

# Reconfigurable Optical Switch Module OSM

## Reconfigurable Optical Switch Module

The Polatis OSM family is a series of high performance, fully non-blocking optical switch modules. Designed for OEM integration, the OSM is an ideal product where small size and superior optical performance are required.

The Reconfigurable option provides user-definable input and output ports, providing unprecedented flexibility for applications with changing needs. Users can create any matrix up to the total fiber count, such that a 16x16 could be reconfigured as a 1x31.

Easily integrated onto standard telecom blades, the small form-factor OSM forms the key element of a reconfigurable optical core. Whether used for ROADM, IP over optical, or client-side switch, the OSM provides fast and reliable reconfiguration, with absolute minimal impact on pre-engineered loss budgets. The OSM is also well suited to integrated test systems and for component & module manufacturing test.



## DirectLight® Technology

All Polatis products are based on the patented DirectLight beam-steering technology, setting the benchmark for reliable, high performance switching.

Polatis also offers Fixed port single and multimode OSM products, as well as a range of rack-mount optical switch systems and standard backplane optical cards.

## KEY FEATURES

- Compact Size, Easy to Integrate
- Fully integrated drive/control electronics
- Extended Environmental Range
- Ultra-low insertion loss
- High signal stability
- Low polarization dependent loss
- Fast switching speed
- High power handling
- Dark fiber switching
- Bi-directional operation
- Protocol and bit rate independent
- RS232 interface

## APPLICATIONS

- Hybrid OEO/OOO network switches
- Network OEM system integration
- ROADM
- Automated manufacturing test
- Client-side OOO switching
- Remote network monitoring & test access
- Network IP over optical routing
- Automated component test
- RF over fiber
- Secure communication networks

# High performance optical switch solutions

## PERFORMANCE SPECIFICATIONS

Fiber Count Designator	A
Insertion Loss <sup>1</sup>	<1.4dB
Polarization Dependent Loss	<0.1dB
Crosstalk	<-60dB
Operating Wavelength Range	1260-1625nm
Wavelength Dependent Loss	<0.3dB (C+L Band)
Repeatability	<±0.05dB
Return Loss <sup>2</sup>	>55dB
Switching Time	<17ms
Maximum Optical Power <sup>3</sup>	+27dBm
Switch Lifetime	10 <sup>8</sup> cycles
Operating Temp (Normal)	+ 5° to +45°C, <85% RH non-condensing
Operating Temp (Extended)	-10° to +60°C, <90% RH non-condensing
Storage Temp (Normal)	-40° to +70°C, <40% RH non-condensing
Storage Temp (Extended)	-40° to +70°C, <95% RH non-condensing
Qualification (Normal)	EN60950
Qualification (Extended)	Designed to meet Telcordia GR1073 EN60950

All parameters are measured excluding connectors at 1550nm and 20°C with an unpolarized source after thermal equalization unless stated.

1. Measured using a 3 patch-cord method as defined in TIA/EIA-526-14A.
2. With APC connectors return loss >70dB without connectors.
3. Switch will operate on dark fiber.

The performance characteristics of the switch modules vary according to the fiber count.

Fiber Count	08	12	16	20	24	28	32
CC	A	A	A	A	A	A	A

## Packaging Information

Fiber Count	Environment	Module Dimensions (mm)			Power Dissipation
		273	178	38	
8-32	Normal	273	178	38	15W
	Extended	260	170	38	

## Ordering Information

The part numbering scheme for Polatis products is as follows:

**OSM - xCC - 1 - R D**

Fibers	8-32 Reconfigurable
Fibers	CC = Reconfigurable
Connector	L = LC F = FC C = SC T = ST U = MU
Polish	U = UPC A = APC
Fiber	1 = Single mode 9/125µm
Interface	R = RS232
Protocol	S = SCPI C = Command Line Interface
Power	D = DC
Environmental	N = Normal E = Extended
Customization	S = Standard V = Non-standard Variant



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