

CrystaLatch™ 1x8 PM Fiberoptic Switch

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

Product Description

The CL Series 1x8 PM 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 PM 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 PM Switch	Min	Typical	Max	Unit
Operation Wavelength ¹	1520	1550	1580	nm
	1295	1310	1325	
Insertion Loss ²		1.3	2.5	dB
Uniformity		0.7	1.0	dB
Extinction Ratio ²	18	25	30	dB
Cross Talk ³	35	50	55	dB
Switch Speed (Rise, Fall)	20	50	200	µs
Repetition Rate			5K	Hz
Polarization Mode Dispersion			0.2	ps
Return Loss ²	50			dB
Operating Temperature ⁵	-5		65	°C
Optical Power Handling ⁴		300	500	mW
Storage Temperature	-40		85	°C
Switch type	Solid-State Latching			
Fiber Type	Corning PM Panda fiber			
Package Dimension	82.8L x 37.3W x 8.5H			mm

1. Agiltron can achieve same SPEC at L band
2. Measured without connectors
3. The typical crosstalk of single stage is 20dB
4. High power version available.
5. -40 °C version is also available.

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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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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
Resistance (each group)	15	18	22	Ω
Switch Voltage	2.5		3	V
Pulse Duration	0.1	0.2	2	ms

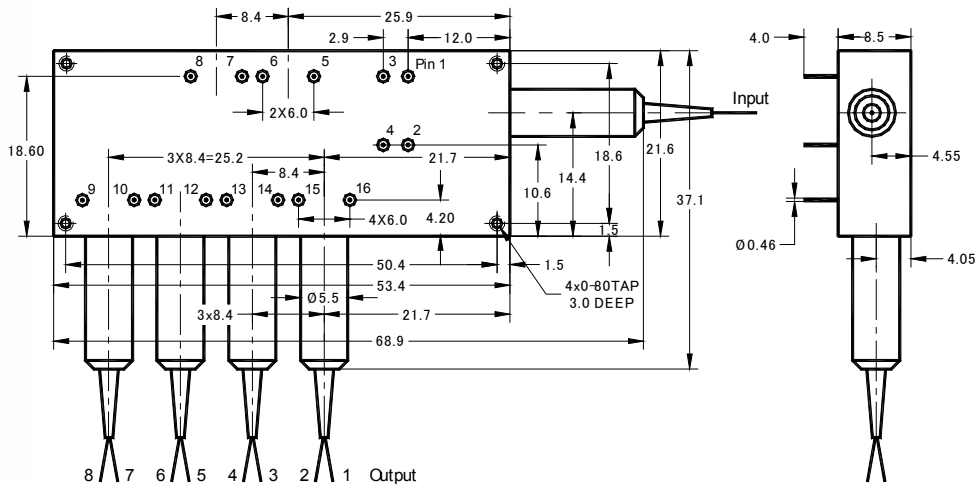
Driving kit with RS232 and TTL interfaces and Windows™ GUI is available

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	-	+	+	-	+	-	-	+	-	+	+	-	-	+	-	+

"+": 2.5~3.0V Pulse; "-": Ground.

Mechanical Footprint Dimensions (Unit:mm)



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Ordering Information

CLPM-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector			
1x8=18 8x1=81	1310=3 1550=5 Special=0	Dual stage=2	Standard=2 Special=0	PM1300=1 PM14XX=2 PM1550=3	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		