

## OSW-3-1×4 Rack-mounted Optical Switch

### ■ Application Areas

**1.Optical Communication Network Protection and Scheduling:** Used for Optical Line Protection (OLP) switching and intelligent optical patching in metropolitan area networks/backbone networks. When the primary link fails, it can automatically and quickly switch services to the backup link, ensuring uninterrupted communication.

**2.Data Center Optical Interconnection:** Within large-scale data centers, it enables dynamic reconfiguration and flexible configuration of physical optical connections between server clusters and storage networks, improving resource utilization and business deployment flexibility.

**3.Automated Testing and Measurement:** In optical device production (such as in Guangxi Keyi Optical Communication's own production lines) and laboratory environments, it automatically switches multiple devices under test to a single set of test instruments, enabling efficient and precise batch testing.

**4.Specialized and Cutting-Edge Fields:** Widely used in laser communication, distributed sensing, laser medical equipment, autonomous vehicle LiDAR systems, and scientific research experiments — any scenario requiring programmable optical path control.

### ■ Product Features

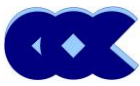
**1.High-Density Integration:** Adopts a standard 19-inch rack-mount (1U/2U) design, integrating three independent switching units within a limited space. This greatly improves cabinet space utilization and facilitates centralized cabling and management.

**2.High Reliability and Intelligent Management:** Features industrial-grade stability and redundant power supply design, supporting 24/7 continuous operation. Offers rich network management interfaces (e.g., SNMP, RS -232), enabling remote monitoring, configuration, and automated operation, significantly improving operational efficiency.

**3.Excellent Optical Performance:** Features low insertion loss (typically <1.0dB), high return loss, and excellent channel consistency, ensuring signal transmission quality. Depending on the technology path (e.g., MEMS, magneto-optical, or mechanical), it can provide switching speeds ranging from milliseconds to microseconds, meeting the requirements of different scenarios.

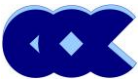
**4.Flexible and Scalable:** Supports multiple fiber optic interfaces and protocols. The modular design facilitates maintenance and future functional upgrades, allowing for quick integration into existing optical network infrastructure.





## ■ Performance Specifications

Optical Performance/光学性能			Specification
Operation Wavelength/工作波长		nm	1310.00
Insertion Loss /插入损耗	Typ	dB	<1.0
Polarization Dependent Loss/偏振相关损耗	max	dB	0.05
Wavelength Dependent Loss/波长相关损耗	max	dB	0.20
Temperature Dependent Loss/温度相关损耗	max	dB	0.20
Repeatability/重复性	max	dB	0.05
Return Loss/回波损耗	min	dB	55
Cross-talk/串扰	min	dB	60
Lifetime/使用寿命			108
Switching time/开关时间		ms	12
Transmission power/传输光功率	max	mw	500
Switch Mode/控制方式			232+RJ45
Power supply/驱动电压		V	5V
Fiber Type/光纤类型			9/125
Dimensions/尺寸		mm	1U
Operating Temperature/工作温度		oC	-20~70
Storage Temperature/储存温度		oC	-40~85
Environmental Stress Screening/环境压力测试			Specification
Baking (Temperature / Duration)/烘烤 (温度/		C / Hr	+85°C/48Hr
Temperature Cycling (Temperature Range /		C / Hr	-40°C to +85°C/48Hr
Mechanical and Configuration/形态和布局			Specification
Labelling (Label Material & Dimension)/加标			N/A
Package Dimension/外包装尺寸		mm	440*200*44
Data Document Preparation/数据文档制备			Specification
Individual Test Data Sheet Format/单独测试数		Hardcopy	Neutral
Electronic Media Test Data File Format/电子		MS-Word	Neutral
Others Parameters/其它参数			Specification
RoHS Required/是否需要过 RoHS		Yes/No	No
Pigtail Type/尾纤类型			φ0.9mm loose tube
Pigtail Length/尾纤长度			
Pigtail Mark Method/尾纤标识方法		Fiber color	Numbered sleeve
Connector Type/接头类型			LC/PC



■ 订货信息: OSW-A-B-C-D-E-F

A	B	C	D	E	F
Chanel	Fiber	Wavelength	Shape	Power	Connector
1 ~ 128	SM: SM, 9/125 M5: MM, 50/125 M6: MM, 62.5/125	850: 850nm 1310: 1310nm 1550: 1550nm 13/15: 1310/1550nm	1U: 1U 19 2U: 2U 19 4U: 4U 19	S22: Single 220V S48: Single 48V D22: Double 220V D48: Double 48V S24: 220V+48V	OO: None FP:FCIPC FA:FC/APC SP:SC/PC SA:SC/APC LP:LC/PC LA:LC/APC

