

# 1xN Optical Switch Spec



The mechanical optical switch has the advantages of low insertion loss and small size, and is the ideal device for dynamic configuration of the plug-in multiplexer OADM, cross-connector OXC, system monitoring and protection, and the small package is easier to integrate into the high density optical communication system, with locking and non-locking control types.

## Features

- Low Insertion Loss
- Wide wavelength range
- Low channel crosstalk
- Lock or Non-lock
- High stability and reliability



## Application

- Metro network
- Laboratory research and development
- Monitoring system
- Dynamic configuration distribution multiplexing

## Performance Specifications

| Parameters                  | Specifications            |                            |                              |                             |                              | Unit  |
|-----------------------------|---------------------------|----------------------------|------------------------------|-----------------------------|------------------------------|-------|
|                             | 1<N≤12                    | 16<N≤32                    | 32<N≤64                      | 64<N≤128                    |                              |       |
| Channel                     | 1<N≤12                    | 16<N≤32                    | 32<N≤64                      | 64<N≤128                    |                              |       |
| Insertion Loss <sup>1</sup> | ≤1.0                      | ≤1.0                       | ≤1.5                         | ≤2.0                        |                              | dB    |
| Wavelength Range            | 850±40 or 1260-1650       |                            |                              |                             |                              | nm    |
| Testing Wavelength          | 850 or 1310/1550          |                            |                              |                             |                              | nm    |
| Crosstalk                   | MM≥35 SM≥55               |                            |                              |                             |                              | dB    |
| Return Loss                 | MM≥30 SM≥50               |                            |                              |                             |                              | dB    |
| Polarization Dependent Loss | ≤0.05                     |                            |                              |                             |                              | dB    |
| Wavelength Dependent Loss   | ≤0.25                     |                            |                              |                             |                              | dB    |
| Temperature Dependent Loss  | ≤0.25                     |                            |                              |                             |                              | dB    |
| Repeatability               | ≤0.02                     |                            |                              |                             |                              | dB    |
| Power Supply                | 5 or 12                   |                            |                              |                             |                              | V     |
| Lifetime                    | ≥10 <sup>7</sup>          |                            |                              |                             |                              | Times |
| Switch Time                 | ≤8                        |                            |                              |                             |                              | ms    |
| Power Supply                | 500                       |                            |                              |                             |                              | mW    |
| Operation Temperature       | -20 ~ +70                 |                            |                              |                             |                              | °C    |
| Storage Temperature         | -40 ~ +85                 |                            |                              |                             |                              | °C    |
| Package Dimension           | 1<N≤12<br>(135×<br>64×32) | 12<N≤16<br>(184×78<br>×36) | 16<N≤32<br>(140×77.5<br>×64) | 31<N≤88<br>(184×156×<br>66) | 88<N≤128<br>(184×220×<br>66) | mm    |

\* Notes: 1.Insertion Loss tested without connector.

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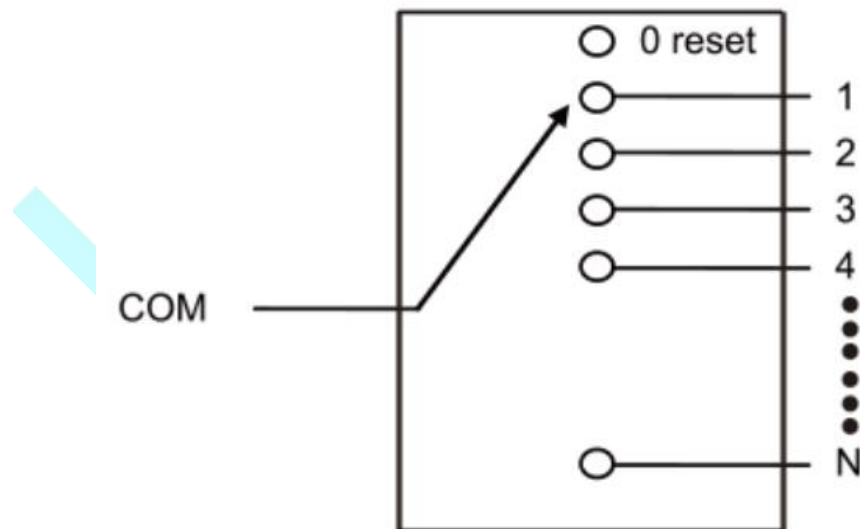
## Pins

| Pin | Symbol | In/Out | Describe   |
|-----|--------|--------|--|
| 1   | D0     | Input  | TTL, Channel selection bit 0   |
| 2   | D1     | Input  | TTL, Channel selection bit 1   |
| 3   | D2     | Input  | TTL, Channel selection bit 2   |
| 4   | D3     | Input  | TTL, Channel selection bit 3   |
| 5   | /RESET | Input  | TTL, Low level reset to channel 0. High level means channel selection bits are effective |
| 6   | /READY | Output | TTL, Ready (High=Not ready, Low=Ready)   |
| 7   | ERROR  | Output | TTL, Error (High=Error, Low=No error)  |
| 8   | GND    | Input  | Ground   |
| 9   | +5VDC  | Input  | 5.0±5% VDC Power Supply (max 550mA)  |

## Channel Selection Table

| Max Channel | Input |    |    |    |       |       |       |       | Optical state |
|-------------|-------|----|----|----|-------|-------|-------|-------|---------------|
|             | Reset | D6 | D5 | D4 | D3    | D2    | D1    | D0    |               |
| N=16        | 0     | ×  | ×  | ×  | ×     | ×     | ×     | ×     | 0 reset       |
|             | 1     | ×  | ×  | ×  | 0     | 0     | 0     | 0     | COM—1         |
|             |       | ×  | ×  | ×  | 0     | 0     | 0     | 1     | COM—2         |
|             |       | ×  | ×  | ×  | 0     | 0     | 1     | 0     | COM—3         |
|             |       | ×  | ×  | ×  | ..... | ..... | ..... | ..... | .....         |
|             |       | ×  | ×  | ×  | 1     | 1     | 1     | 1     | COM—16        |

