M1x8 Magneto-Optical Switch

Product Description

The M1x8 optical switch operates by either connecting or blocking optical signals to achieve optical path switching. This switch features a non-mechanical configuration and is activated by an electrical control signal. Additionally, the switch integrates a built-in circulator and isolator functionality. It 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、 Fault-safe locking mechanism

Part Number

MP-OSW-1550-US100-18-M

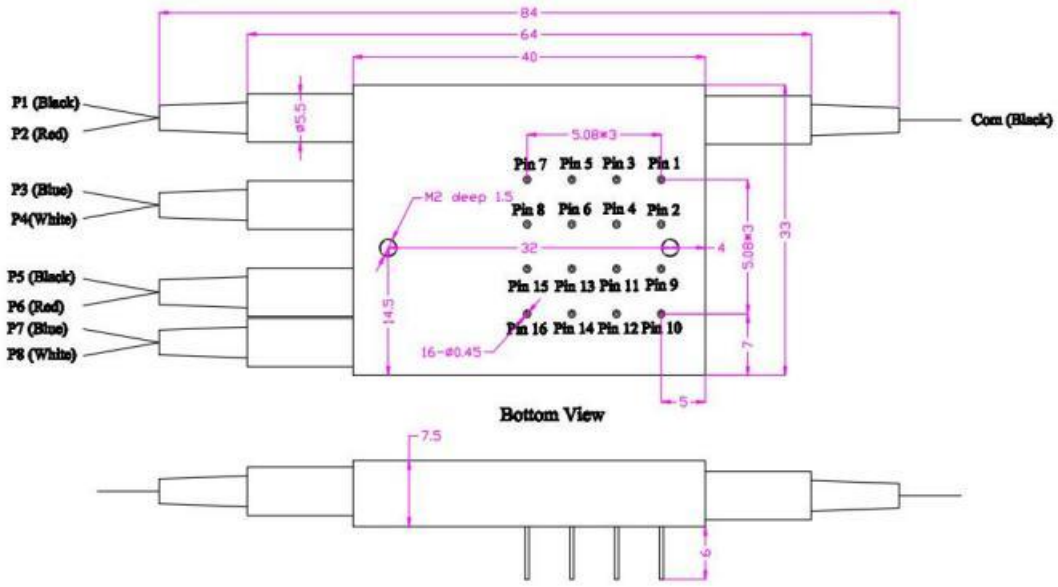
Application area

Aerospace equipment、 Configurable add/drop functionality、 System monitoring、 Sensing systems

Core parameters

Wavelength	Peak Isolation
1550nm	⩽2.0dB

Dimension Drawing



General Parameters

Performance Specifications

Parameter	Unit	Specification
Wavelength Range	nm	1520 ~ 1580

Parameter	Unit	Specification
Test Wavelength	nm	1550
Insertion Loss [1,2]	dB	⩽ 2.0
TDL	dB	⩽ 0.30
PDL	dB	⩽ 0.20
Return Loss	dB	⩾ 50
Crosstalk	dB	⩾ 40
Repeatability	dB	⩽ ±0.01
Switching Time	us	⩽ 100
Pulse Duration	us	⩾ 200
Durability	Cycles	⩾10 Billions
Switch Type	NA	Latching
Operating Current	mA	⩽ 200
Maximum Optical Power	mW	⩽ 500
Operating Temperature	℃	-5 ~ +70
Storage Temperature	℃	-40 ~ +85
Dimensions	mm	(L)40.0 × (W)33.0 × (H)7.5 ±0.2
Note: 1. Tested under room temperature and standard operating conditions (SOP). 2. Excludes connectors, a pair of connectors adds 0.2dB.		

Electric Drive

Type	State	light path	Electric Drive															
			Pin group A		Pin group B		Pin group C		Pin group D		Pin group E		Pin group F		Pin group G		Pin group H	
			Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12	Pin 13	Pin 14	Pin 15	Pin 16
M 1x 8	I	Com-P1	V+	GND	V+	GND	V+	GND	V+	GND	GND	V+	V+	GND	GND	V+	GND	V+

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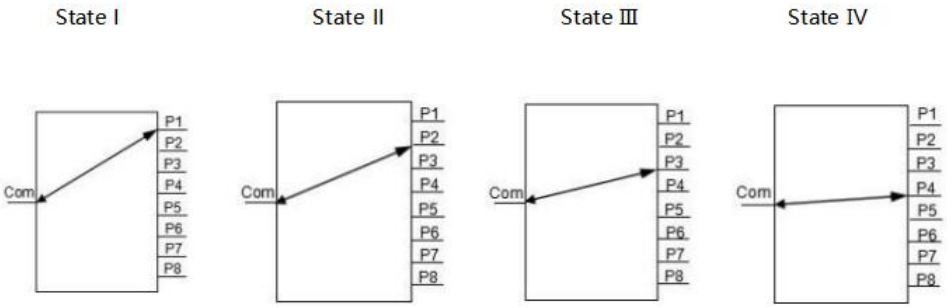
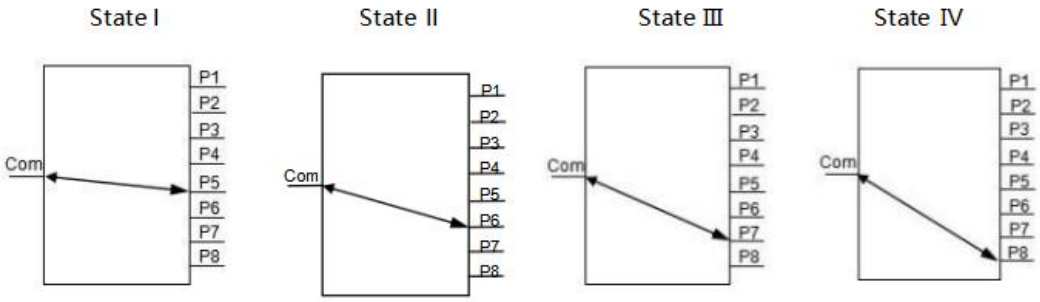
			Pin group A		Pin group B		Pin group C		Pin group D		Pin group E		Pin group F		Pin group G		Pin group H	
			Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12	Pin 13	Pin 14	Pin 15	Pin 16
	II	Com-P2	GND	V+	GND	V+	V+	GND	V+	GND	GND	V+	V+	GND	GND	V+	GND	V+
	III	Com-P3	V+	GND	GND	V+	GND	V+	GND	V+	V+	GND	V+	GND	GND	V+	GND	V+
	IV	Com-P4	GND	V+	V+	GND	GND	V+	GND	V+	V+	GND	V+	GND	GND	V+	GND	V+
	V	Com-P5	V+	GND	GND	V+	GND	V+	V+	GND	GND	V+	GND	V+	V+	GND	GND	V+
	VI	Com-P6	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	GND	V+	V+	GND	GND	V+
	V	Com-P7	V+	GND	GND	V+	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	V+	GND
	V	Com-P8	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	V+	GND

Functional Diagram

Bidirectional States



Unidirectional States



Ordering Reference Information

Switch Type	Fiber Type	Voltage	Wavelength	Loose Tube Type	Fiber Length	Connector

B: Bidirectional	SM：SM，9/125 X: Others	2.5：2.5V 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