

## 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
- Channel protection
- System monitoring
- Test & measurement
- Fiber optics sensing system
- High speed optics beam scanning

## Product Description

Primanex MagLight™ 1x8 optical switch is an all solid-state device without any moving parts. The switching of the optical signal is based on well-known Faraday Effect, and realized by using a patent protected non-mechanical configuration with solid-state all-crystal design which eliminates the need for mechanical movement. The microsecond fiber optic switch is designed to meet the most demanding switching requirements for reliability, durability, speed, and none-stopping high frequency switching.

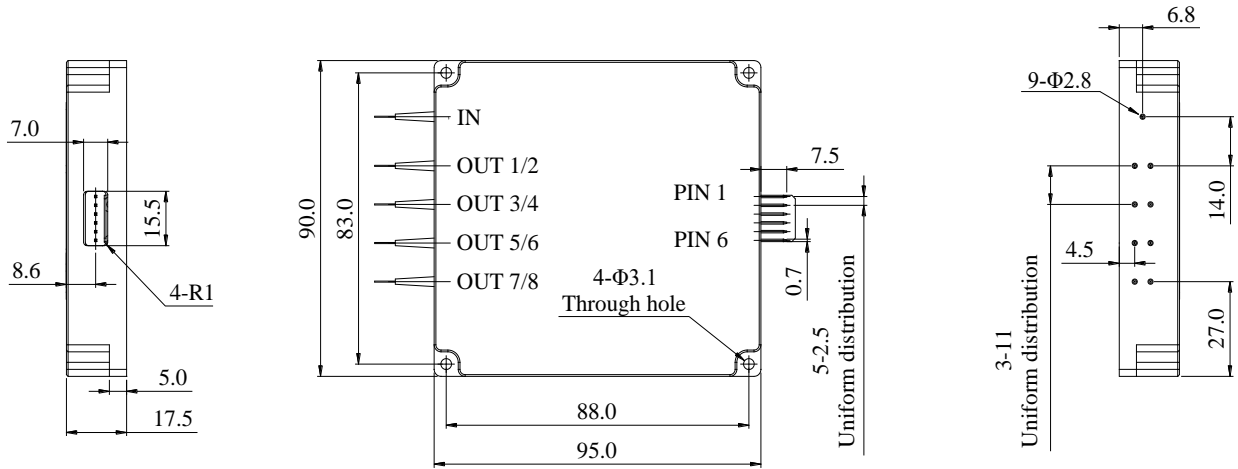
## Specifications

Item	Unit	Parameters		Notes
		Unidirectional	Bidirectional	
Wavelength Range	nm	1525 ~ 1565		Other wavelengths available
Insertion Loss	dB	2.8 (Typ.); 3.2(Max.)	3.0 (Typ.); 3.5(Max.)	Add 0.9dB for high-power version
PDL	dB	0.2 (Typ.); 0.3(Max.)		
Return Loss	dB	>40	>30	
Crosstalk	dB	>40	>35	Typical >50dB
PMD	ps	<0.2		
Repeatability	dB	+/- 0.01		
Durability	Cycles	> 30 Billions		
Switching Speed	μs	200 ~ 400		Other speed optional
Switching Type	N/A	Latching		Need power only during switching
Operating Temperature	℃	-5 ~ 70		
Storage Temperature	℃	-40 ~ 85		
Maximum Optical Power	mW	500		Refer to hi-power version for higher power handling requirement
Dimension( L×W×H )	mm	95×90×17.5		

\*. All the specifications are based on the devices without connectors, and guaranteed over the operating temperature range, wavelength range and all polarization states.

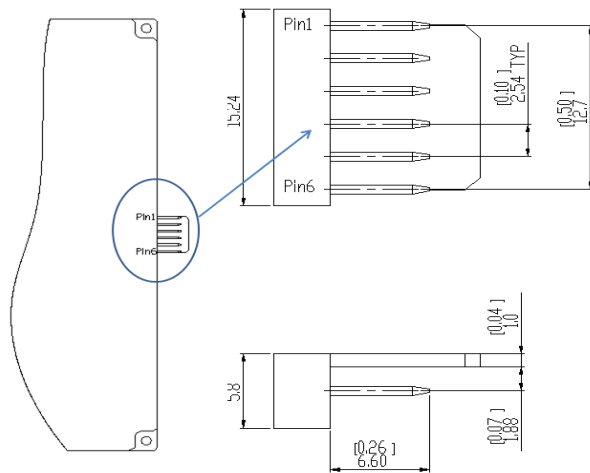
\*\* Specifications are subject to change without notice.

