Ultra-mini 1x1, 1x2, 2x2 (Add/Drop) Fiber-optic Switch

OFMSSM Series

Product Description

Oplink OFMS ultra-mini fiber-optic switches are ideal for module and system integration where the unique unilateral input and output fiber configuration is preferred. These switches are designed for use in re-configurable optical add/drop multiplexers, optical cross-connect systems, and network switching for fault protection applications.

The opto-mechanical ultra-mini switch can be directly mounted on printed circuit board (PCB) and offer the same excellent performance characteristics of Oplink's standard OFMS series switch products. The OFMS miniature switches are designed to exceed Telcordia standards GR-1221 and GR-1073.

Oplink provides customized design to meet special control and applications. Also, Oplink offers modular assemblies that integrate other components to form a full function module or subsystem.

Performance Specification

Parameters		Min	Typ.	Max	Unit
Wavelength Range (λ_{Op})			1290 ~ 1330 and/or 1525 ~ 1610		nm
Insertion Loss [1]	1x1, 1x2		< 0.5		dB
	2x2AD		< 0.6		
Polarization Dependent Loss			< 0.07		dB
Return Loss			> 50		dB
Channel Cross-talk			> 55		dB
Repeatability				±0.02	dB
Switching Speed [2]			< 4		ms
Operating Voltage			5 ± 10%		VDC
Driving Current [3]	Latching	22		32	mA
	Non-latching	31		46	
Coil Resistance	Latching		205.5 ± 10%		Ω
	Non-latching		145 ± 10%		
Cycle Rate				≤10	Hz
Durability		10^7			cycle
Operating Power Handling			500		mW
Operating Temperature (T_{Op})		0		70	°C
Storage Temperature		-40		80	°C
Humidity [4]			<85% RH, or <90%RH for short term		
Switch Type			latching or non-latching, single coil		
Fiber Type			Corning SMF-28 250μm fiber		
Nominal Package Size	Bare Fiber Pigtail		29 (L) x 10.5 (W) x 8.0 (H)		mm
	900μm Loose Tube Pigtail		38.5 (L) x 10.5 (W) x 8.0 (H)		mm

Notes:
1) Excluding connectors; add 0.3 dB within λ_{Op} and T_{Op}.
2) Switching time is defined as the time interval between electrical trigger and 90% of stable optical output.
3) A >20ms DC pulse is recommended for latching type of switch.
4) Short term is defined as less than 96 consecutive hours and less than a total of 15 days over a one year period.

Features

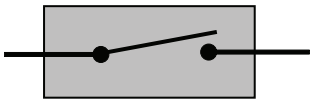
- Miniature Size
- Unilateral Input/output Fiber Configuration
- Bi-directional Operation
- 1x1, 1x2 Latching or Non-latching Configurations
- Wide Operating Wavelength Range
- Seam-seal Package
- Highly Stable & Reliable

Applications

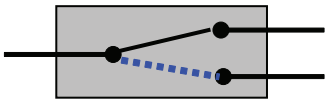
- Network Switching
- Re-configurable Optical Add/drop Multiplexers
- Optical Cross-connect Systems
- Network Protection and Restoration
- Module and System Integration
- Instrumentation, Testing and Measurement

OPLINK
your DESIGN & OMS partner

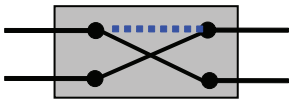
Function Diagram



1x1 On/Off Switch



1x2 Switch



2x2 Add/Drop Switch

Ordering Information

Oplink can provide a remarkable range of customized optical solutions. For detail, please contact Oplink's OEM design team or account manager for your requirements and ordering information (510) 933-7200.

OFMS □ □ M I □ □ 0 2 □ □ □

Type
1x1 = 11
1x2 = 12
2x2 Add/Drop = 22

Ultra-mini

Switch Type
Latching = 0
Non-latching = 1

Wavelength
1310/1550nm = D
1310nm = 3
C+L bands = E

Package Type
P2 = 2 (Ultra-mini)

Fiber Type
SMF-28 250μm = 1
900μm loose tube = 2

Fiber Length
0.5 meter = H
1.0 meter = 1
1.5 meter = 5
2.0 meter = 2

Connector Type
None = 1
FC/PC = 2
FC/SPC = 3
FC/APC = 4
SC/PC = 5
SC/SPC = 6
SC/APC = 7
ST = 8
LC = 9
MU = A

46335 Landing Pkwy Fremont, CA 94538 Tel: (510) 933-7200 Fax: (510) 933-7300 Email: Sales@Oplink.com • www.oplink.com