

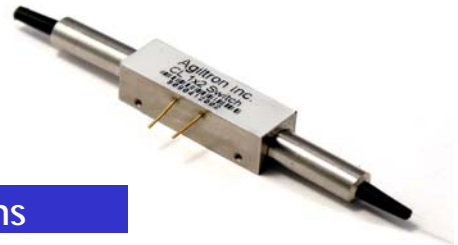
CrystaLatch™ 1x1, 1x2 3-Stage Solid-State Fiberoptic Switch

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

Product Description

The CL Series 1x1, 1x2 3-Stage 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. The all solid state CL 1x1, 1x2 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 1x1, 1x2 3-Stage Switch	Min	Typical	Max	Unit
Operation Wavelength ¹	1510	1550	1620	nm
	1295	1310	1325	nm
Insertion Loss ²		0.7	1.1	dB
Cross Talk	50	70		dB
Switch Speed (rise, fall)	20	50	200	µs
Repetition Rate		5K		Hz
Polarization Dependent Loss		0.1	0.2	dB
Polarization Mode Dispersion		0.1	0.2	ps
Return Loss	50	55		dB
Operating Temperature	-5		70	°C
Optical Power Handling		300	500 ⁴	mW
Storage Temperature	-40		85	°C
Fiber Type	Corning SMF-28			
Package Dimension	63.5L x 7.8W x 7.8H			mm

1. Agiltron can achieve same SPEC at L band
2. Measured without connectors
3. High power version available.

Features

- Solid-State high speed
- Ultra-high reliability
- Fail-safe latching
- Low insertion loss
- Direct low voltage drive
- Compact
- Low cost

Applications

- Optical channel blocking
- Configurable Add/Drop
- System monitoring
- Instrumentation



CrystaLatch™ 1x1,1x2 3-Stage Solid-State Fiberoptic Switch

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	7.0	7.5	8.0	V
Drive Current	165	210	295	mA
Pulse Duration	0.2	0.5	10	ms

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

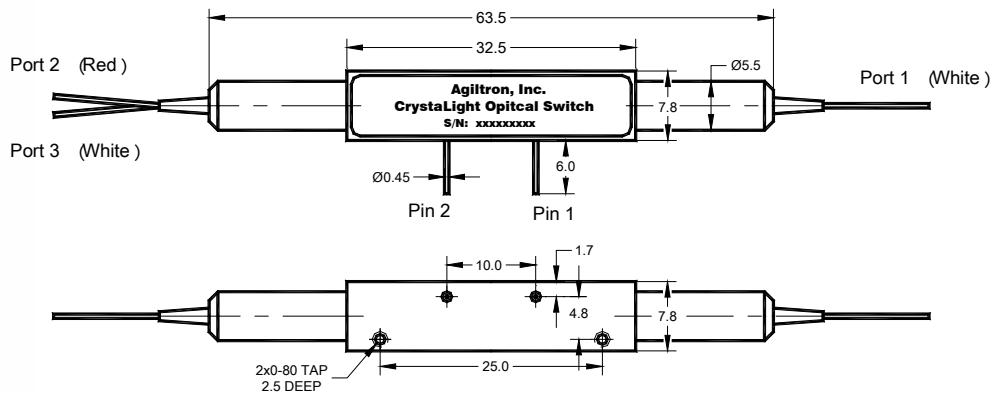
CL 1x2 3-Stage Switch

Optical Path	Pin 1	Pin 2
Port 1→Port 2	GND	7.5V Pulse
Port 1→Port 3	7.5V Pulse	GND

CL 2x1 3-Stage Switch

Optical Path	Pin 1	Pin 2
Port 2→Port 1	7.5V Pulse	GND
Port 3→Port 1	GND	7.5V Pulse

Mechanical Dimensions (mm)



Ordering Information

CLTS-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1x1=11 1x2=12 2x1=21	1310=3 1550=5 Special=0	3-stage=1 Special=0	Standard=1 Special = 0	SMF-28 =1 Special=0 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