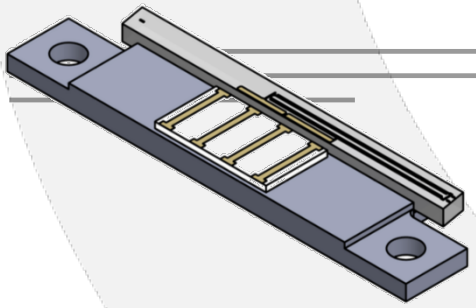
MIOC-1550-SB



DEVICE

Multi-functional Integrated Optical Chip Submount, 1550 nm

OVERVIEW

MIOC-1550-SB is the key component of Fiber Optic Gyroscope (FOG) for rotational rate sensing and inertial navigation systems. This Integrated Optic Chip (IOC) device is composed of a polarizer, a Y-junction coupler and dual electro optic phase modulators. Based on Lithium Niobate (LiNbO3), MIOC-1550-SB is fabricated with Proton Exchange (PE) optical waveguides. The MIOC-1550-SB features Polarization Extinction Ratio (PER) exceeding 60 dB that can minimize bias drift which results from polarization crosstalk induced non-reciprocity. The MIOC-1550-SB assures high reliability and performance over wide temperature range.

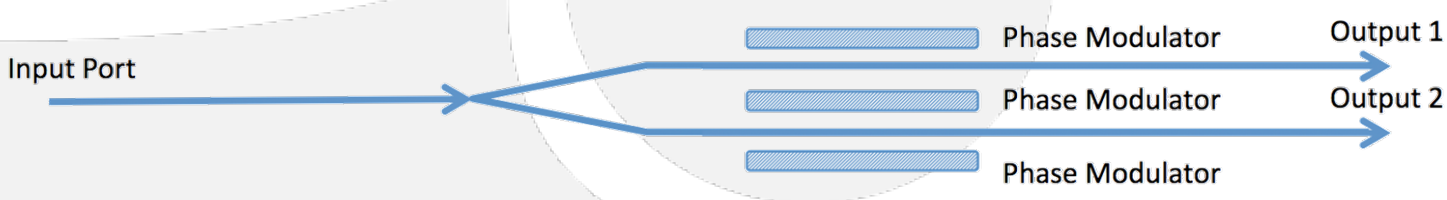
FEATURES

- 1550 ± 20 nm operation
- PM input and output port
- Low insertion loss 3.5 dB
- Polarization extinction ratio > 60 dB
- Low Vπvoltage 4V
- Polarization crosstalk < -20 dB
- Unpackaged chip available

USE IN

- Fiber Optic Gyroscope (FOG)
- Fiber Optic Current Sensor (FOCS)
- Hydrophone and other optic sensitive fields
- Research and development

FUNCTIONAL DIAGRAM



地址： 北京市石景山区阜石路165号今鼎时代广场C座416室 电话： 010-82379330/31 传真：010-82378090

MIOC-1550-SB

SPECIFICATIONS

GENERAL

Operating Wavelength	1550 ± 20 nm
Pigtailed Insertion Loss	≤ 3.5 dB; 3.0 dB available
Split Ratio	50 ± 5%
Half-wave Phase Modulation Voltage, V π	4 V
Polarization Extinction Ratio	≥ 60 dB
PM Pigtail Crosstalk	≤ -20 dB
Intensity Modulation	≤ 0.1%
Electrode Type	Push-pull
Pigtail Compatibility	80μm Clad
Operating Temperature	-45 °C to +70 °C

MECHANICAL

Dimensions	1.75 mm x 7 mm x 26 mm
Electrode	Gold Plated
Substrate Material	LiNbO3
Crystal Orientation	X-cut, Y-propagation
Waveguide Process	Proton Exchange

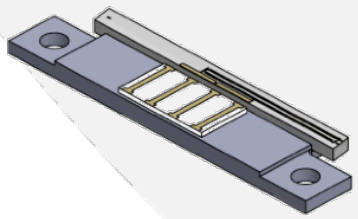
Sample Test Data

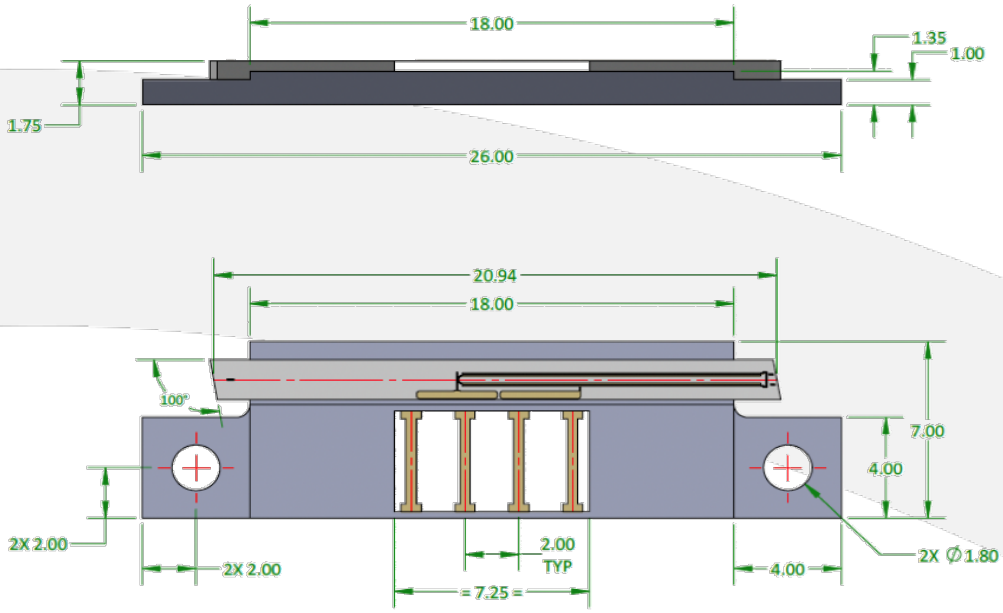
	Input Port	Output Port 1	Output Port 2
Extinction Ratio -5°C (dB)	31.3	24.3	28
Extinction Ratio -25°C (dB)	33.1	26.2	30.8
Extinction Ratio -25°C (dB)	31.0	24.5	27.8
Coupling Ratio (%)	N/A	50.0	50.0
V π (V)	< 4.5 V		
Insertion Loss	3.7		

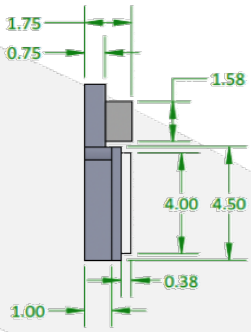
地址： 北京市石景山区阜石路165号今鼎时代广场C座416室 电话： 010-82379330/31 传真：010-82378090

MIOC-1550-SB

MECHANICAL DRAWING







地址： 北京市石景山区阜石路165号今鼎时代广场C座416室 电话： 010-82379330/31 传真：010-82378090