

**BUY NOW** 

# LightBend™ 1xN Mini Broadband Fiber Optic Switch (Bidirectional)

(Protected by U.S. patent 6823102 and pending patents)

## Product Description

The LB Series 1xN Multimode Broadband Fiberoptic Switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved by using a patent pending opto-mechanical configuration activated via an electrical control signal. Latching operation preserves the selected optical path after the drive signal has been removed. Agiltron unique design offers low insertion loss covering a very broad spectral band from 400 to 2000 nm with various fiber core size from 5 to 100 um. The LB series 1xN optical fiber switch is suitable for multiple channel signal monitoring and signal management. The switch is bidirectional. The switch is ideal for sensor and spectroscopy applications as well.

The driving circuit is connected to computer through RS232, or USB interface for operation.

The LB series 1xN optical fiber switch is compliant with the Telcordia 1209 and 1221 reliability standards.



## Features

- Unmatched Low Cost
- Very Broad Spectral Range
- High Isolation
- High Reliability
- Epoxy-Free Optical Path

## Performance Specifications

LB 1xN Mini Broadband Switch	Min	Typical	Max	Unit
Operation Wavelength	400		2000	nm
Insertion Loss <sup>[1]</sup>		0.5	1.5	dB
Wavelength Dependent Loss <sup>[2]</sup>		0.1	0.3	dB
Polarization Dependent Loss		0.03	0.10	dB
Return Loss (APC/UPC)	35/50 <sup>[3]</sup>			dB
Cross Talk	60			dB
Operating Voltage		12	13	VDC
Power Consumption			1	W
Switching Type		Latching		
Switching Time		1		s
Durability	10 <sup>7</sup>			Cycle
Operating Temperature	0		70	°C
Optical Power Handling <sup>[4]</sup>		300	500	mW
Storage Temperature	-40		85	°C
Fiber Type		SMF-28, 50/125MM,	62.5/125MM	
Package Dimension		105L x 40W x 40H		mm

Note:

- [1]. Exclude connectors.
- [2]. Within 50nm bandwidth.
- [3]. Single mode RL=50dB, Multimode RL=35dB.
- [4]. High power version available.

**Warning:** This device must use the reference circuit to driver otherwise it is unstable.

## Applications

- Signal management
- Sensor
- Spectroscopy
- High Power Laser
- Instrumentation

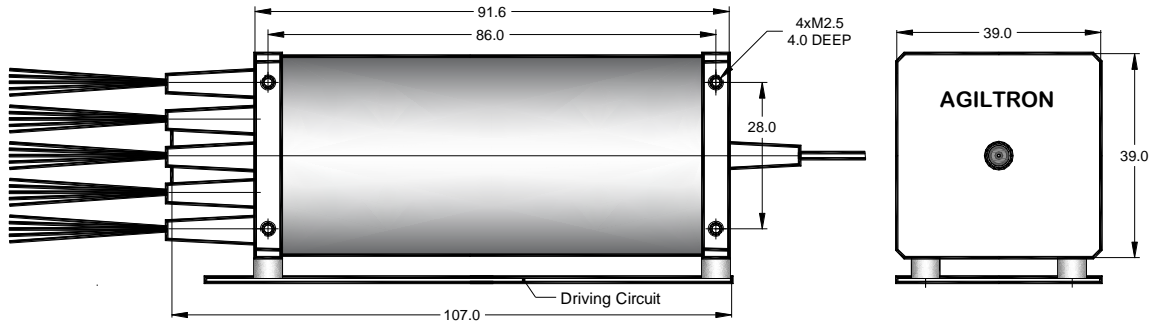
# LightBend™ 1xN Mini Broadband Fiber Optic Switch (Bidirectional)

## Electrical Driving Requirement

Computer controlling kit with USB and RS232 interfaces and Windows™ GUI

The load is a resistive coil which is activated by applying 5V (draw ~ 40mA). However, the current flow direction must be correct otherwise it will cancel the permanent magnet inside causing instability. We strongly recommend to use the reference circuit to avoid major issues. We offer pushbutton elevation driver for verifications or convenient income inspection.

## Mechanical Dimensions (Unit: mm)



\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

## Ordering Information

LBMB*-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector
□ □ □ □ □ □ □ □	1x2=002	1060=1	Latching=1	Package A=4	SMF-28=1	Bare fiber=1	None=1
	1x3=003	C+L=2	Special=0	Special=0	50/125MM=5	900um tube=3	FC/PC=2
	1x4=004	1310=3			62.5/125MM=6	Special=0	FC/APC=3
	1x6=006	1410=4			100 um=A		SC/PC=4
	1x8=008	1550=5			200um=B		SC/APC=5
	1x16=016	650=6			400um=C		ST/PC=6
	1x32=032	780=7			Special=0		LC=7
	1x48=048	850=8					Duplex LC=8
	Special=000	1310/1550=9					SMA905=9
		1260~1620=B					Special= 0
		Special=0					

\*LBMB: LightBend Mini Broadband Switch.