



# OZ Optics

shop.ozoptics.com  
www.ozoptics.com

219 Westbrook Road  
Ottawa, ON, Canada, K0A 1L0

Toll free: 1-800-361-5415  
Telephone: 1-613-831-0981  
Fax: 1-613-836-5089  
sales@ozoptics.com

## FIBER OPTIC SWITCHES

**PRELIMINARY**

### Features

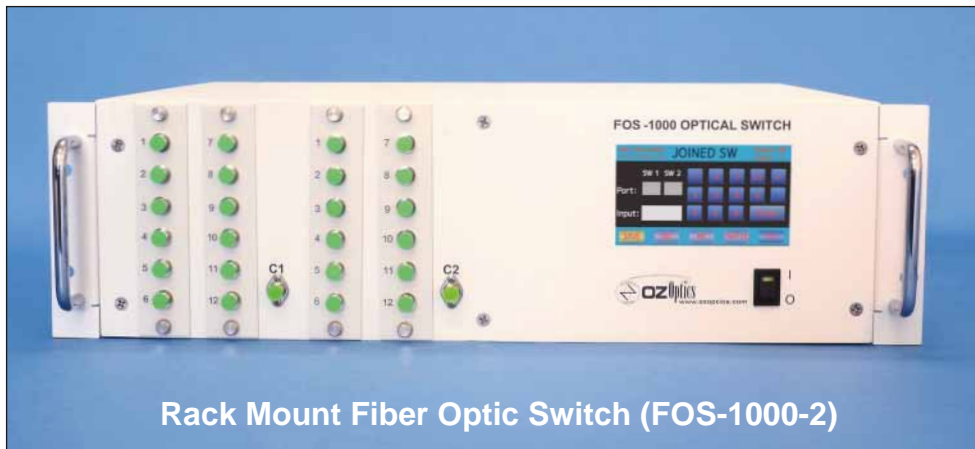
- 1x4 to 1x36 channel configuration
- Multiple fiber or device testing capability
- Standard unit comes with single mode fiber for 1250–1670 nm. Other options are also available upon request
- Wide range of available wavelengths
- Touch screen display
- High resolution
- Fast switching time
- High repeatability

### Applications

- Optical network monitoring
- Fiber based sensors
- Quality control
- End-to-end loss measurement

### Product Description

OZ Optics now offers turnkey rack mountable optical switches with built-in electronics and color touch screen. The switch is offered in a 1x4 to 1x36 configuration. It can be customized with 2 independent optical switches in one rack mount. The standard units are configured with 9/125  $\mu\text{m}$  SM fiber for broad operating wavelengths covering 1250 nm to 1670 nm. These switches are built using mature and highly reliable MEMS technology, achieving a low insertion loss and high channel isolation. The switches have been tested over millions of switching cycles with no change in losses. They are ideal for test instruments. Systems come with a USB interface port. Systems with polarization maintaining fiber or multimode fiber can be offered on a case-by-case basis using different mechanical switch technologies. Contact OZ Optics with your specific product requirement.



Rack Mount Fiber Optic Switch (FOS-1000-2)



Bench Top Fiber Optic Switch (FOS-1000-1)

## Standard Specifications

Parameters		Units	Specifications <sup>1</sup>	
Output Ports			4–12	16–36
Fiber Type		µm	9/125	
Wavelength		nm	1250–1670	
Insertion Loss <sup>2</sup> :	Typical	dB	0.4	1
	Max.	dB	0.8	1.5
Return Loss <sup>2</sup>		dB	55	
Switching Time		ms	5	
Adjacent Port Isolation		dB	> 50	
Repeatability <sup>2</sup>		dB	0.01	
Temperature Dependent Loss		dB	<0.2	
Wavelength Dependent Loss Over 1250 to 1650 nm		dB	<1.0	
PDL <sup>2</sup>		dB	0.1	
Durability <sup>2</sup>			No wear out	
Communication Interface			USB	
Input Supply Voltage			Universal 50/60 Hz 110/220V	
Operating Temperature		°C	0 to 70	
Storage Temperature		°C	-40 to 85	
Dimensions (Excluding Handle and Connectors)		mm	100 x 280 x 300 for 2 to 8 channel version	
			133 x 430 x 305.6 for 12 channels and up	
Display			Color touch screen	

<sup>1</sup> All specifications measured at 1550 nm, at constant temperature 25°C and no polarization variation.

<sup>2</sup> Not including connector.

## Ordering Information For Custom Parts

OZ Optics welcomes the opportunity to provide custom designed products to meet your application needs. As with most manufacturers, customized products do take additional effort so please expect some differences in the pricing compared to our standard parts list. In particular, we will need additional time to prepare a comprehensive quotation, and lead times will be longer than normal. In most cases non-recurring engineering (NRE) charges, lot charges, and a minimum quantity order will be necessary. These points will be carefully explained in your quotation, so your decision will be as well informed as possible. We strongly recommend buying our standard products.

**Note concerning part numbers:** Depending on the configuration of the desired system, the fiber types, and receptacles may be different for input and output ports. Therefore it is important to correctly identify each port in the proper order.

## Questionnaire For Custom Parts

1. What wavelength range are you interested in?
2. What type of fiber is being used? Single-mode, Multimode or PM?
3. Do you want one or two input ports?
4. How many output ports do you need?
5. What receptacle fiber interface do you want on device front panel?
6. What is the maximum input power that will be launched in the system?

## Part Number **FOS-1000-U-1xN-X-W-a/b-F**

**U** = 1 or 2: Number of independent switch modules

**N** = 4, 8, 12, 16, 24, 32, or 36:  
Number of channels per module.  
Note: Switches are bi-directional.

**F** = Fiber type: S-SM, P-PM, M-MM

**a/b** = Fiber Core/Cladding (µm)

**W** = Wavelength

**X** = Connector type\* on each port:  
FC/SPC = 3S      LC/SPC = LC  
FC/APC = 3A      LC/APC = LCA  
FC/UPC = 3U      LC/UPC = LCU

Note: 1. Unit package in a benchtop style for 4 to 8 channels.  
2. We can offer up to 1x4 PM switch in a single block with current availability.

\* For other connectors see Table 6 of our *Standard Tables* data sheet.  
[https://www.ozoptics.com/ALLNEW\\_PDF/DTS0079.pdf](https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf)

## Example For Custom Part

For a remote test system a customer is looking for a 1550 nm SM optical switch in a rack mount with 2 separate 1x12 optical switches terminated with FC/APC connectors.

The part to order will be: FOS-1000-2-1x12-3A-1550-9/125-S

Description: Rackmount Optical Switch, with two banks of 1x12 1550 nm singlemode mode optical switches with 9/125 µm SMF28 fiber terminated with FC/APC connectors on device front panel.