

Passive Optical Networks

Faraday mirror/Faraday rotator



INTRODUCTION::

Fibrain FRM Faraday mirrors and rotators are fully passive devices which rotate the plane of polarization of light by a predefined angle. In the most often encountered form they work as polarization plane-rotating mirrors, which turn the output polarization plane by 90 degrees compared to the input light, when outputting the light through the same port as the input. Faraday rotators utilize the magneto-optic effect. Fibrain FRM devices offer tight rotation control, reduced insertion loss, very good stability and compact dimensions. A number of standard options are available, as well as customized solutions (non-standard spectral ranges, connectors, packaging and so on).

APPLICATIONS:

Optical amplifiers, including erbium doped (EDFAs)
Fiber lasers
Fiber interferometers
Fiber optic sensors

FEATURES AND ADVANTAGES:

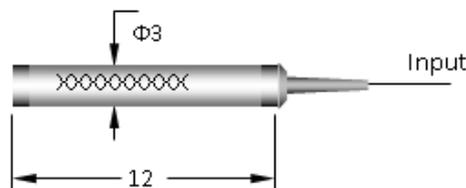
Wide spectra working range
-5/+65 °C temperature working range
Very low insertion loss
Good temperature stability
Compact housings
Customizable parameters

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TECHNICAL SPECIFICATION:

Parameter	Unit.	Value	Comments
Operating wavelength range	nm	1527-1563	
Faraday rotation angle	deg	90+/-1	Dual pass
Max. insertion loss	dB	0.6	Without connectors, extra 0.3 dB with connectors
Max. PDL	dB	0.1	Without connectors, extra 0.05 dB with connectors
Fiber type		652.D	
Operating temperature range	deg C	-5/+65	
Max. power handling	mW	200	
Dimensions	mm	OD3, L12	SST metal pipe
Cable type	um	900	LZSH-type

HOUSING SCHEMATIC VIEW::



REFERENCE SYSTEM

Series	Type	Fiber type	Operating band	Faraday rotation angle	Cable length	Cable type	Housing	Connector type
FRM	G0	1 – G.652D	13 – 1310 nm	45 – 45 deg	0 – 0.5 m	90 – 900 μm	1 – OD3xL12 mm SST pipe	XX - no conn.
	G1	2 – G.657A	14 – 1480 nm	90 – 90 deg	1 – 1 m	20 – 2.0 mm	2 – 100x26x10 mm black box	SC – SC UPC
		3 – Panda 1550	15 – 1550 nm		2 – 2 m	30 – 3.0 mm		SCA – SC APC
			16 – 1625 nm		3 – 3 m			FC – FC UPC
								FCA – FC APC
								SC1 – PM SC UPC, SLOW AXIS
								C2 – PM SC UPC, FAST AXIS
								FC1 – PM FC UPC, SLOW AXIS
								FC2 – PM FC UPC, FAST AXIS
								FCA1 – PM FC APC, SLOW AXIS
								FCA2 – PM FC APC, FAST AXIS

Ordering example:

FRM-G1-1-15-90-1-90-1-FCA – FIBRAIN FARADAY MIRROR, G.652.D FIBER, 1550NM BAND, 90 DEGREE ROTATION ANGLE, 900UM, 1M PIGTAIL, SST PIPE, FC APC CONNECTOR

Important notice

Buyer and/or user of this product has to make sure before using this product that it is suitable for the intended use. All questions of liability relating to this product are subject – in accordance with the prevailing – to the Terms of Sales of the selling Fibrain subsidiary.