

## Prism Switch Module: 1x2

This document summarizes the performance specifications of a 1x2 Prism Switch Module with SMF-28 fiber operated at 1310 nm, 1550 nm (C or C/L), and dual bands (1290 - 1330 and 1525 – 1575 nm or 1290 - 1330 and 1525 – 1610 nm). Target parameters are referenced without any connector.

### Features

- Fast Switching Speed
- Low Insertion Loss, Low Cross Talk, and High Return Loss
- Wide Wavelength Range
- Status Feedback of Optical State
- Energy Efficient with Latching Operation
- Excellent Repeatability and Mechanical Stability
- Long Life Cycles
- High Optical Power
- Optional Electronic Interface Driver

### Applications

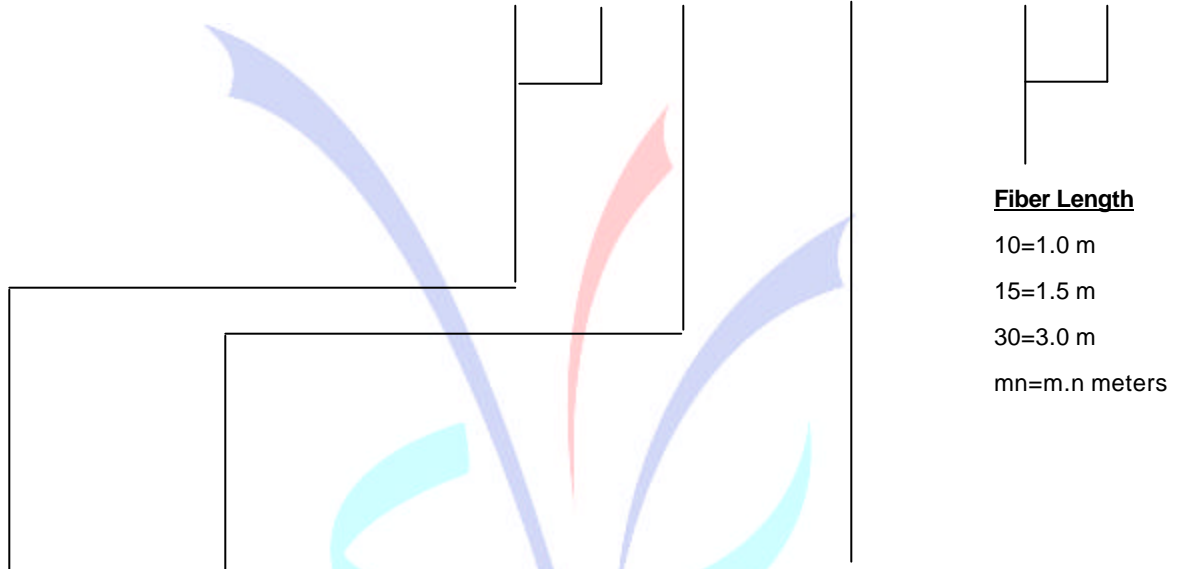
- Active Optical Add/Drop Multiplexing
- Network Route Switching
- Laboratory R&D

Optical Switch Parameters	Symbol	Performance Specifications		Unit
Wavelength Range	$C_L$	1290 - 1330 and/or 1525 - 1610		nm
Switching Time	$T_{SW}$	Typical	5	ms
		Maximum	7.5	
Insertion Loss in room temperature ( $23 \pm 3$ °C) measured at 1310 nm and/or 1550 nm, respectively for corresponding wavelength range	IL	Maximum	0.8 for 1290 - 1330 nm 0.8 for 1525-1610 nm (C/L) 1.0 for dual bands	dB
Wavelength Dependent Loss for 1290 - 1330 and for 1525 – 1610 nm	WDL	Maximum	0.4 for 1290-1330 nm 0.3 for 1525-1575 nm (C) 0.4 for 1525-1610 nm (C/L)	dB
Cross Talk	CT	Typical	-60	dB
		Maximum	-55	
Polarization Dependent Loss	PDL	Typical	0.05	dB
		Maximum	0.10	
Repeatability (100 cycles)	RP	Typical	$\pm 0.02$	dB
		Maximum	$\pm 0.05$	
Optical Return Loss	RL	Typical	60	dB
		Minimum	55	
Polarization Mode Dispersion	PMD	Maximum	0.10	ps
Temperature Dependent Loss over 0 ~ +65 °C	TDL	Maximum	0.30	dB
Input Optic Power	P	Maximum	500	mW
Control Pulse Width	PW	Minimum	20	ms
Cycle Rate	Max	Maximum	10	Hz
Life Cycles (Durability)		10 Millions		
Operating Temperature	$T_{OP}$	0 ~ +65		°C
Storage Temperature	$T_{ST}$	-40 ~ +85		°C
Switching Voltage	V	4.5 – 5.5		V
Switching Current		45 – 55		mA
Dimension	PKG	43.5 (L) x 18 (W) x 10 (H)		mm

\* Patent pending technology

## P/N Scheme: Prism Switch Module

S	W	M	S	M	L				1		N			
---	---	---	---	---	---	--	--	--	---	--	---	--	--	--



<u>Configuration</u>	<u>Wavelength</u>	<u>Fiber Type</u>	<u>Connectors</u>
11 = 1x1	A = 1290 – 1330 nm	A =250 μm bare fiber	0=none    A=FC/PC
12 = 1x2	B = 1525 – 1575 nm	B =900 μm loose tube	2=FC/UPC    B=SC/SPC
22 = 2x2	C = 1525 – 1610 nm		3=FC/APC    C=SC/PC
	I = 1290 – 1330 nm & 1525 – 1575 nm		4=SC/UPC    D=ST/SPC
	K = 1290 – 1330 nm & 1525 – 1610 nm		5=SC/APC    E=ST/PC
			6=ST/UPC    F=LC/SPC
			7=LC/UPC    G=LC/PC
			9=FC/SPC    H=MU/UPC
			I=MU/PC
			J=LC/APC