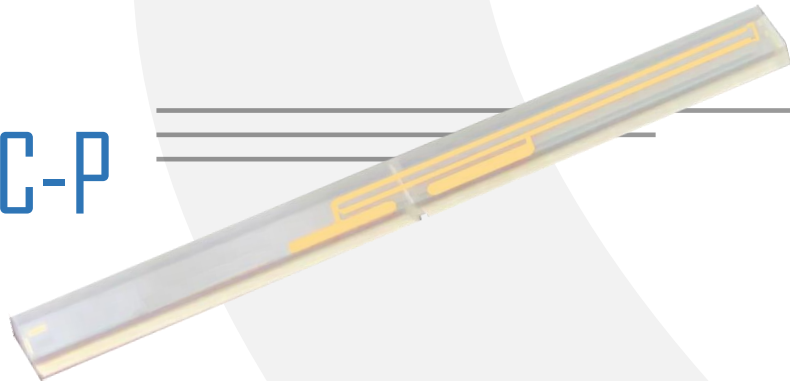


MIOC-1550-BC-P



DEVICE

Multi-functional Integrated Optical Chip, 1550 nm, Premium Grade

OVERVIEW

The Optilab MIOC-1550-BC-P 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-BC-P is fabricated with Proton Exchange (PE) optical waveguides. The MIOC-1550-BC-P features Polarization Extinction Ratio (PER) exceeding 60 dB that can minimize bias drift which results from polarization crosstalk induced non-reciprocity. The MIOC-1550-BC-P assures high reliability and performance over wide temperature range, contact Optilab for more information.

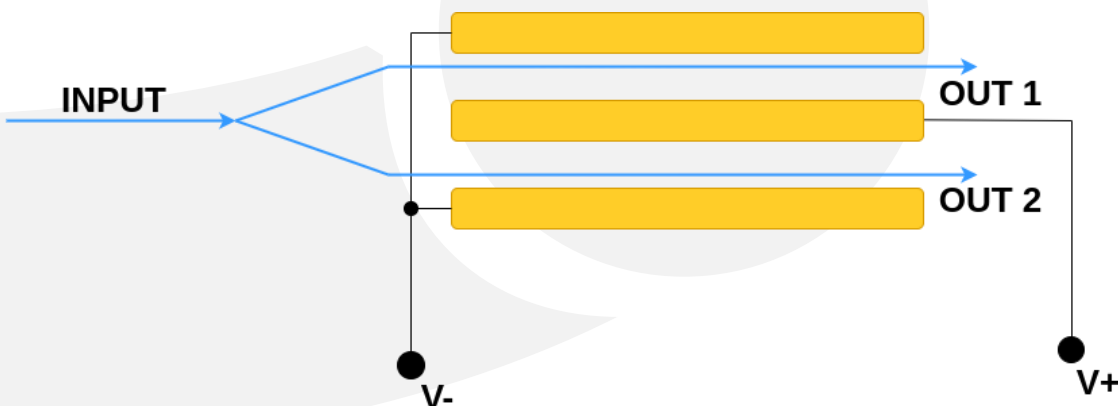
FEATURES

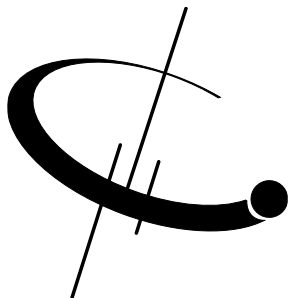
- 1550 ± 20 nm operation
- PM input and output port
- Low insertion loss <2.5 dB
- Polarization extinction ratio > 60 dB
- Low V_{π} voltage 4V
- Polarization crosstalk < -20 dB
- Unpackaged chip available

USE IN

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

FUNCTIONAL DIAGRAM





MIOC-1550-BC-P

SPECIFICATIONS

Operating Wavelength	1550 ± 20 nm
Insertion Loss	≤ 2.5 dB
Split Ratio	50 ± 1.5%
Half-wave Phase Modulation Voltage, $V \pi$	4 V
Polarization Extinction Ratio	≥ 60 dB
Intensity Modulation	≤ 0.1%
Electrode Type	Push-pull
Pigtail Compatibility	80 μm Clad
Operating Temperature	-45 °C to +70 °C

GENERAL

Dimensions	1 mm x 1.8 mm x 22.5 mm
Electrode	Gold Plated
Substrate Material	LiNbO ₃
Crystal Orientation	X-cut, Y-propagation
Waveguide Process	Proton Exchange
Output Waveguide Spacing	400 μm

MECHANICAL

