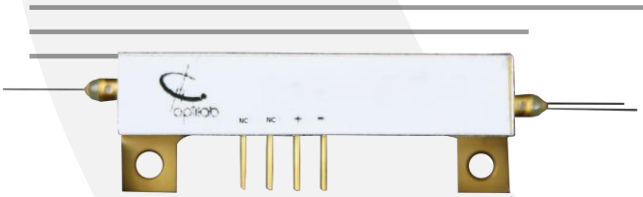
MIOC-1550-PG-P



DEVICE

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

OVERVIEW

The Optilab MIOC-1550-PG-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-PG-P is fabricated with Proton Exchange (PE) optical waveguides. The MIOC-1550-PG-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-PG-P assures high reliability and performance over wide temperature range, contact Optilab for more information.

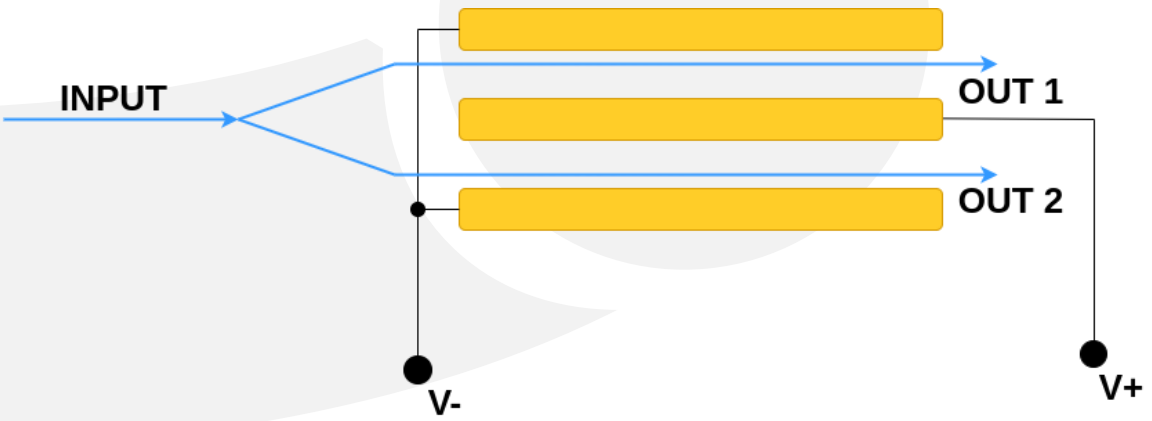
FEATURES

- 1550 ± 20 nm operation
- PM input and output port
- Low insertion loss 2.8 dB typ.
- 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



MIOC-1550-PG-P

SPECIFICATIONS

GENERAL

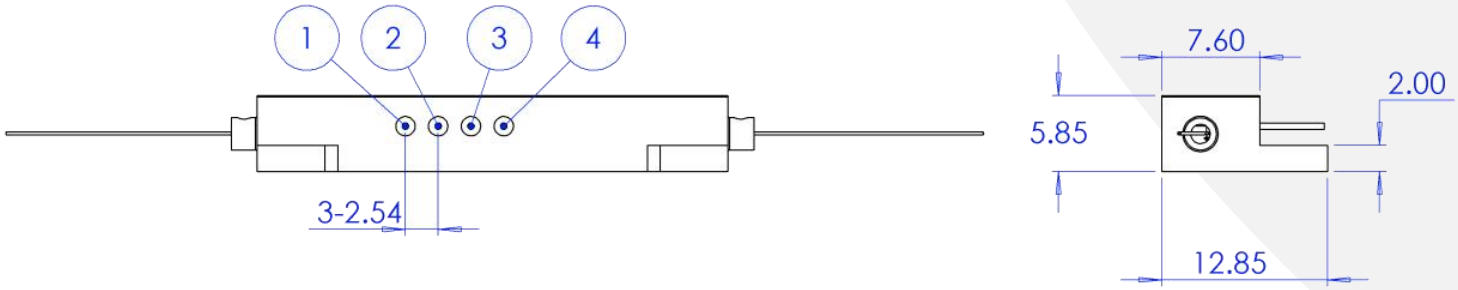
Operating Wavelength	1550 ± 20 nm
Pigtailed Insertion Loss	2.8 dB Typ., 3.1 dB Max.
Split Ratio	50 ± 1.5%
Half-wave Phase Modulation Voltage, $V\pi$	4 V typ., 4.5 V max.
Polarization Extinction Ratio	≥ 60 dB
PM Pigtail Crosstalk	≤ -20 dB
Intensity Modulation	≤ 0.1 % typ.
Electrode Type	Push-pull
Maximum Input Voltage	+/- 15 V
Operating Temperature	-45°C to + 70°C

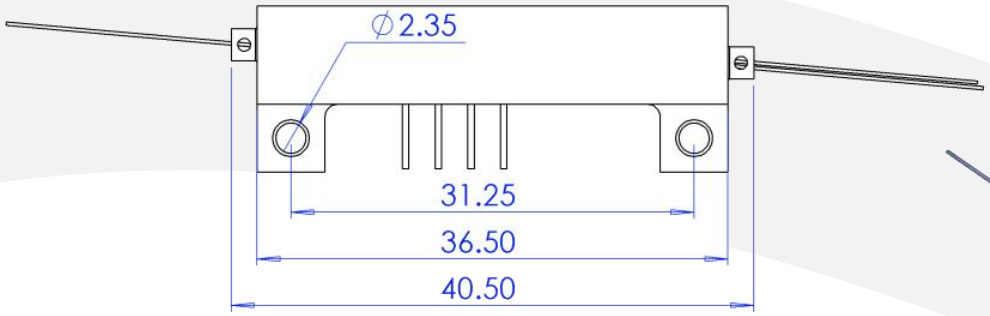
MECHANICAL

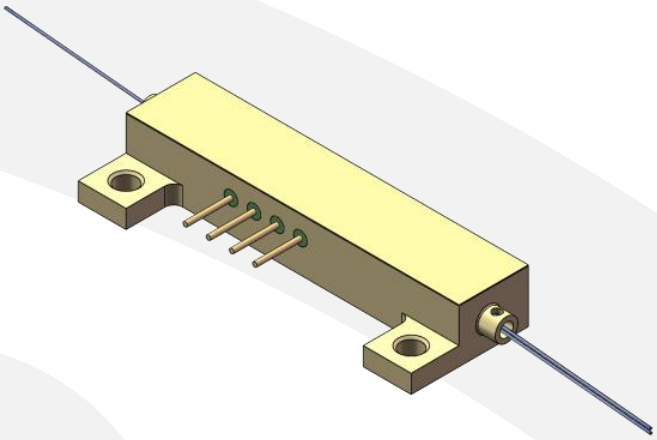
Housing Material	Stainless Steel
Input/Output Fiber Type	Corning RCPM15 (80μm) (125μm fiber Available)
Fiber Length	1.5m (customizable)
Fiber Orientation	Slow Axis aligned to TE Mode
Substrate Material	LiNbO3
Crystal Orientation	X-cut, Y-propagation
Waveguide Process	Proton Exchange

MIOC-1550-PG-P

MECHANICAL DRAWING







*Unit: mm

PIN #	Description
1	N/C
2	N/C
3	V+
4	V-

* Case Ground