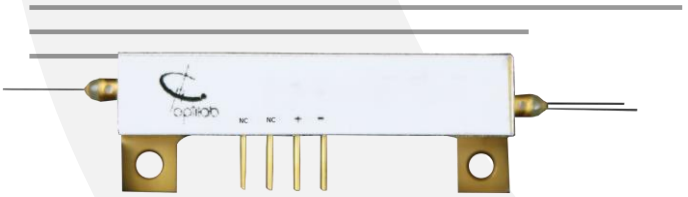
FOCS-1550-PG



DEVICE

Fiber Optic Current Sensor Chip, Packaged 1550 nm

OVERVIEW

The Optilab FOCS-1550-PG is designed for fiber optic current sensing. This device is composed of a polarizer, a Y-junction coupler and dual electro optic phase modulators. Based on Lithium Niobate (LiNbO3), FOCS-1550-PG is fabricated with Annealed Proton Exchange (APE) optical waveguides. The FOCS-1550-PG features Polarization Extinction Ratio (PER) exceeding 60 dB that can minimize bias drift which results from polarization crosstalk induced non-reciprocity. The FOCS-1550-PG assures high reliability and performance over wide temperature range, contact Optilab for more information.

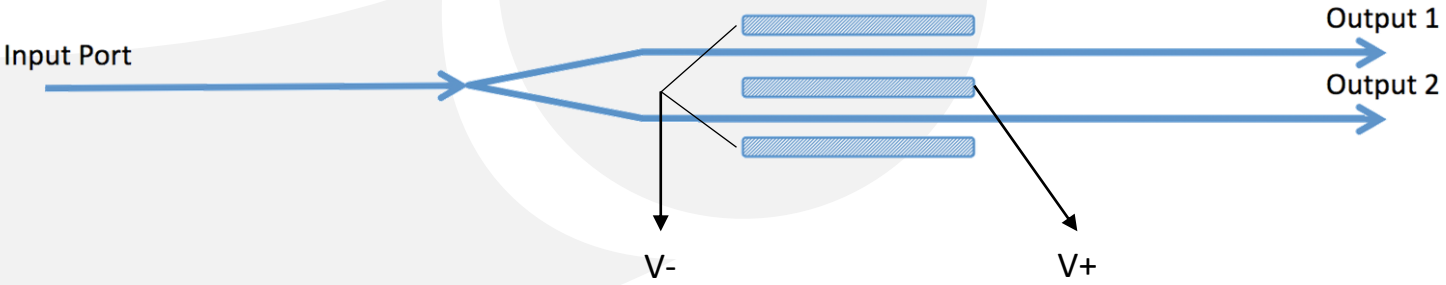
FEATURES

- 1550 ± 20 nm operation
- PM input and output port
- Polarization extinction ratio > 60 dB
- Low Vπvoltage 4.2 V
- Polarization crosstalk < -20 dB
- Unpackaged chip available

USE IN

- Fiber Optic Interferometers
- Fiber Optic Current Sensor (FOCS)
- Differential Phase Shifter
- Hydrophone and other optic sensitive fields
- Research and development

