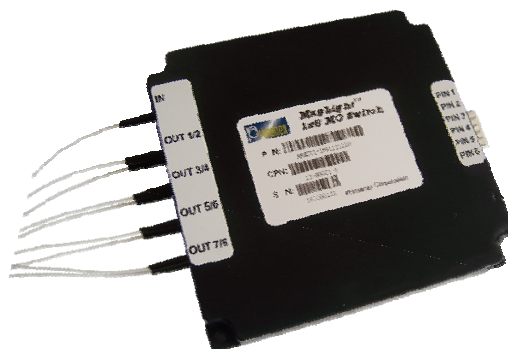


## Features

- 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. ; more specifically, is designed to withstand high-power /high-energy lasers in such applications

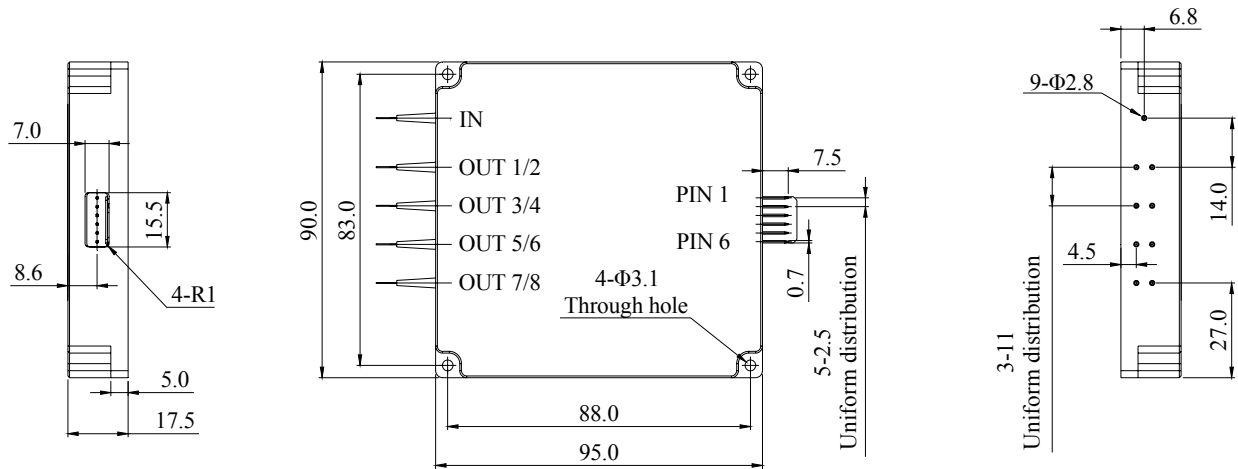
## Specifications

Item	Unit	Parameters		Notes
		Unidirectional	Bidirectional	
Wavelength Range	nm	1525 ~ 1565		Other wavelengths available
Insertion Loss	dB	<4.1	<4.4	
PDL	dB	<0.3		
Return Loss	dB	>40	>30	
Crosstalk	dB	>40	>35	Typical >50dB
PMD	ps	<0.2		
Repeatability	dB	+/- 0.01		
Durability	Cycles	> 100 Billions		
Switching Speed	μs	200 ~ 400		Other speed optional
Switching Type	N/A	Latching		Need power only during switching
Operating Temperature	°C	-5 ~ 70		
Storage Temperature	°C	-40 ~ 85		
Maximum Optical Power	N/A	100μJ for nano-second pulsed laser or 5W for CW laser for single-mode fiber devices		Higher power-handling available upon request
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.

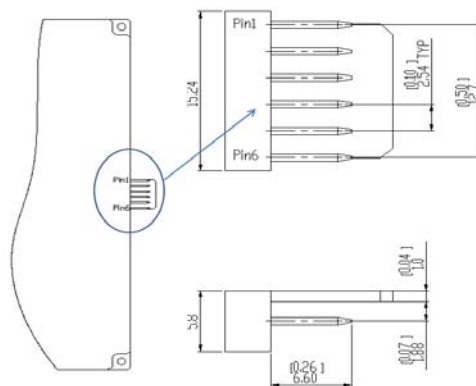
\*\* Specifications are subject to change without notice.

## 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	-



# 1×8 MagLight™ Optical Switch (High Power)

*Photonics Beyond Boundary*

## 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:RFMS11-18M1121120)

<input type="checkbox"/> <b>FMS1</b> <input type="checkbox"/> <b>-18M</b> <input type="checkbox"/> <input type="checkbox"/> <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	1. Standard	0. No Connector	
B. Bidirectional	2. L Band	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	Switch Speed	Fiber Length	Fiber Type	6. MU/PC
0. Regular 500mW	1. 200~400μs	1. 0. 5 +/- 0.1m	1.250μm fiber	7. Others
1. Hi-power: 100μJ for pulsed or 5W for CW	2. 10~30μs	2. 1.0 +/- 0.1m	2.900μm fiber	
2. Others	3. Others	3. Others	3. Others	

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