

Multimode Optical Switch Module OSM

Multimode Optical Switch Module

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

Easily integrated into standard blades, the small form-factor OSM forms the key element of a reconfigurable optical core. As part of a resilient network strategy, the OSM can provide fiber management in a business continuity setting or as part of a secure communication system. Since there is no regeneration, no signal monitoring and no signal modulation introduced, the OSM is a secure node for carrying sensitive communications. With its low loss, very high repeatability and low crosstalk, the multimode OSM is a perfect fit for testing of Fibre Channel and GigE interfaces as part of an automation strategy.

The OSM is available in both symmetric (NxN) and asymmetric (MxN) port configurations, with package options allowing for either Normal or Extended operating environments. Users can select either 50 micron or 62.5 micron cores.



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 and Reconfigurable port single mode 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
- High signal stability
- Fast switching speed
- High power handling
- Dark fiber switching
- Fully non-blocking
- Bi-directional operation
- Protocol and bit rate independent
- RS232 interface
- 50µm and 62.5µm core options
- Mode transparent

APPLICATIONS

- Network OEM system integration
- Automated component test
- Automated manufacturing test
- Client-side OOO switching
- GigE, fibre channel module test
- Secure communication networks
- Shipboard communications
- Enterprise networks

High performance optical switch solutions

PERFORMANCE SPECIFICATIONS

Fiber Count Designator	A	A
Fiber Type (Core/Cladding)	50/125	62.5/125
Insertion Loss @1310nm ¹	<2.5dB	<3.0dB
Insertion Loss @850nm ¹	<2.0dB	<2.5dB
Crosstalk	<-40dB	
Repeatability	<±0.05dB	
Return Loss	>30dB	
Switching Time	<17ms	
Maximum Optical Power ²	+27dBm	
Switch Lifetime	10 ⁸ 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)	Designed to meet EN60950	
Qualification (Extended)	Designed to meet Telcordia GR1073 EN60950	

All parameters are measured excluding connectors at 1310nm 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 Switch will operate on dark fiber

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

Fiber Count	04	08	12	16
04	A	A	A	A
08	A	A	A	A
12	A	A	A	A
16	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 - ___ x ___ - P - R D

Fibers	
4-16 Input	
Fibers	
4-16 Output	
Connector	
L = LC	
F = FC	
C = SC	
T = ST	
Polish	
P = PC	
Fiber	
8 = Multimode 50/125µm grade index 0.20NA	
9 = Multimode 62.5/125µm grade index 0.28NA	
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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