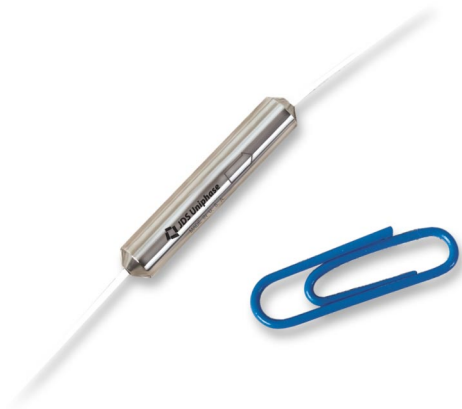# *Product Bulletin*

In-Line Fiber Faraday Rotator

The in-line, fiber faraday rotator is a passive device that provides 45 degree rotation, independent of input light polarization states. The product offers excellent performance, including lowest possible insertion loss and a high return loss. The device is rugged and environmentally stable, making it suitable for laboratory, field, and system use.
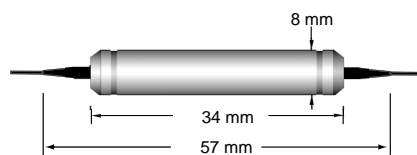
Key Features
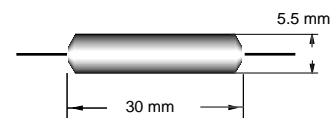- High extinction ratio
- Low loss
- High power handling

Applications
- Advanced optical systems
- Instrumentation

Package Dimensions: Standard

8 mm

34 mm

57 mm

Package Dimensions: Compact

5.5 mm

30 mm

Specifications

Parameter		Premium	A Grade
Center wavelength		1310, 1480, 1550 nm	1310, 1480, 1550 nm
Spectral width	Minimum	10 nm	10 nm
Insertion loss[2]	Typical	0.35 dB	0.5 dB
	Minimum	0.5 dB	0.8 dB
Extinction ratio[2]	Minimum	35 dB	35 dB
Return loss	Minimum	65 dB/60 dB	60 dB/55 dB
Faraday rotation angle tolerance	Maximum	0.5°	1°
Faraday rotation angle (in/out)		45°	45°
Optical power	Maximum	300 mW	300 mW
Tensile load	Maximum	5 N	5 N
Operating temperature[1]		-20 to 60 °C	-20 to 60 °C
Storage temperature[1]		-40 to 85°C	-40 to 85°C

1. -20 °C to 70 °C for 3.0 mm cable.
2. Without connectors.

Environmental Tests

Temperature cycling	-40 to 80 °C for 14 days; rate 1 °C/min; dwell 1 hour at extremes
High temperature bake	80 °C for 2,000 hours
Vibration	3 axes 20 g's at 20 to 2,000 Hz
Shock	3 axes, 100 g's, 11 ms
Maximum tensile load	10 N force for 10 sec.

Ordering Information

Indicate your requirements by selecting one option from each configuration table. Please print the corresponding codes in the available boxes to form your part number. For more information on this or other products and their availability, please contact your JDS Uniphase account manager, or call 1-877-550-JDSU toll free in the U.S. and Canada, or visit www.jdsuniphase.com.

Sample: IFFR10PC41000

IFFR ☐ 0 ☐ ☐ ☐ ☐ ☐ 0 0

Code	Wavelength
1	1560 nm
2	1550 nm[1]
3	1540 nm
4	1480 nm[1]
5	1310 nm[1]
6	1300 nm

Code	Model
P	Premium
A	A grade

Code	Package
S	Standard
C	Compact

Code	Fiber Type
1	250 μm fiber (SMF-28)
3	900 μm loose tube (SMF-28)
4	900 μm tight buffer (SMF-28)[1]
5	3 mm cable (SMF-28)

Code	Fiber Length
1	1 meter[1]
2	2 meters
3	3 meters

Code	Connector[2]
0	No connector[1]
1	FC/PC
2	FC/SPC
3	FC/APC
4	SC/SPC
5	SC/APC
6	Biconic
7	D4
8	ST
9	FC/UPC
A	SC/UPC
D	MU

SMF-28 is a registered trademark of Corning Incorporated.
ST is a registered trademark of Lucent Technologies.

1. Standard.
2. Insertion loss and return loss depend on connector type.

JDS Uniphase

U.S. and Canada Toll Free: 877-550-JDSU
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