

PMF 1xN (N≤4) MEMS Optical Switch, Coaxial Design

Features

Compact Size
Fast Response Time
TTL or CMOS Logic
High PER

Applications

Protection Switching
Reconfiguration
Optical Subsystems
Array Integration

Specifications

Parameters	Unit	Values
Operation Wavelength ¹	nm	1310±30, 1490±30, 1550±30, 1630±30
Insertion Loss ²	dB	≤1.2 (Typ. 0.4)
Polarization Dependent Loss	dB	≤0.15
Polarisation Extinction Ratio	dB	≥20
Return Loss	dB	≥50
Cross Talk	dB	≥50 (Typ. 55)
Switch Time	ms	≤10 (Typ. 5)
Optical Power Handling ³	mW	≤500
Cycle Rate	Hz	≤50 (Typ. 10)
Repeatability ⁴	dB	±0.01
Durability	cycles	No Wear Out
Fiber Type		PM1550
Operating Relative Humidity	%	5~90
Operating Temperature	°C	-10 ~ +70
Storage Temperature	°C	-40 ~ +85
Dimensions (LxWxH)	mm	21x40x8
ROHS Compliance		2011/65/EU (no exceptions)
Supply Voltage	V	4.75~5.25
Power Consumption, Normal Mode	mW	≤150
Power Consumption, Standby	mW	40 (Typ.)
UART Speed	baud	9600~115200
SMBus/I ² C Bus Speed	kbps	≤400
Logic Level Low	V	≤0.6 (Typ. 0)
Logic Level High	V	≥2.4 (Typ. 5)
Reset Inactive Voltage ⁵	V	≥2.4 (Typ. 5)
Reset Active Voltage	V	≤0.9 (Typ. 0)
Reset Pulse Duration	μs	≥15
Weight	g	75

1 Insertion loss is optimized for one band. If the switch is operated over all four bands add 0.5 dB to IL. Band is selectable over software between 1310, 1550 nm

2 Value @ 25 °C, without connectors.

3 It is recommended to switch off the laser during switch transients when switching high optical power above 50 mW

4 For constant temperature and polarization.

5 Through onboard pull-up resistor.

Functional Bloc Diagram

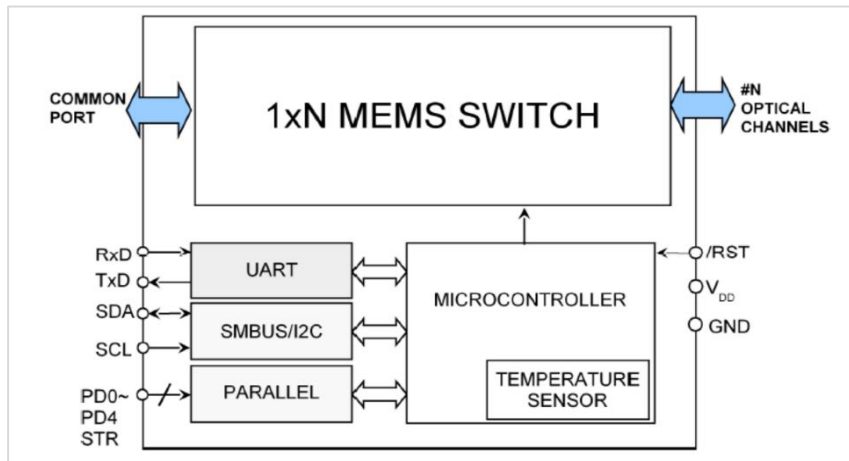
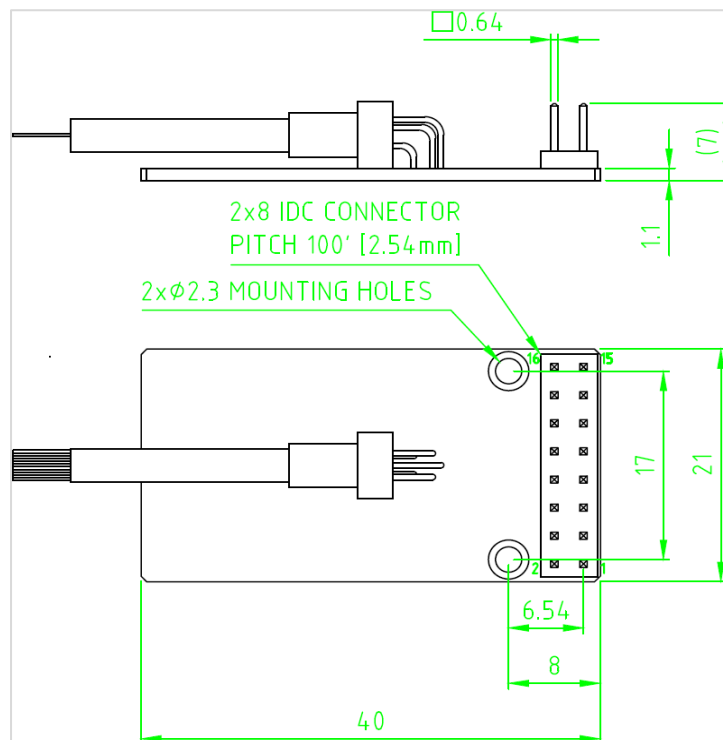


