EOSPACE

LiNbO₃ Phase Modulator
(10-20GHz; Very-low-Vπ version)

3.48" x 0.35" x 0.35" (88.4 x 8.9 x 8.9 mm³)
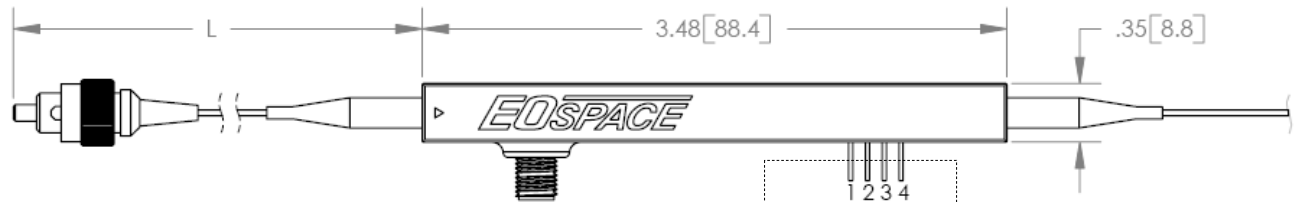
EOSPACE → Broadband (12.5+ Gb/s) Phase Modulator
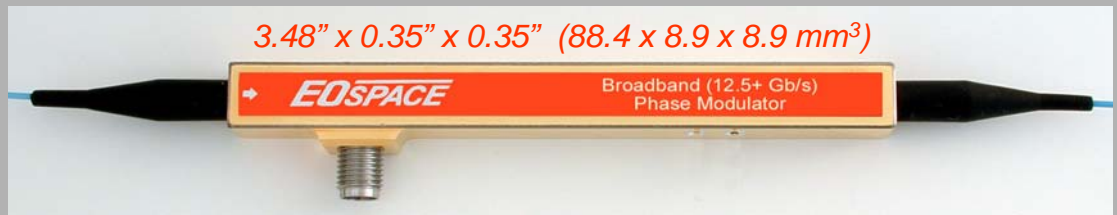
- Very-Low-Drive Voltage (<3V) version

- Traveling-wave electrode structure with (or without) internal matched 50Ω termination

- Bandwidth >10 GHz (std.), or >18GHz version (Larger BW for 40 Gb/s available)

- Low-insertion-loss (<4dB std.,<3dB UL version)

- Dual (or single) polarization transmission (or with integrated polarizer option)

- Polarization modulator/scrambler applications with input fiber aligned at 45° (option)

- Version with output RF port for the traveling-wave electrode (without internal termination)

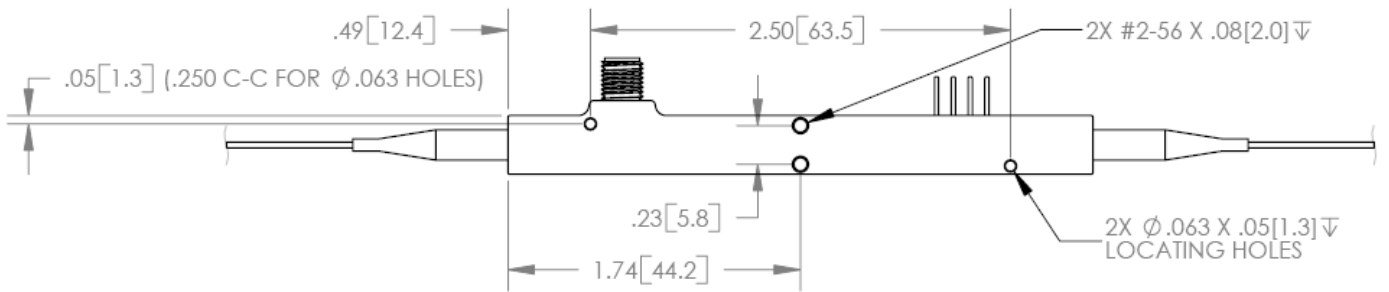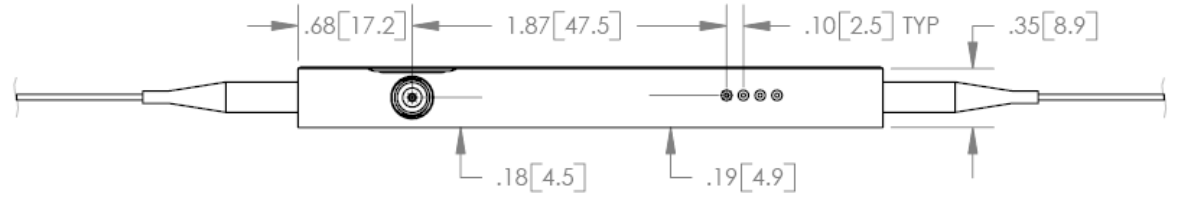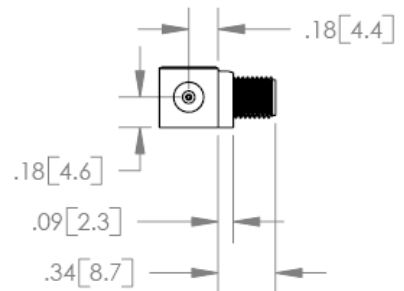- Other wavelength λ =650, 750, 800, 850, 980, 1060, 1300 nm available

