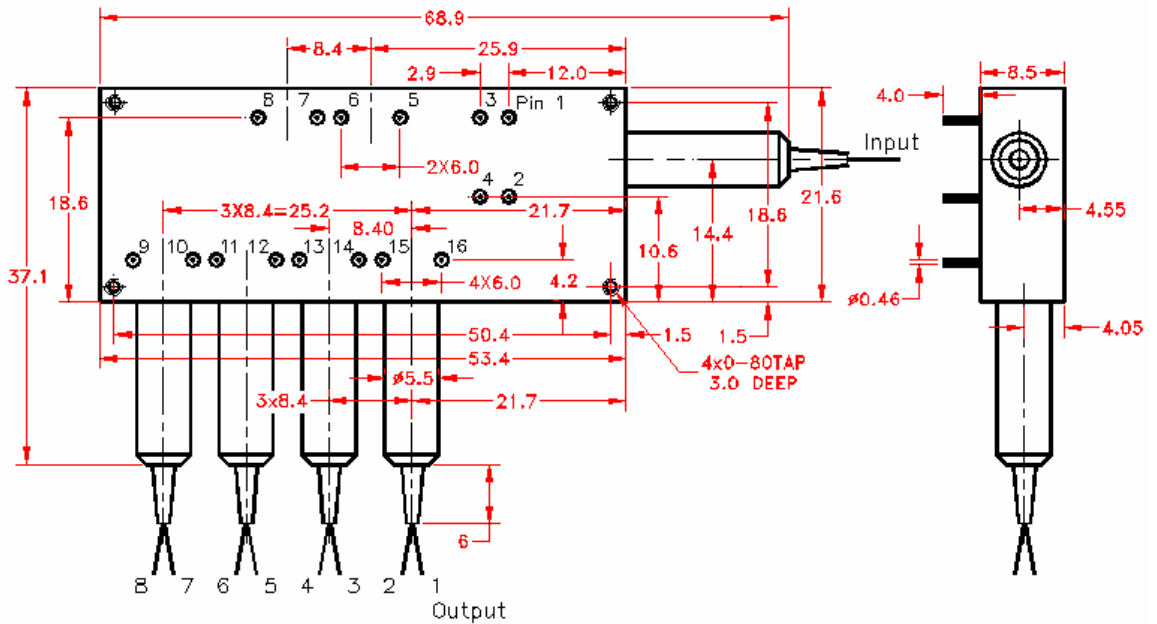
Optical Path	Pin Group 1		Pin Group 2		Pin Group 3		Pin Group 4		Pin Group 5		Pin Group 6		Pin Group 7		Pin Group 8	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Input- Output 1	+	-	+	-	-	+	-	+	+	-	+	-	-	+	+	-
Input- Output 2	-	+	-	+	-	+	-	+	+	-	+	-	-	+	+	-
Input- Output 3	+	-	-	+	-	+	-	+	+	-	+	-	+	-	-	+
Input- Output 4	-	+	+	-	-	+	-	+	+	-	+	-	+	-	-	+
Input- Output 5	+	-	-	+	+	-	+	-	+	-	-	+	-	+	-	+
Input- Output 6	-	+	+	-	+	-	+	-	+	-	-	+	-	+	-	+
Input- Output 7	+	-	-	+	+	-	-	+	-	+	+	-	-	+	-	+
Input- Output 8	-	+	+	-	+	-	-	+	-	+	+	-	-	+	-	+

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Mechanical Footprint Dimensions (Unit:mm)

Package Type 2



Ordering Information

CLSW-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector
	1x8=18 8x1=81	1310=3 1550=5 Special=0	Single stage=1 Dual Stage=2	Package 1=1 Package 2=2	SMF-28 =1 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