

1x4 Optical Switch

CORNING

Features and Benefits

Low Insertion Loss
Monolithic Package
Cost Effective
Latching or Non-Latching
TTL or LVTTTL Drive Upon Request
Customized Driver Circuit Upon Request

Corning's 1x4 Optical Switch is a cost effective component that increases network flexibility. With the optical switching sub-assembly fully integrated with the control circuit, the 1x4 switch provides a digital interface which enables binary switching selection along with fast and repeatable switching performance. The packaging provides high long-term reliability. Corning's 1x4 switch is available in latching and single-side-stable configurations.

Standards

RoHS	Free of hazardous substances according to RoHS2011/65/EU
Design and Test Criteria	Product is qualified to Telcordia GR-1209-CORE and GR-1221-CORE



1x4 Optical Switch



Specifications

Parameters			
	Minimum	Typical	Maximum
Central Wavelength (λ_c)	1310, 155, and 1310 and 1550 nm		
Bandwidth	100 nm		
Configuration	1x4		
Insertion Loss	1.0 dB		1.5 dB
Return Loss	50 dB	60 dB	
PDL	0.05 dB		0.1 dB
Switching Time		5 ms	10 ms
Cross-Talk	60 dB	70 dB	
Switching Speed			10 Hz
Switch Voltage ¹	4.5-5.5 V		
Durability	10 mil. Cycle		
Repeatability ²	±0.01 dB		±0.02 dB
Power Handling			300 mW
Operating Temperature	0°C to +70°C		
Storage Temperature	-40°C to +85°C		

Notes:
¹ Lower switch voltage available upon request
² Repeatability measured at room temperature for 100 cycles
 Specifications do not include connector loss

Shipping Package		
Packaging Dimensions	Fiber Type	Pigtail Length
86 mm (L) x 80 mm (W) x 15.7 mm (H)	Corning® MF-28e®	1 m (Standard)

Electrical Pin

Optical Path	Electrical Drive		Control Input				Status Sensor			
Pin #	1	2	3	4	5	6	7	8	9	10
Name	Vcc1	Agnd	D0	D1	D2	Start	Ready	Error	Dgnd	Vcc2
Function	Switch Power Supply	Switch Power Return	Port Selection Data Bus		N/A	Start Strobe	Low= Ready	Low= Error	CMOS Ground	CMOS Power Supply

Note: Error, Ready

$I_{oL} = 8.0 \text{ mA}$ $V_{max} = 0.4 \text{ V}$
 $I_{oH} = -4.0 \text{ mA}$ $V_{min} = 2.4 \text{ V}$