## Dimensions Drawing (Unit: 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	The optical output port1, 2, 3, 4, 5, 6, 7, 8	-
Pin 1	VCC	5V
Pin 2	GND	-
Pin 3	Ctrl 0	5V TTL
Pin 4	Ctrl 1	5V TTL
Pin 5	Ctrl 2	5V TTL
Pin 6	NA	-



## Electrical Specifications

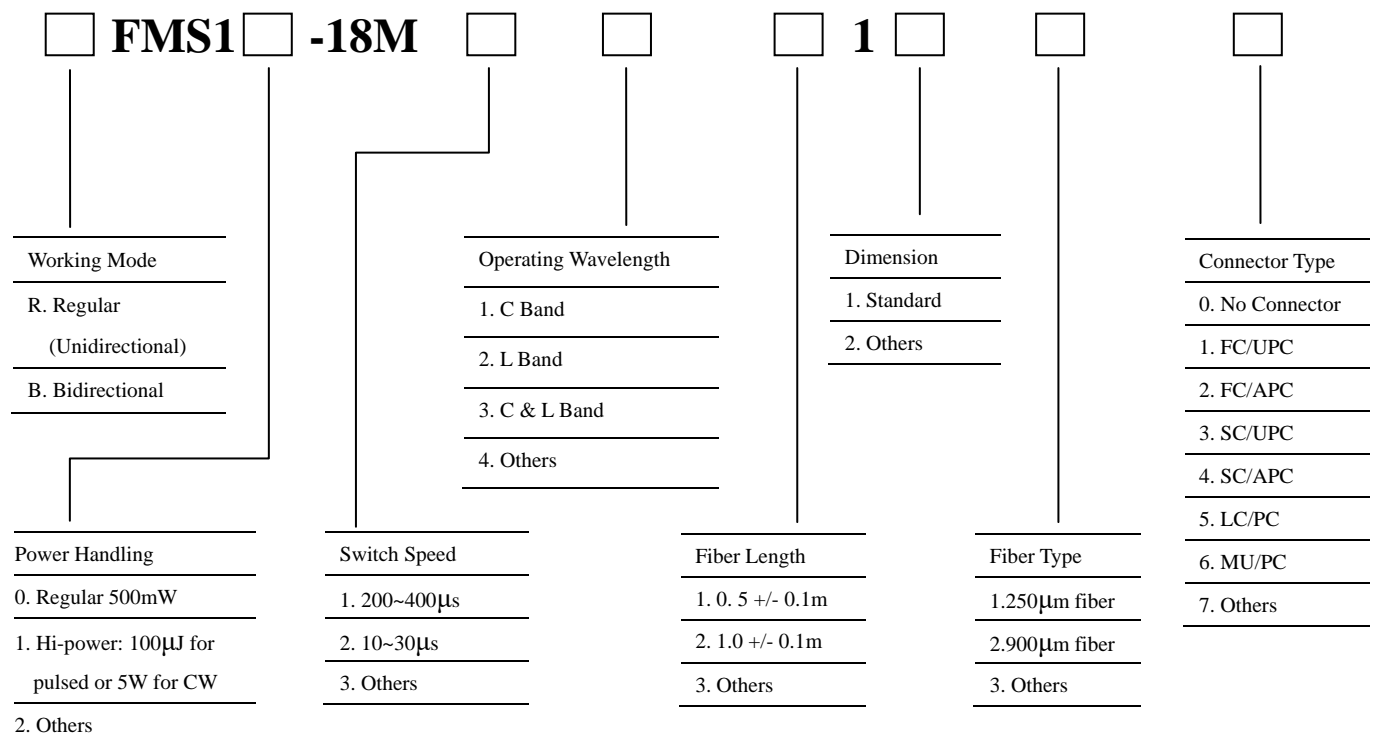
Parameter	Specification	Unit
Power Supply Voltage (VCC)	5 (+/-5%)	V
Inrush Current	< 700	mA
Claim Frequency	600	Hz

## Pin Control Signal Corresponding to Switching Status:

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

Switching State	Ctrl 0	Ctrl 1	Ctrl 2	Optical Path	
				Unidirectional	Bidirectional
0	0	0	0	IN → OUT1, OUT8 → IN	IN ↔ OUT1
1	0	0	1	IN → OUT2, OUT7 → IN	IN ↔ OUT2
2	0	1	0	IN → OUT3, OUT6 → IN	IN ↔ OUT3
3	0	1	1	IN → OUT4, OUT5 → IN	IN ↔ OUT4
4	1	0	0	IN → OUT5, OUT4 → IN	IN ↔ OUT5
5	1	0	1	IN → OUT6, OUT3 → IN	IN ↔ OUT6
6	1	1	0	IN → OUT7, OUT2 → IN	IN ↔ OUT7
7	1	1	1	IN → OUT8, OUT1 → IN	IN ↔ OUT8

## Ordering Information (Example:RFMS10-18M1121120)



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