

## Custom High-Speed Lithium Niobate Electro-optic Switches

$\lambda = 1550\text{nm}$ ; Please call for other  $\lambda$  : 2000+, 1700, 1300, 1060, 980, 850, 700nm

### Ultra-High-Speed (sub-nanoseconds) 1x2, 2x2 Optical Switches/Modulators (wideband traveling-wave electrode structure with internal 50- $\Omega$ termination)



2.56" x 0.35" x 0.195" (65 x 8.9 x 4.95 mm<sup>3</sup>)

### 1x2, 2x1, 2x2 Ultra-high-speed Switch/Modulator

- Single polarization (SP), separate DC bias port
- >10GHz (>18GHz option),  $T_{\text{switch}} \ll 100\text{ps}$ ,  $V_{\pi} \sim 5\text{V}$
- Insertion loss < 4.0dB (< 3.0dB option)

### Very-High Speed (<10 nanoseconds) 1xN, Nx1, NxN Optical Switches Single-Polarization (SP) or Polarization Independent (PI)

#### 1x1, 1x2, 2x1, 2x2 Switches

##### Single Polarization (SP) version:

- Insertion Loss < 4.0 dB (< 2.5 dB option)
- Switching Voltage  $\sim 5\text{V}$
- Crosstalk < -20 dB
- Capacitive electrode (C $\sim$ 30pF), Switching Time < 10 ns.

##### Polarization Independent (PI) version:

- Insertion Loss < 4.0 dB, (< 2.5 dB option)
- Switching Voltage < 15V
- Crosstalk < -18 dB
- Capacitive electrode (C $\sim$ 30pF), Switching Time < 10 ns.



#### 1x8 (8x1) Switch-Array Module

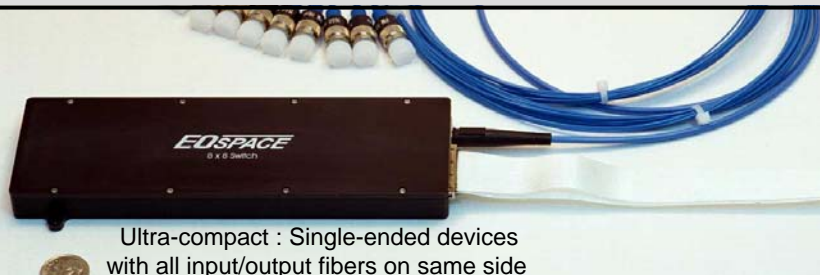
##### Single Polarization version:

- Insertion Loss < 5 dB, (< 3.5 dB option)
- Crosstalk < -20 dB
- Capacitive electrode (C<25pF), Switching Time < 10 ns.
- Polarization Independent version (please call)



#### Compact, High-speed 8x8 Switch-Array Module

- Strictly Non-Blocking
- Double-Stage Crosstalk-Suppression



Ultra-compact : Single-ended devices with all input/output fibers on same side

#### Custom: Large-scale Switch Module-examples

- Programmable, 4-bit (binary) Optic Time-Delay Switch Module



#### 32-channel (8- $\lambda$ , 4x4) Cross-Connect Switch

