

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.

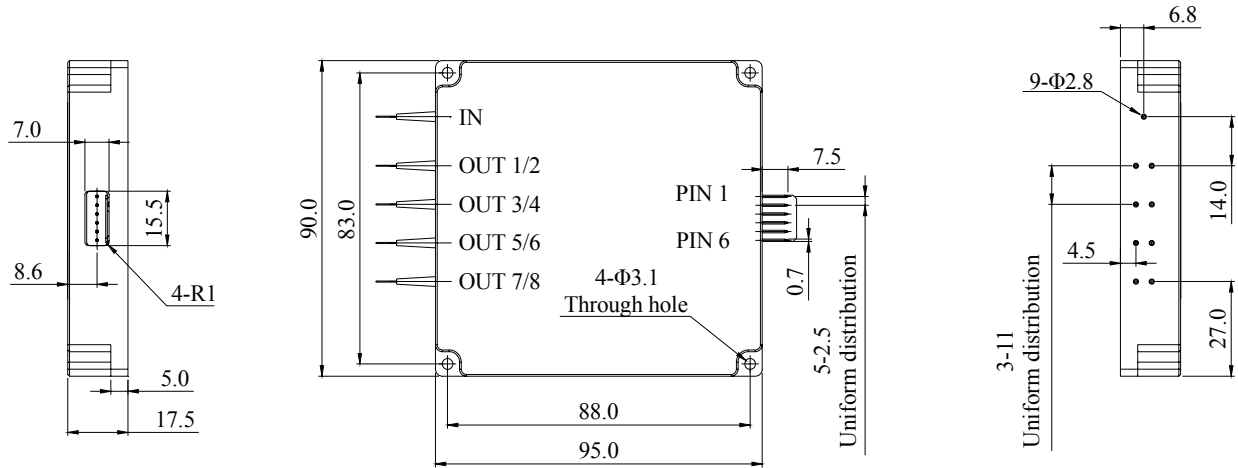
Specifications

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	> 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	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.

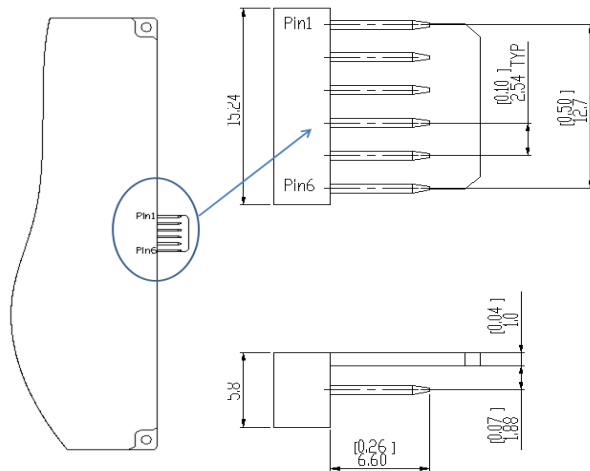
**. Specifications are subject to change without notice.

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)

<input type="text"/>	FMS1	<input type="text"/>	-18M	<input type="text"/>	<input type="text"/>	<input type="text"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
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				

All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accurate. However, the accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. Primanex reserves the right to change at any time without notices the design, specifications, function, fit or form of its products described herein, including withdrawal at any time of a product offered for sale herein. Primanex makes no representations that the products herein are free from any intellectual property claims of others. Please contact Primanex for more information. Primanex and the Primanex logo are trademarks of Primanex Corporation. Other trademarks are the property of their respective holders.