Control (D1, D0)	00	01	10	11
Selected Port	1	2	3	4

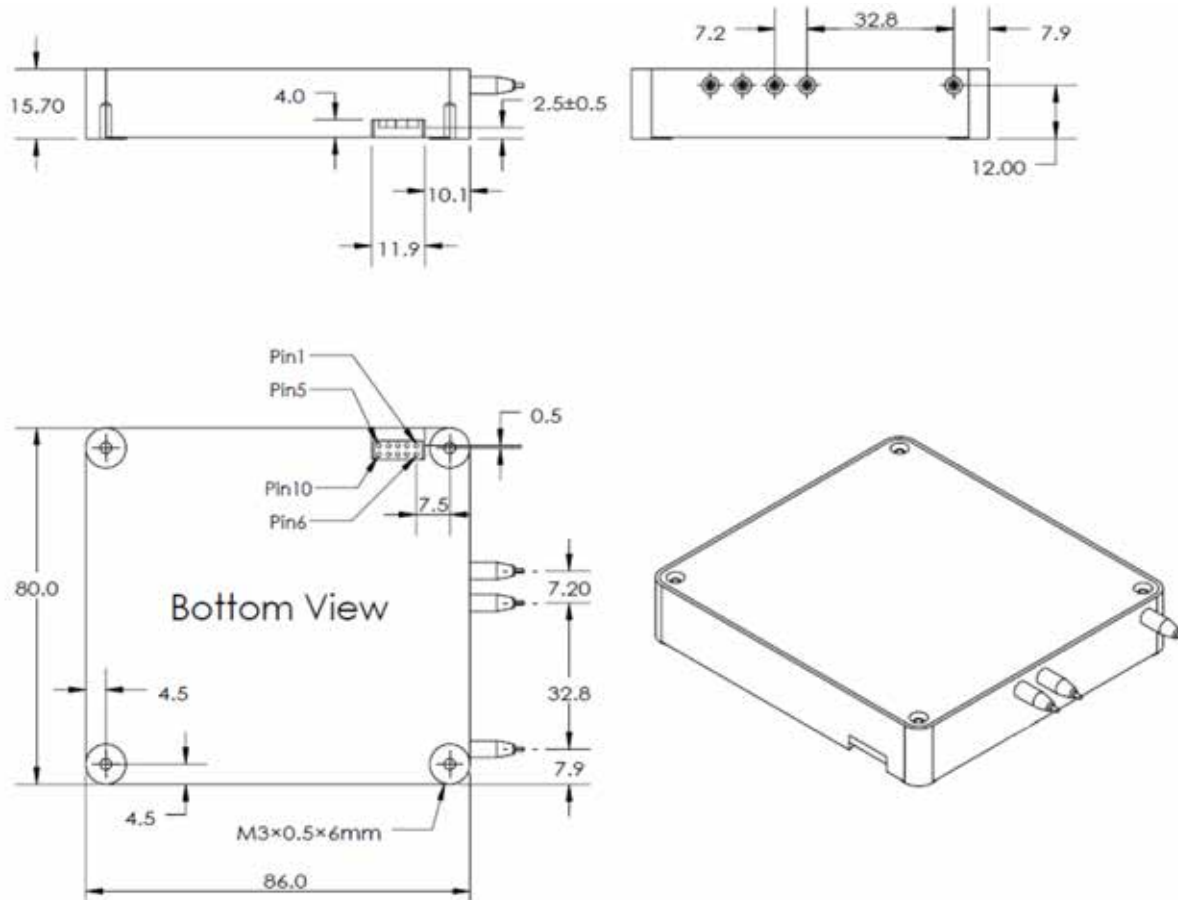
1x4 Optical Switch



Switching Logic – Port Selection Control Logic

D2	D1	D0	Active Port
N/A	0	0	1
N/A	0	1	2
N/A	1	0	3
N/A	1	1	4

Packaging Layout: 1x4 Optical Switch



1x4 Optical Switch

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Ordering Information

1x4 Optical Switch

S W 1 - 3 - 0

1 **2** **3** **4** **5** **6**

1 Select Mode

- 1: Single-mode
- 2: Multimode 62.5/125 μm
- 3: Multimode 50/125 μm

2 Select Wavelength

- 31: 1310 nm
- 35: 1310 and 1550 nm
- 55: 1550 nm
- 85: 850 nm

3 Select Buffer

- 1: 250 μm Bare Fiber
- 2: 900 μm Loose Tube
- 3: Others

4 Select Connector*

- A: None
- K: LC/APC
- L: LC/PC
- P: FC/PC
- Q: FC/APC
- S: SC/PC
- T: SC/APC
- U: MU/PC
- Z: Others

5 Select Type

- 1: Latching
- 2: Non-Latching

6 Select Customization

Running number used for special types or custom made

Note:

* Specifications do not include connector loss



These part numbers are specific to Corning Optical Communications OEM Solutions Business Unit. Please contact OEM sales at +1-408-736-6900 or oemsales@corning.com and visit www.corning.com/opcomm/oem for sales support.

Corning Optical Communications LLC • PO Box 489 • Hickory, NC 28603-0489 USA

800-743-2675 • FAX: 828-325-5060 • International: +1-408-736-6900 • www.corning.com/opcomm/oem • Email: oemsales@corning.com

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