

# 1xN Optical Switch

## LT500

The LT500 Series of 1xN (1x3-1x5) optical switches combine world class switching speed with low insertion loss and excellent repeatability. The LT500 Series small form factor enables optimal space management and simple integration with complimentary optical components. The LT500 incorporates LIGHTech's patented reflective optics technology to deliver outstanding performance and reliability.

- Designed to meet Telcordia 1221 performance and reliability standards
- Insertion loss of 0.6 dB, typical
- Repeatability of  $< \pm 0.02$  dB
- Switching speed of 10 ms, typical
- Crosstalk of  $< -70$  dB
- Patented reflective optics permits operation from 0-65 °C
- Operates with TTL control
- Compact size of 15 x 50 x 70 mm

### Applications

- Broadband wavelength monitoring
- System monitoring
- Test access
- OEM network test systems



**Fiberoptic Solutions at the Speed of**

**LIGHTech**<sup>TM</sup>  
FIBEROPTICS, INC.

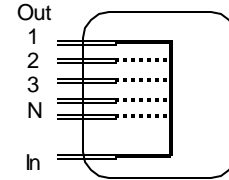
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## Configuration



## Performance Specifications

| Specifications                         | LT500 Series 1x3 - 1x5 | Unit  |
|--|------------------------|-------|
| Insertion Loss <sup>1,2</sup>          | 0.6 typ – 1.0 max      | dB    |
| Repeatability                          | < ± 0.02               | dB    |
| Switching Time <sup>3</sup>            | 8 typ - 12 max         | ms    |
| Operating Temperature                  | 0 to 65                | °C    |
| Back Reflection                        | < -55                  | dB    |
| Crosstalk                              | < -70                  | dB    |
| Maximum Operating Current              | 88                     | mA    |
| Nominal Operating Voltage <sup>4</sup> | 5                      | V DC  |
| PDL                                    | < 0.1                  | dB    |
| Durability                             | 10 million min         | cycle |
| Control                                | TTL / 14-pin out       | --    |
| Housing Dimensions (HxWxL)             | 15x50x70               | mm    |
| Wavelength Window <sup>5</sup>         | 1280~1340, 1520~1580   | nm    |

All specifications referenced without connectors

All specifications referenced with single-mode fiber

Multimode switches available upon request

1. Insertion loss based on 1550 nm single wavelength

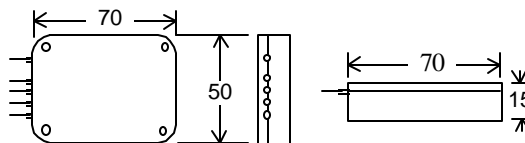
2. Add 0.2 dB for 1310/1550 nm dual wavelength

3. For non-latching, 40 ms max

4. Operating voltage range from 4.75 to 5.5 volts (at room temperature)

5. Optimized at 1310 or 1550 nm (other wavelengths available upon request)

## Housing Dimensions:



## Ordering Information: <sup>(4)</sup>

Example: N104LR5T-FCA2

| Code | # of Input Channels | Code | Control                     | Code | Pigtail <sup>(3)</sup>           |
|------|---------------------|------|-----------------------------|------|----------------------------------|
| 1    | 1                   | L    | Latching <sup>(1)</sup>     | FCA  | 900 μm loose tube <sup>(1)</sup> |
| 03   | 3                   | N    | Non-latching <sup>(2)</sup> | FCP  | 3.0 mm loose tube <sup>(2)</sup> |
| 04   | 4                   |      |                             | FCU  | 900 μm tight buffer              |
| 05   | 5                   |      |                             | SCA  | Special                          |
|      |                     | Code | Wavelength                  | SCP  |                                  |
|      |                     | 3    | 1310 nm                     | SCU  |                                  |
|      |                     | 5    | 1550 nm                     | STP  |                                  |
|      |                     | D    | 1310/1550 nm <sup>(2)</sup> |      |                                  |
|      |                     |      |                             | Code | Connector Type                   |
|      |                     |      |                             | M    | FC/APC                           |
|      |                     |      |                             | T    | FC/PC                            |
|      |                     |      |                             |      | FC/UPC                           |
|      |                     |      |                             |      | SC/APC                           |
|      |                     |      |                             |      | SC/PC                            |
|      |                     |      |                             |      | SC/UPC                           |
|      |                     |      |                             |      | ST/PC                            |

(1) Product standards

(2) Causes specification change

(3) Length: 1 ± 0.1 meter

(4) Custom specifications available

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