

CrystaLatch™ 1x2 Fiberoptic PM Switch

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

Product Description

The CL Series 1x2 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 1x2 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 1x2 PM Switch ¹	Min	Typical	Max	Unit
Operation Wavelength	1520	1550	1580	nm
	1295	1310	1325	nm
Insertion Loss ²		0.6	1.0	dB
Cross Talk	40	50		dB
Switch Speed (rise, fall)	5	50	200	µs
Repetition Rate		2K		Hz
Durability		10 ¹¹		cycle
Extinction ratio		18		dB
Return Loss ²		50		dB
Operating Temperature ⁴		0	70	°C
Optical Power Handling ³		300	500 ⁴	mW
Storage Temperature	-40		85	°C
Fiber Type	Panda PM fiber			
Package Dimension	58.2L x 8.4W x 8.4H			mm

1. Agiltron can achieve same SPEC at L band.
2. Measured without connectors.
3. Continuous operation, for pulse operation call.
4. -40 °C version is also available.

Features

- Solid-State High Speed
- Low Insertion Loss
- High Extinction Ratio
- High Isolation
- Fail-Safe Latching
- Non-Mechanical
- Compact & Rugged
- Direct Low Voltage Drive

Applications

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

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Electrical Driving Information

The switch 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
Drive Voltage	4.5	5	5.5	V
Drive Current	110	140	195	mA
Pulse Duration	0.2	0.3	0.5	ms

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

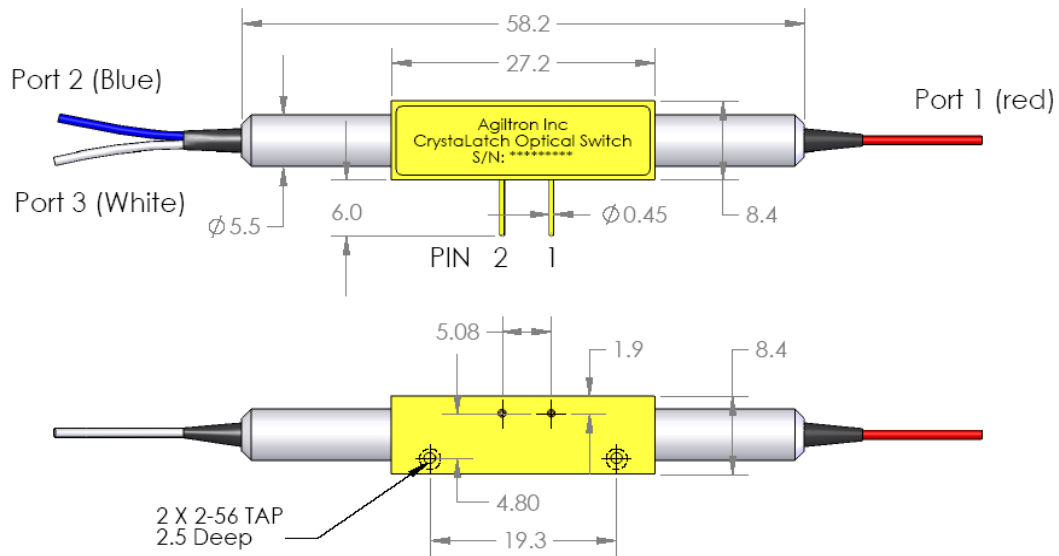
CL 1x2 PM Switch

Optical Path	Pin 1	Pin 2
Port 1→Port 2	GND	5V Pulse
Port 1→Port 3	5V Pulse	GND

CL 2x1 PM Switch

Optical Path	Pin 1	Pin 2
Port 2→Port 1	5V Pulse	GND
Port 3→Port 1	GND	5V Pulse

Mechanical Footprint Dimensions (mm)



Ordering Information

CLPM-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1x2=12 2x1=21	1310=3 1550=5 Special=0	Dual stage=2 Special=0	Special=0	PM1300=1 PM14XX=2 PM1550=3	Bare fiber=1 900um 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