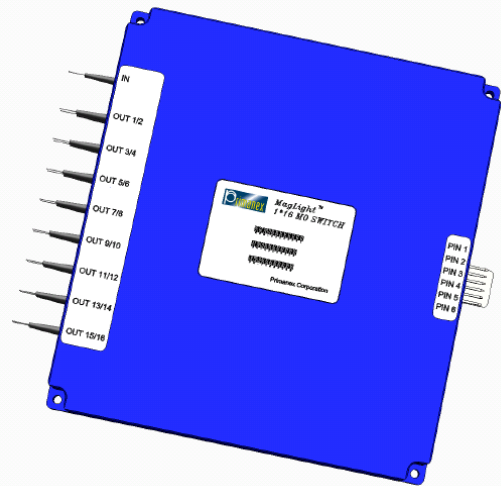


## Features

- No moving parts, best reliability
- Ultra fast switching speed
- Extremely stable latching mode
- Low power consumption
- Easy to route-all fibers on one end
- Exceptional durability and stability



## Applications

- Optical switching
- High speed protection
- System monitoring
- Test & measurement
- Fiber-optics sensing system

## Product Description

The  $\mu$ s-series 1x16 solid-state fiber optical switch connects optical channels by redirecting an incoming optical signal into a selected output optical fiber. The switching of the optical light is realized by utilizing Faraday Effect.

This is achieved using a patent protected non-mechanical configuration with solid-state all-crystal design which eliminates the need for mechanical movement. The  $\mu$ s-series fiber optic switch is designed to meet the most demanding switching requirements of reliability, durability, response, and continuous high frequency switching operation.

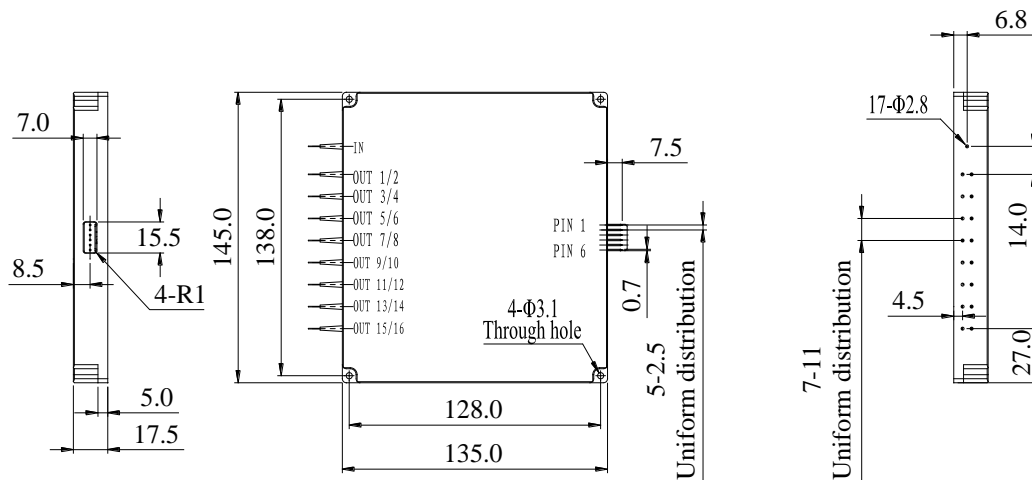
## Specifications

Item	unit	Parameters		Notes
		Unidirectional	Bidirectional	
Wavelength Range	nm	1525~1565		Other band optional
Insertion Loss	dB	3.5(Typ.); 4.0 (Max.)	4.0(Typ.); 5.0(Max.)	Add 1.6dB for high-power version
PDL	dB	0.3(Typ.); 0.5(Max.)		
Return Loss	dB	40	30	
Crosstalk	dB	40	35	
PMD	ps	0.20		
Repeatability	dB	+/- 0.01		
Durability	cycles	> 30 Billions		
Switching Speed	$\mu$ s	200 ~ 400		
Storage Temperature	℃	-40 ~ 85		
Operating Temperature	℃	-5 ~ 70		
Maximum Optical Power	mW	500 (for high-power version: 5W for CW laser, 700W of peak power for ns-scale pulsed laser)		
Package Size (L × W × H)	mm	145×135×17.5		

\*. All the specifications are based on the devices without connector, and guaranteed over wavelength, polarization and temperature.