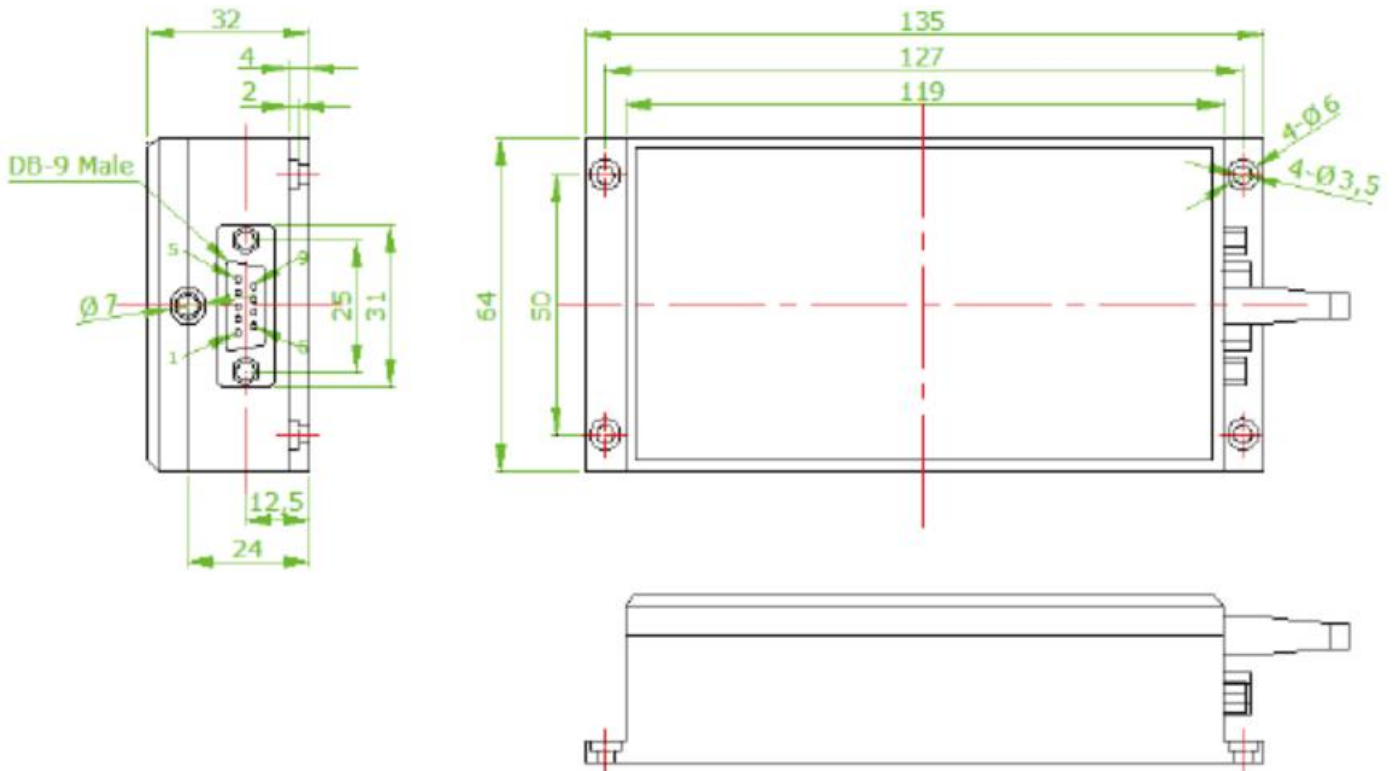
## Route States



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Dimensions Diagram(1<N≤12)



## Order information:

SW (Switch) PN: SW-XXXXXXXX-XX (SW+11 Code+2 Serial Number)

| SW | X       | XXXX               | X          | X              | X                  | X         | X              | X             | XX     |
|----|---------|--------------------|------------|----------------|--------------------|-----------|----------------|---------------|--------|
|    | Type    | Central Wavelength | Fiber Type | Fiber Jacket   | Fiber Length       | Connector | Control Type   | Drive Voltage |        |
| 1  | 1X1     | 0850               | 850        | 0 SM, 9/125    | 0 250um Bare Fiber | 0 none    | L Latching     | 3 3V          | S<br>N |
| 2  | 1X2     | 0980               | 980        | 1 MM, 50/125   | 1 0.9mm Loose      | 1 SC/UPC  | N Non-latching | 5 5V          |        |
| 3  | 1X2T    | 1060               | 1060       | 2 MM, 62.5/125 | S Special          | 2 SC/APC  |                | S Special     |        |
| 4  | 2X2B    | 1310               | 1310       | 3 PM           |                    | 3 FC/UPC  |                |               |        |
| 5  | 2X2T    | 1480               | 1480       | S Special      |                    | 4 FC/APC  |                |               |        |
| 6  | 1X4     | 1550               | 1550       |                |                    | 5 LC/UPC  |                |               |        |
| 7  | 1X6     | 1315               | 1310&1550  |                |                    | 6 LC/APC  |                |               |        |
| 8  | 1X8     | 1625               | 1625       |                |                    | 7 ST/UPC  |                |               |        |
| 9  | 1X8     | 1625               | 1625       |                |                    | 8 E2000   |                |               |        |
| S  | Special | 000S               | Special    |                |                    | S Special |                |               |        |

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