DEVICE Multi-functional Integrated Optical Chip, ISSO and the optic Gyroscope (FO 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 is fabricated with Proton Exchange (PE) optical waveguides. The MIOC-1550-BC 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 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 Virvoltage 4V • Delarization extinction ratio > 60 dB • Low Virvoltage 4V USE IN • Fiber Optic Gyroscope (FOG) • Fiber Optic Current Sensor (FOCS) • Hydrophone and other optic sensitive fiel FUNCTIONAL DIAGRAM • Hydrophone and development		MIDC-1550-BC
The Optilab MIOC-1550-BC 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 is fabricated with Proton Exchange (PE) optical waveguides. The MIOC-1550-B 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 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 3.5 dB - Polarization extinction ratio > 60 dB • Low Vrtvoltage 4V - Polarization crosstalk < -20 dB - Unpackaged chip available USE IN • Fiber Optic Gyroscope (FOG) - Fiber Optic Current Sensor (FOCS) • Hydrophone and other optic sensitive fie - Research and development FUNCTIONAL DIAGRAM • Diagram • Hydrophone and other optic sensitive fie - Research and development		
FEATURES • 1550 ± 20 nm operation • PM input and output port • Low Vπvoltage 4V • Polarization extinction ratio > 60 dB • Fiber Optic Gyroscope (FOG) • Fiber Optic Current Sensor (FOCS)	DEVICE	Multi-functional Integrated Optical Chip, 1550 nm
 PM input and output port Low insertion loss 3.5 dB Polarization extinction ratio > 60 dB Polarization extinction ratio > 60 dB Piber Optic Gyroscope (FOG) Fiber Optic Current Sensor (FOCS) Hydrophone and other optic sensitive fiel Research and development 	OVERVIEW	electro optic phase modulators. Based on Lithium Niobate (LiNbO3), MIOC-1550 is fabricated with Proton Exchange (PE) optical waveguides. The MIOC-1550-BC 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 assures high reliability and performance over wide temperature
Fiber Optic Current Sensor (FOCS) Research and development FUNCTIONAL DIAGRAM Phase Modulator Out	FEATURES	 PM input and output port Polarization crosstalk < -20 dB Low insertion loss 3.5 dB Unpackaged chip available
Phase Modulator Out	USE IN	
	FUNCTIONAL	DIAGRAM
Input Port	Input Port	Phase Modulator Output 1
Phase Modulator Ou		Phase Modulator Output 2



MIOC-1550-BC

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
Intensity Modulation	≤ 0.1%
Electrode Type	Push-pull
Pigtail Compatibility	80 µm Clad
Operating Temperature	-45 °C to +70 °C

MECH	ANICAL
	AINIL AL

Dimensions	1 mm x 1.8 mm x 22.5 mm	
Electrode	Gold Plated	
Substrate Material	LiN603	
Crystal-Orientation	X-cut, Y-propagation	
Waveguide Process	Proton Exchange	
Output Waveguide Spacing	400 µm	