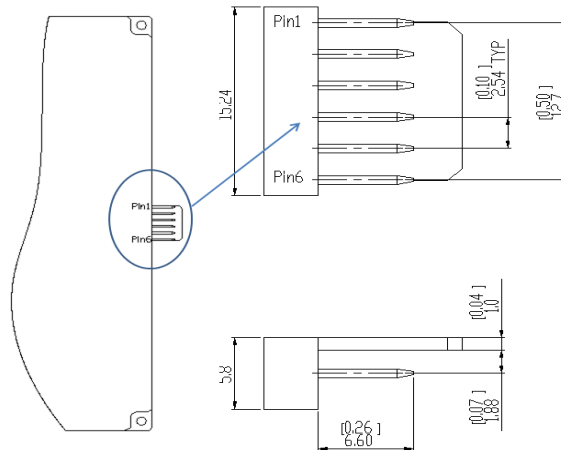
\*\* Specifications are subject to change without notice.

## Dimensions Drawing (mm)



## Electrical Connector Specifications

Vendor:	Molex (P/N: 0022057068)
Housing:	Natural nylon, UL 94V-O
Contact:	Brass, 0.64 mm (.025") square
Plating:	Tin



## Port Mark & Pin Assignment

Ports & Pins	Assignment	Note
IN	The optical input port	-
OUT1, OUT2, OUT3, OUT4, OUT5, OUT6, OUT7, OUT8, OUT9, OUT10, OUT11, OUT12, OUT13, OUT14, OUT15, OUT16	The optical output port1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	-
Pin 1	VCC	5V
Pin 2	GND	-
Pin 3	Ctr3	5V TTL
Pin 4	Ctr2	5V TTL
Pin 5	Ctr1	5V TTL
Pin 6	Ctr0	5V TTL



## Electrical Specifications

Parameter	Specification	Unit
Power Supply Voltage(VCC)	5 (+/-5%)	V
Inrush Current	<1.2	A
Claim Frequency	600	Hz

## Pin Control Signal Corresponding to Switching Status

Table1: Pin control signal corresponding to switching status for unidirectional switch

Ctrl 3	Ctrl 2	Ctrl 1	Ctrl 0	Optical Path
0	0	0	0	IN → OUT1
0	0	0	1	IN → OUT2
0	0	1	0	IN → OUT3
0	0	1	1	IN → OUT4
0	1	0	0	IN → OUT5
0	1	0	1	IN → OUT6
0	1	1	0	IN → OUT7
0	1	1	1	IN → OUT8
1	0	0	0	IN → OUT9
1	0	0	1	IN → OUT10
1	0	1	0	IN → OUT11
1	0	1	1	IN → OUT12
1	1	0	0	IN → OUT13
1	1	0	1	IN → OUT14
1	1	1	0	IN → OUT15
1	1	1	1	IN → OUT16
0	0	0	0	OUT16 → IN
0	0	0	1	OUT15 → IN
0	0	1	0	OUT14 → IN
0	0	1	1	OUT13 → IN
0	1	0	0	OUT12 → IN
0	1	0	1	OUT11 → IN
0	1	1	0	OUT10 → IN
0	1	1	1	OUT9 → IN
1	0	0	0	OUT8 → IN
1	0	0	1	OUT7 → IN
1	0	1	0	OUT6 → IN
1	0	1	1	OUT5 → IN
1	1	0	0	OUT4 → IN
1	1	0	1	OUT3 → IN
1	1	1	0	OUT2 → IN
1	1	1	1	OUT1 → IN



Table2: Pin control signal corresponding to switching status for bidirectional switch

Ctrl 3	Ctrl 2	Ctrl 1	Ctrl 0	Optical Path
0	0	0	0	IN←→OUT1
0	0	0	1	IN←→OUT2
0	0	1	0	IN←→OUT3
0	0	1	1	IN←→OUT4
0	1	0	0	IN←→OUT5
0	1	0	1	IN←→OUT6
0	1	1	0	IN←→OUT7
0	1	1	1	IN←→OUT8
1	0	0	0	IN←→OUT9
1	0	0	1	IN←→OUT10
1	0	1	0	IN←→OUT11
1	0	1	1	IN←→OUT12
1	1	0	0	IN←→OUT13
1	1	0	1	IN←→OUT14
1	1	1	0	IN←→OUT15
1	1	1	1	IN←→OUT16

## Ordering Information (Example:RFMS10-116M1121120)

<input type="checkbox"/>	<b>FMS1</b>	<input type="checkbox"/>	<b>-116M1</b>	<input type="checkbox"/>	<b>1</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Working Mode		Operating Wavelength		Dimension		Connector Type		
R. Regular (Unidirectional )		1.C Band 1525-1565 nm		1.Standard		0.No Connector		
B. Bidirectional		2.L Band 1565-1615 nm		2.Others		1.FC/UPC		
		3.C & L Band				2.FC/APC		
		4.Others				3.SC/UPC		
						4.SC/APC		
						5.LC/PC		
Power Handling		Fiber Length		Fiber Type		6.MU/PC		
0.Standard		1.0. 5 +/- 0.1 m		1.250μm fiber		7.Others		
1.High Power		2.1.0 +/- 0.1m		2.900μm fiber				
		3.Others		3.Others				

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