



## FAST FIBER OPTIC 1x32 SWITCH

### OVERVIEW

The **sercalo** fiber optic switch is a very fast opto-mechanical switch based on the MEMS technology. The component makes an optical connection between an optical port and either one of 32 input or output lines. The highly reliable switching mechanism use integrated micromirrors and features below 20 ms switching time and below 2.0 dB insertion loss. The switch is powered by a 5 V supply voltage. A 5 V TTL or CMOS drive signal is used to control the switching state.

The switching mechanism offers the reliability of a solid state device; it neither wears out nor degrades over time. Even after billions of cycles the switching quality stays constant. The small package withstands rugged environments and is well suited for direct mounting on printed circuit boards.

### APPLICATIONS

- Optical Reconfiguration
- Instrumentation
- Provisioning

#### ORDERING INFORMATION

SW1x32-9N (smf 28, single mode fiber)  
SW1x32-50N (50 um core, graded index)  
SW1x32-62N (62.5 um core, graded index)

### FEATURES

- reliable
- 2.0 dB insertion loss
- 5 ms response time
- 60 dB crosstalk
- miniature size
- non-latching

#### Ordering Information:

 800 Village Walk #316  
Guilford, CT 06437  
Ph: 203-401-8093  
Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
Fax orders to: 800-878-7282

#### Contact:

Sercalo microtechnology ltd  
Landstrasse 151, 9494 Schaan  
Principality of Liechtenstein  
Tel. +423 237 57 97 Fax. +423 237 57 48  
[www.sercalo.com](http://www.sercalo.com) e-mail: [info@sercalo.com](mailto:info@sercalo.com)

**TECHNICAL SPECIFICATIONS (Multi Mode Variant)**

	Unit	Min	Typ	Max
<b>Switch</b>				
Wavelength Range	nm	700		1700
Insertion Loss	dB		1.5	2.0
Crosstalk	dB		60	50
Backreflection	dB		35	30
Repeatability <sup>1</sup>	dB			0.002
Switching Time	ms		5	20
Switching Voltage	V			5
Fiber Pigtail	μm		SMF28 or 50/125/900 62/125/900	
Durability	cycles		no wear out	
<b>Package</b>				
Power Consumption	mW		200	
Operation Temperature	°C	0		70
Storage Temperature	°C	-40		85
Size (L x W x H)	mm		206 x 105 x 10	

<sup>1</sup> value for constant temperature and polarisation

## ELECTRICAL CONNECTION

Optical port selection table

1	2	3	4	5	Port
0	0	0	0	5	1
0	0	0	5	0	2
0	0	0	5	5	3
0	0	0	0	0	4
5	0	5	0	5	5
5	0	5	5	0	6
5	0	5	5	5	7
5	0	5	0	0	8
0	5	5	0	5	9
0	5	5	5	0	10
0	5	5	5	5	11
0	5	5	0	0	12
5	5	0	0	5	13
5	5	0	5	0	14
5	5	0	5	5	15
5	5	0	0	0	16
5	5	5	0	0	17
5	5	5	5	5	18
5	5	5	5	0	19
5	5	5	0	5	20
0	5	0	0	0	21
0	5	0	5	5	22
0	5	0	5	0	23
0	5	0	0	5	24
5	0	0	0	0	25
5	0	0	5	5	26
5	0	0	5	0	27
5	0	0	0	5	28
0	0	5	0	0	29
0	0	5	5	5	30
0	0	5	5	0	31
0	0	5	0	5	32

0 = 0 V (TTL or CMOS level)  
5 = 5 V (TTL or CMOS level)  
x = 0 V or 5 V

# MECHANICAL OUTLINE