Photo and Dimensions (mm)

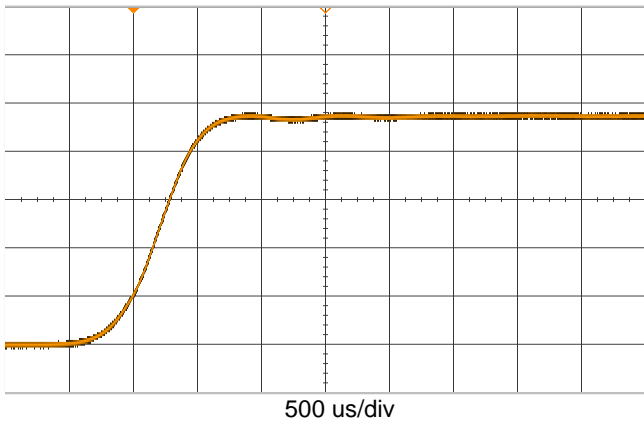


Connector Pinout

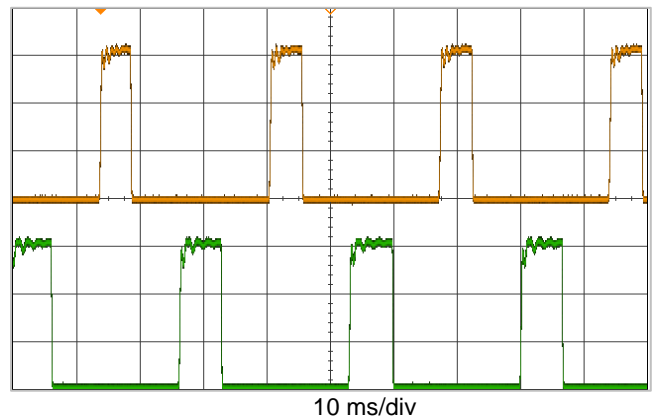
Pin Number	Description
1	Parallel PD3
2	Parallel PD4
3	Parallel PD1
4	Parallel PD2
5	Parallel STROBE
6	Parallel PD0
7	Ground (GND)
8	Supply voltage (V _{DD})
9	Reserved ¹
10	UART TX data
11	Reserved ¹
12	UART RX data
13	System reset (/RST)
14	SMBus/I ² C SDA
15	SMBus/I ² C SCL
16	Ground (GND)

¹Let reserved pins unconnected.

Optical Response Time



Continuous Switch Operation



Ordering Information

LMSW- ①①①-②②②-③-④④④-⑤-⑥-⑦⑦

①	Port Type	1x3; 1x4;
②	Wavelength	1310; 1490; 1550; 1630;
③	Latching	N=Non-Latching;
④	Pigtail Type	250=250μm Fiber(4 Core Ribbon Fiber);
⑤	Fiber Type	5=PM1550 fiber;
⑥	Fiber Length	1=1m;
⑦	Connector	NE=None; FA=FC/APC; FC=FC/UPC; SA=SC/APC; SC=SC/UPC; LC=LC/UPC; XX=Others;