

## M1x8 Magnet Fiber Optical Switch

The M1x8 optical switch is connected to the optical path by connecting or blocking the optical signal. the switch has non-mechanical configurations and activated via an electrical control signal. the switch also has build-in circulator and isolator functions. Products are widely used in aerospace and military equipment.



### Features

- ◆ Solid-state high speed
- ◆ High Stability, High Reliability
- ◆ Epoxy-free on Optical Path
- ◆ Fail-safe latching

### Applications

- ◆ Aerospace equipment
- ◆ Configurable Add/Drop
- ◆ System monitoring
- ◆ Sensing system

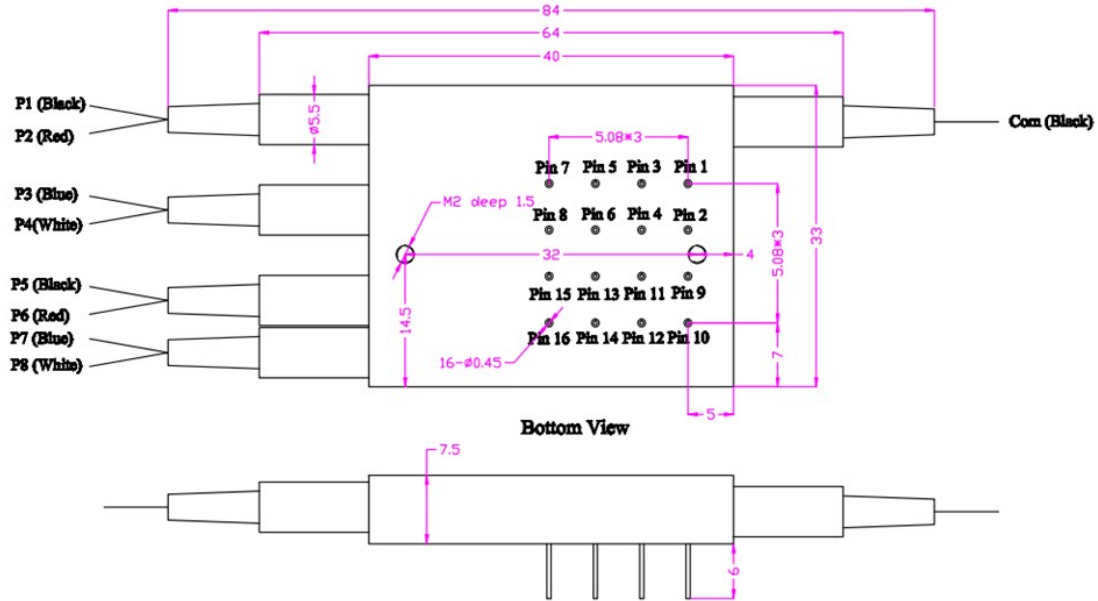
### Performance Specifications

Parameters	Unit	Specifications
Wavelength Range	nm	1520 ~ 1580
Test Wavelength	nm	1550
Insertion Loss <sup>1,2</sup>	dB	$\leq 2.0$
TDL	dB	$\leq 0.30$
PDL	dB	$\leq 0.20$
Return Loss	dB	$\geq 50$
Crosstalk	dB	$\geq 40$
Repeatability	dB	$\leq \pm 0.01$
Switching Time	us	$\leq 100$
Pulse Duration	us	$\geq 200$
Durability	Cycles	$\geq 10$ Billions
Switch Type	NA	Latching
Operating Current	mA	$\leq 200$

Maximum Optical Power	mW	≤ 500
Operating Temperature	°C	-5 ~ +70
Storage Temperature	°C	-40 ~ +85
Dimension	mm	(L)40.0×(W)33.0×(H)7.5 ±0.2

Note: 1 Test at room temperature and SOP.  
 2 Excluding connectors, 0.2dB for one pair connectors.

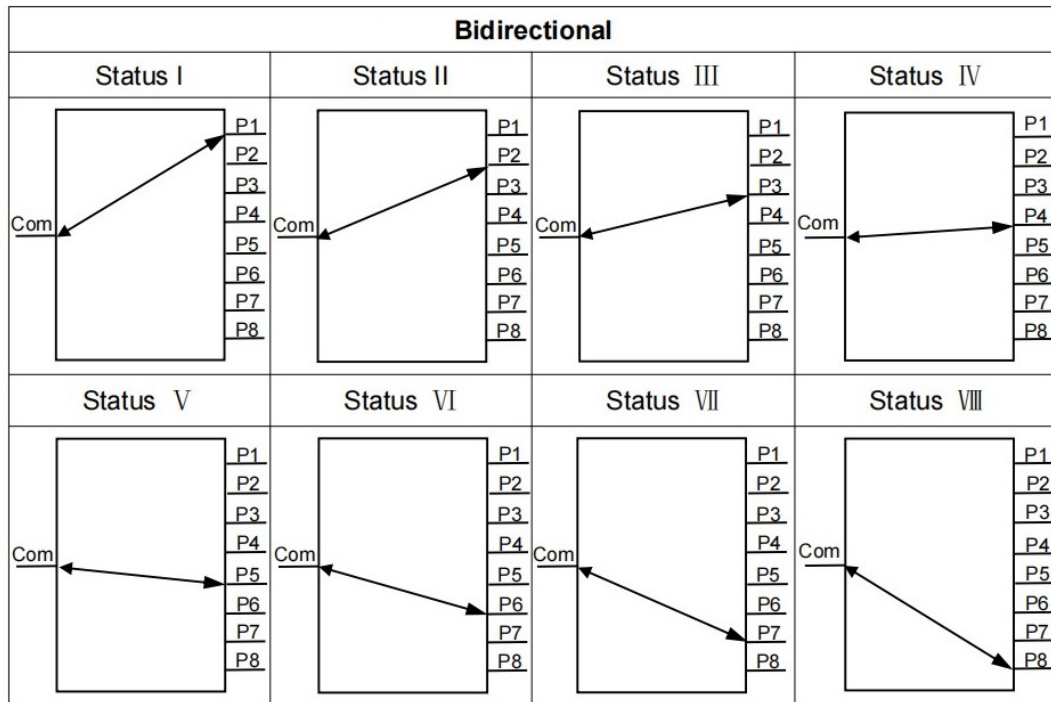
**Mechanical Dimensions (Unit:mm)**



**Electrical Drive**

Type	Status	Optical Route	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
M1x8	I	Com-P1	V+	GND	V+	GND	V+	GND	V+	GND	GND	V+	V+	GND	GND	V+	GND	V+
	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+
	VII	Com-P7	V+	GND	GND	V+	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	V+	GND
	VIII	Com-P8	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	V+	GND	GND	V+	V+	GND

### Functional Diagram



### Ordering Information

FSW-M1x8-□-□-□-□-□-□-□-□

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