



## FAST FIBER OPTIC 1x16 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 16 input or output lines. The highly reliable switching mechanism use integrated micromirrors and features below 1 ms switching time and only 1.5 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 miniature package withstands rugged environments and is well suited for direct mounting on printed circuit boards.

The switch is built by cascading 1x2 switches which are qualified according to Telcordia GR1221.

### APPLICATIONS

- Optical Reconfiguration
- Instrumentation
- Provisioning

#### ORDERING INFORMATION

SW1x16-9N-12-16

### FEATURES

- reliable
- 1.3 dB insertion loss
- 1 ms response time
- 60 dB crosstalk
- miniature size
- non-latching

#### Contact:

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

## TECHNICAL SPECIFICATIONS

	Unit	Min	Typ	Max
<b>Switch</b>				
Wavelength Range	nm	1240		1640
Insertion Loss	dB		1.3	2.0
Crosstalk	dB		75	60
Backreflection	dB		55	45
Polarisation Dependent Loss	dB			0.15
Repeatability <sup>1</sup>	dB			0.002
Switching Time	ms		0.5	1
Switching Voltage	V			5
Fiber Pigtail	µm		9/125/900	
Durability	cycles		no wear out	
<b>Package</b>				
Power Consumption	mW		190	
Operation Temperature	°C	0		70
Storage Temperature	°C	-40		85
Size (L x W x H)	mm		175 x 105 x 10	

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

Optical Port Selection

S1	S2	S3	S4	S5	S6	Port
0	5	x	0	0	x	1
0	5	x	5	x	5	2
0	5	x	5	x	0	3
0	5	x	0	5	x	4
5	x	0	0	0	x	5
5	x	0	5	x	5	6
5	x	0	5	x	0	7
5	x	0	0	5	x	8
5	x	5	0	0	x	9
5	x	5	5	x	5	10
5	x	5	5	x	0	11
5	x	5	0	5	x	12
0	0	x	0	0	x	13
0	0	x	5	x	5	14
0	0	x	5	x	0	15
0	0	x	0	5	x	16

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

