

M2x2 Magneto-Optic Switch



● Product Description

The M2x2 optical switch achieves optical path connection by either passing or blocking optical signals. This switch features a non-mechanical configuration and is activated by electrical control signals. It also has built-in circulator and isolator functions. The product is widely used in aerospace and military equipment.

● Product features

Solid-state high-speed operation 、 High stability and reliability 、 No epoxy resin in the optical path 、 Fail-safe locking mechanism

● Part Number

MP-OSW-1550-US100-22-M

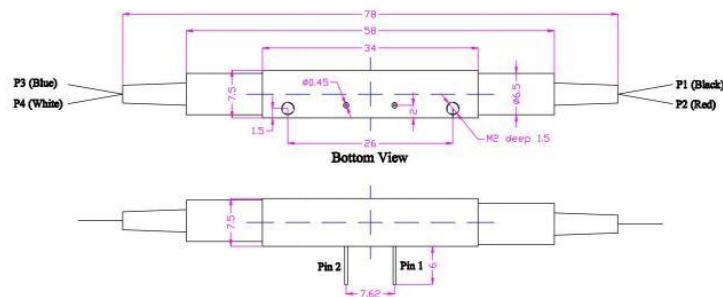
● Application area

Aerospace equipment 、 Configurable for add/drop functionality 、 System monitoring 、 Sensor systems

● Core parameters

Wavelength	Insertion Loss	Switching Time
1550nm	≤1.2dB	≤100us

● Dimension Drawing



● General Parameters

Performance Specifications

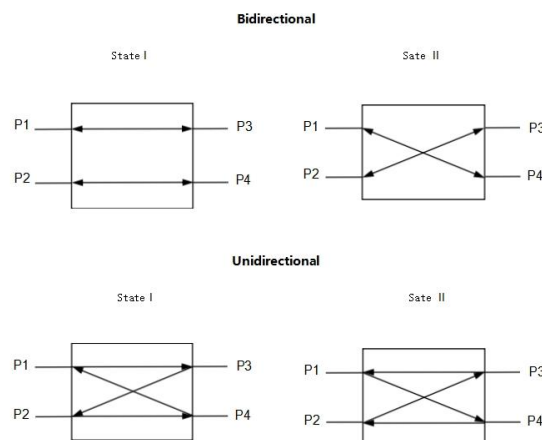
Parameter	Unit	Specification
Wavelength Range	nm	1520 ~ 1580
Test Wavelength	nm	1550
Insertion Loss 1, 2	dB	≤ 1.2
TDL	dB	≤ 0.30
PDL	dB	≤ 0.20
Return Loss	dB	≥ 50
Crosstalk	dB	Bi-directional ≥ 20
		Uni-directional ≥ 35
Repeatability	dB	$\leq \pm 0.01$
Switching Time	us	≤ 100
Pulse Duration	us	≥ 200
Durability	Cycles	≥ 10 Billions
Switch Type	NA	Latching
Operating Current	mA	≤ 200
Max Optical Power	mW	≤ 500
Operating Temperature	°C	-5 ~ +70
Storage Temperature	°C	-40 ~ +85
Dimensions	mm	(L)34.0 × (W)7.5 × (H)7.5 ± 0.2

Parameter	Unit	Specification
Notes: 1. Tested at room temperature and SOP. 2. Does not include connectors; a pair of connectors has 0.2dB loss.		

Power Drive

Type	Status	Optical Path	Power Drive	
Bidirectional	I	P1 ↔ P3 P2 ↔ P4	GND	V+
	II	P1 ↔ P4 P2 ↔ P3	V+	GND
Unidirectional	I	P1 → P3 P3 → P2 P2 → P4 P4 → P1	GND	V+
	II	P1 → P4 P4 → P2 P2 → P3 P3 → P1	V+	GND

Functional Diagram



Ordering Reference Information

OSW-M2x2-□-□-□-□-□-□-□

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Switch Type	Fiber Type	Voltage	Wavelength	Loose Tube Type	Fiber Length	Connector
B: Bidirectional U: Unidirectional	SM: SM, 9/125 X: Others	2.5: 2.5V 5: 5.0V X: Others	1550: 1550nm X: Others	250: 250um 900: 900um X: Others	05: 0.5m ±5cm 10: 1.0m ±5cm X: Others	OO: None FC: FC/PC FA: FC/APC SC: SC/PC SA: SC/APC LC: LC/PC X: Others