Typical Electro-Optical Response (dBe)

Broadband response with internal matched termination

Frequency (GHz)
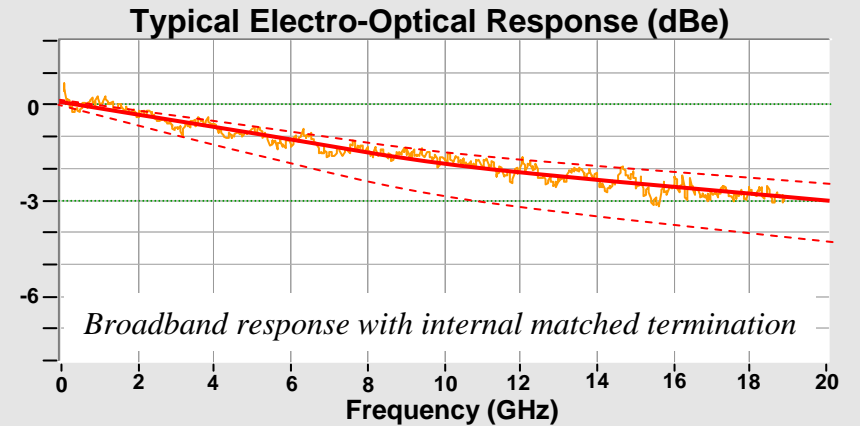
Very-Low-Vpi LiNbO₃ Phase Modulator

Optical Insertion Loss	< 4 dB(standard); < 3 dB (Option)
Bandwidth	>10 GHz (with internal termination); (>18GHz, >25GHz available)
RF Vπ @ 1GHz	~ 3 V (std.) & <2.5V (custom)
|S₁₁| RF Return Loss	> 10 dB (0.13-10GHz)
Polarization Crosstalk	< -20 dB
Optical Return Loss	> 50 dB
RF Connector	2.92mm or Female K
Input Fiber	PM (Polarization Maintaining)
Output Fiber	PM (std.) or SM (Opt.)
Fiber Connector	FC/UPC (std.) or FC/APC (Opt.)
Wavelength	1550 nm (C &L bands)

Unused (or removed) pins for phase modulator

L

3.48[88.4]

.35[8.8]

1 2 3 4

.18[4.4]

.18[4.6]

.09[2.3]

.34[8.7]

.68[17.2]

1.87[47.5]

.10[2.5] TYP

.35[8.9]

.18[4.5]

.19[4.9]

.49[12.4]

.05[1.3] (.250 C-C FOR Ø.063 HOLES)

2.50[63.5]

2X #2-56 X .08[2.0] ⍊

.23[5.8]

1.74[44.2]

2X Ø.063 X .05[1.3] ⍊
LOCATING HOLES

Pin	Assignment
1	Case ground
2	Bias (+,-)
3	PD Anode
4	PD Cathode

SPECIFICATIONS

RF port connector	2.92 mm female connector
Bias port pins	Diameter: 0.025 in. Length: 0.23 in.
Input fiber	PANDA Polarization Maintaining
Output fiber	Corning SMF-28 or PANDA PM
Cabling	900 um polyester loose tube
Optical connectors	FC/UPC, FC/APC, others

5   4   3   2   1