FUNCTIONAL DIAGRAM



FOCS-1550-PG

SPECIFICATIONS

GENERAL

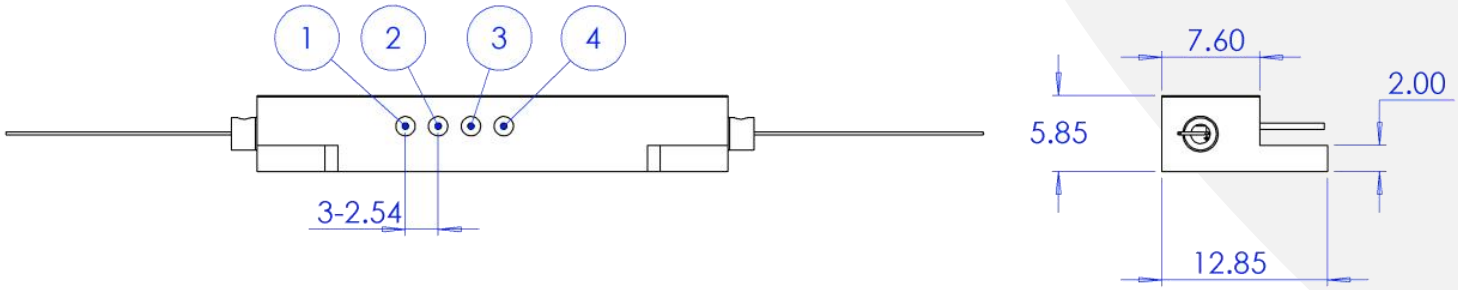
Operating Wavelength	1550 ± 20 nm
Pigtailed Insertion Loss	4.2 dB typ., 4.5 dB Max.
Split Ratio	50 ± 5%
Half-wave Phase Modulation Voltage, $V\pi$	4 V typ., 4.5 V max.
Bandwidth 3 dB drop EO	175 MHz typ.
Polarization Extinction Ratio	≥ 60 dB
PM Pigtail Crosstalk	≤ -20 dB
Intensity Modulation	≤ 0.1 % typ
Electrode Type	Push-Pull
Maximum Input Voltage	+/- 15 V
Operating Temperature	-15°C to + 65°C (Standard)

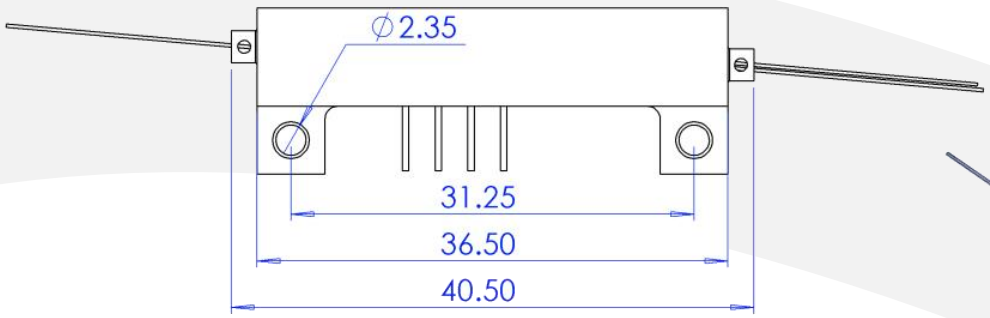
MECHANICAL

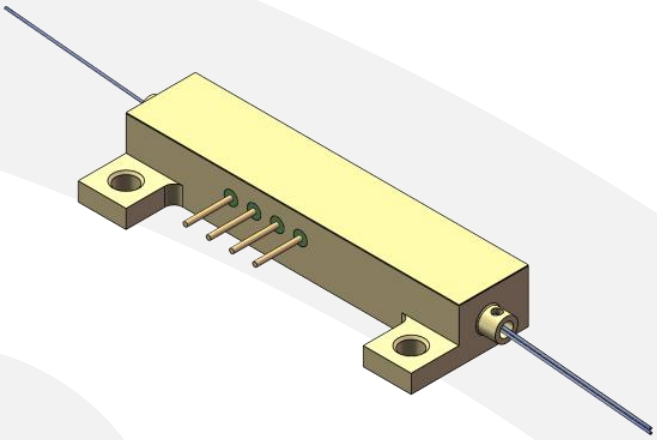
Housing Material	Stainless Steel
Input/Output Fiber Type	Corning RCPM15 (80µm) (125µm fiber Available)
Fiber Length	1.5m (customizable)
Fiber Orientation	Slow Axis aligned to TE Mode
Substrate Material	LiNbO3
Crystal Orientation	X-cut, Y-propagation
Waveguide Process	Annealed Proton Exchange

FOCS-1550-PG

MECHANICAL DRAWING







*Unit: mm

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

* Case Ground