OFMS Series Single Mode Dual 1x2 and 2x2 Add/Drop Optical Fiber Switches

OFMSSMD Series

Product Description

Oplink OFMS series single mode dual 1x2 or 2x2Add/Drop optical fiber switches function as two 1x2 or 2x2 Add/Drop switches that are simultaneously switched together. The dual switch is housed in the similar package as the Oplink OFMS series standard switches while maintaining superior optical performance.

The dual 1x2 or 2x2 Add/Drop switch are built on Oplink's patented opto-mechanical switches having a unique prism design to improve the switch repeatability and stability. The switches are designed for use in re-configurable optical add/drop multiplexers, optical cross-connect systems, and network switching for fault protection applications. One dual 1x2 (2x2Add/Drop) switch device can be used to substitute two 1x2 (2x2Add/Drop) switches. In addition, the dual 1x2 switches can be used as building blocks to construct 1x4 and 1x8 switches while significantly reducing the mechanical foot-print.

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
Operating Wavelength Range (λ_{Op})		1260 ~ 1360 and/or 1510 ~ 1610			nm
Insertion Loss [1,2]	Dual 1x2		0.4	0.7	dB
	Dual 2x2AD			1.1	
Wavelength Dependent Loss			0.1	0.2	dB
Polarization Dependent Loss			0.05	0.1	dB
Return Loss [2]		50			dB
Channel Cross-talk	Dual 1x2	55			dB
	Dual 2x2 AD	50			dB
Repeatability			±0.01	±0.02	dB
Switching Speed			5	10	ms
Operating Voltage [3]		4.5	5.0	5.5	VDC
Operating Current [3]	Latching	40	50	60	mA
	Non-latching	29	35	42	
Coil Resistance	Latching	101.2 ± 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
Switch Relay Type		latching, 2 Coils or non-latching, single coil			
Fiber Type		SMF-28			
Dimension [4]	Bare Fiber Pigtail	P1: 46.0 (L) x 15.5 (W) x 9.0 (H)			mm
	900µm Loose Tube Pigtail	P2: 54 (L) x 15.5 (W) x 9.0 (H)			mm

Features

- Wide Operating Wavelength Range
- Compact Size
- Low Insertion Loss
- Seam-seal Package
- Latching Configurations
- Highly Stable & Reliable

Applications

- Network Switching
- Configurable Add/Drop
- Network Protection and Restoration
- Instrumentation, Testing and Measurement
- 1x4 and 1x8 Switch Building Blocks

Notes:
1) IL @23°C over all wavelength range and all SOP. Add 0.25 dB (max.) to IL values for dual 1x2 and 0.4dB (max) for dual 2x2 Add/Drop over operating temperature range.
2) Excluding connectors.
3) Current is derived from driving voltage and coil resistance. Pulse of >20 ms duration is recommended for latching switch.
4) The mechanical tolerance is ±0.2 mm on all package dimensions unless specified otherwise.

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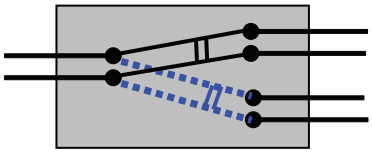
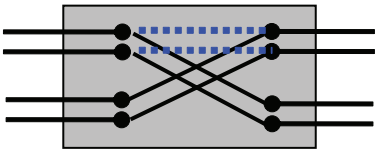
Function Diagram



Dual 1x2 Switch



Dual 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.

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

Dual

Switch Type
Latching = 0
Non-latching = 1

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

Mounting Type
Dual-row pins on the bottom = 0
Single-row pins on the side with screw tabs = 1

Package & Fiber Type
P1 + 250µm bare fiber = 11
P2 + 900µm loose tube = 22

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

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