



## FAST FIBER OPTIC 1x4 SWITCH

### OVERVIEW

The [sercalo](#) 1x4 switch is a very fast opto-mechanical switch working over both telecom wavelength windows from 1240 nm to 1600 nm. The highly reliable switching mechanism is based on micromechanical mirrors and features below 1 ms switching time and below 1.2 dB insertion loss.

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.

### FEATURES

- reliable
- 0.7 dB insertion loss
- 1 ms response time
- 60 dB crosstalk
- non-latching

### APPLICATIONS

- Source Selection
- Protection Switching
- Monitoring
- Wavelength provisioning

**ORDERING INFORMATION**  
SN1x4-9N

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**sercalo**

## TECHNICAL SPECIFICATIONS

	Unit	Min	Typ	Max
<b>Switch</b>				
Wavelength Range	nm	1240		1640
Insertion Loss <sup>1</sup>	dB		0.7	1.2
Wavelength d. Loss per band	dB			0.2
Temperature d. Loss	dB			0.3
Crosstalk	dB		75	60
Backreflection	dB		55	50
Polarisation Dependent Loss	dB		0.05	0.10
Repeatability <sup>2</sup>	dB			0.001
Max. input power / port	dBm			20
Switching Time	ms		0.5	1
Fiber Pigtail	µm		9/125/900 SMF 28e	
Durability	cycles		no wear out	
<b>Integrated Driver</b>				
Supply Voltage V	V	4.75	5	5.25
Current Consumption I	mA		2	10
Logic Level Low	V			0.8
Logic Level High	V	0.8		
ESD protection of pins			500 V Human body model	
Maximum Voltage ratings	V	-0.2		+6.0
Maximum Current ratings	mA	-10		+10
<b>Package</b>				
Operation Temperature	°C	0		70
Storage Temperature	°C	-40		85
Size (L x W x H)	mm		70 x 50 x 9.5	

<sup>1</sup> value excluding connectors. Add 0.25 dB to account for temperature and wavelength dependent loss.

<sup>2</sup> value for constant temperature and polarisation

## ELECTRICAL SPECIFICATIONS

Supply: 4.5 - 5.5 V, 10 mA max  
S1 – S3: CMOS or  
TTL levels, 0 mA

### Contact pins :

Length : 4 ±0.5mm  
Diameter: 0.59mm  
Pitch: 2.54 mm  
Centering: 0.2mm

### Optical Port Selection

S1	S2	S3	Port
5V	x	5V	B
0V	0V	x	A
0V	5V	x	D
5V	x	0V	C

