

EX-FMIOC-3-XL0X

Description

EX-FMIOC-3-XL0X is LiNbO₃ Multi-Functional Integrated Optics Chip (MIOC) includes a linear polarizer, acts as polarizer and depolarizer; a Y-branch waveguide, acts as optical power splitter and combiner. It works at 1310 nm range.

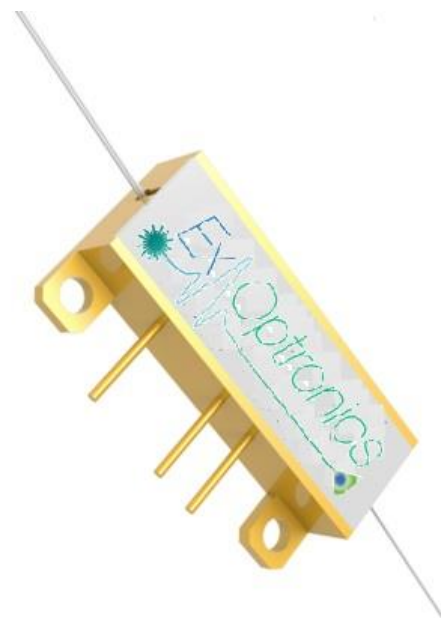
Multi-Functional Integrated Optics Chip (MIOC) has the characteristics of high reliability, low insertion loss, high polarization extinction ratio. Micro-electronic, micro-optical processes and fiber pigtail precision alignment are taken in the MIOC.

Key features

- X-Cut, y-propagating LiNbO₃
- Low Insertion Loss
- High Polarization Extinction Ratio
- Small Temperature Dependent Loss
- Push-pull electrode design
- Electro-optic Phase Modulation Linearity
- Excellent Consistency and Reliability

Applications

- Fiber Optic Gyroscope (FOG)
- Fiber Optic Current Transformer(FOCT)
- Optical Coherence Tomography (OCT)
- Other Fiber Optic Sensing



Absolute Maximum Rating:

Parameter	Sym.	Condition	Rating	Unit
Storage Temperature	T _s	-	-55 to +85	°C
Operating Temperature	T _{op}	-	-45 to +70	°C
Power supply voltage	V _{cc} /V _{ee}		30	V
Lead soldering temperature	T _p	-	<260	°C
Lead soldering time	t _p	-	<10	sec



ExOptronics, Inc

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Electro-Optical Characteristics:

(Tested under Tc=25°C unless otherwise specified.)

Parameter	Symbol	Performance			Unit
		Min	typical	Max	
Operating Wavelength Band	λ	1310 $\pm$ 40			nm
Insertion loss	R _s	-	-	3.5	dB
Insertion loss change @full temperature	Δ IL	-	0.35	0.5	dB
Splitter Ratio	D	47	50	53	%
Splitter Ratio change @full temperature	Δ D	$\pm$ 5			%
Pigtail Polarization Crosstalk(PPC)	C _T	-	-	30	dB
PPC change @ full temperature	C _T		-27	-23	dB
Return loss				-55	dB
Remain Intensity Modulate	RIM		$\leq$ 5/10000	$\leq$ 21000	dB
Half Wave Voltage	V _{HW}		3.5	4.0	V
Waveform Slope	W _S			$\leq$ 1/250	-
3dB Bandwidth	f _{3dB}	>300			MHz

Ordering Options:

EX-FMOIC-3-XL0X

Product code	Input pigtail	Output pigtail	Axis Alignment
EX-FMOIC-3-CL03	125/250 PM	80/165 PM	Fast
EX-FMOIC-3-CL04	125/250 PM	80/165 PM	Slow
EX-FMOIC-3-LL03	80/165 PM	80/165 PM	Fast

- Pigtail 125/250, 80/165 are selectable,
- Fiber length 1.2 meter default



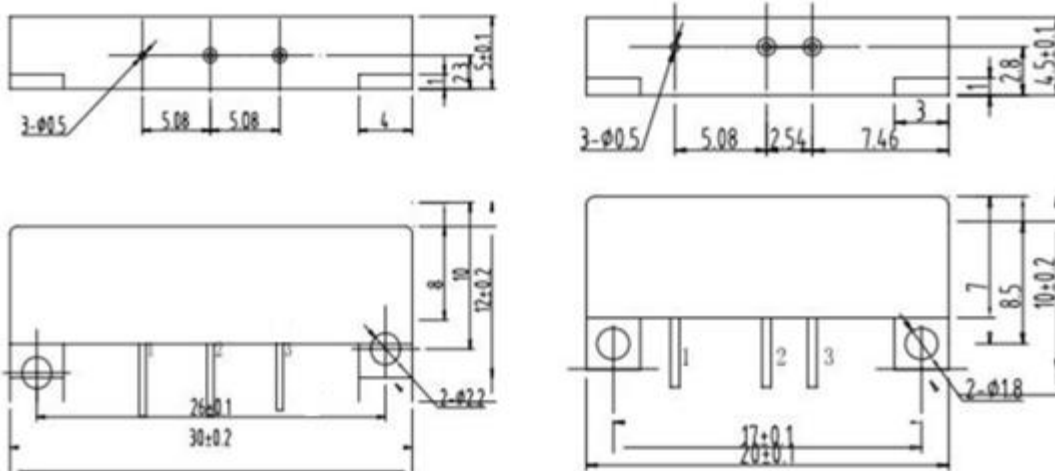
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Outline Drawing - Unit: mm



PIN assignment:

Items	Description
1	Ground(GND)
2	Signal
3	Signal