



## 1x1 OPTICAL SWITCH

### Product Description

Lightwave Link Inc. 1x1 optical switch is designed for use in optical fiber communication networks and measurement instruments. The switch consists of two ports that selectively transmits, redirects, or blocks optical power in a fiber optic transmission line. The optical switch must be actuated to select or change between two states. Furthermore, for the Latching type, it only takes an electrical pulse width with duration  $\geq 20$  msec to change the state. As a result, it consumes low electric energy to operate the optical switch. Lightwave Link Inc. 1x1 optical switch fully complies with RoHS Directive 2011/65/EU.



### Features

- Smallest Size
- Low Insertion-Loss
- Fast Switching Speed
- PCB Mountable
- Available in Single Mode / Multi Mode
- RoHS Compliance

### Applications

- Optical network protection and restoration
- Optical network monitoring
- Reconfigurable add/drop multiplexers
- Transmission equipment protection
- Research and development
- Wavelength router

### Performance Specification

Parameter	9 $\mu$ m Core Single Mode			50 $\mu$ m or 62.5 $\mu$ m Core Multi Mode			Unit
	Min.	Typ.	Max.	Min.	Typ.	Max.	
Wavelength Range <sup>1</sup>	1260~1630			850/1300			nm
Insertion Loss <sup>2</sup>		0.5	1.0		0.3	0.6	dB
Return Loss		-55					dB
PDL			0.1				dB
WDL			0.3				dB
Crosstalk		-80			-80		dB
Repeatability			$\pm 0.1$			$\pm 0.1$	dB
Switching Time <sup>3</sup>			3.5			3.5	ms
Absolute Optical Input Power			500			500	mW
Operating Current	Latching: $40 \pm 10\%$ / Non-Latching: $28 \pm 10\%$						mA
Operating Voltage	4.5	5.0	5.5	4.5	5.0	5.5	VDC
Power Consumption	Latching: $200 \pm 10\%$ / Non-Latching: $140 \pm 10\%$						mW
Switching Life Expectancy	$3 \times 10^7$			$3 \times 10^7$			Cycles
Operation Temperature-Normal	-5		70	-5		70	$^{\circ}$ C
Operation Temperature-Special	-20		70	-20		70	$^{\circ}$ C
Storage Temperature	-40		85	-40		85	$^{\circ}$ C
Operation Humidity	5		95	5		95	%RH
Storage Humidity	5		95	5		95	%RH
Dimension (H*W*L)	7.6 x 11 x 22.6						mm <sup>3</sup>
Weight <sup>4</sup>	10						g

1. Special wavelength would be upon request.
2. Optical parameters excluded connectors.
3. A minimum  $\geq 20$ ms pulse is recommended for latching type of switch.
4. The product weight excluded optical connectors.