

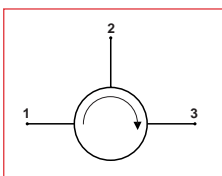
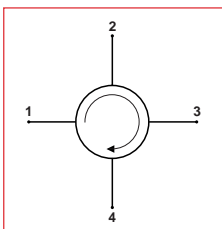


High Reliability Optical Circulator

Key Features

- Compact in-line configuration
- High isolation
- Low Loss
- Low PDL
- PMD Free
- Proven hermetic package design
- Qualified to Telcordia GR1221

Functional Diagram

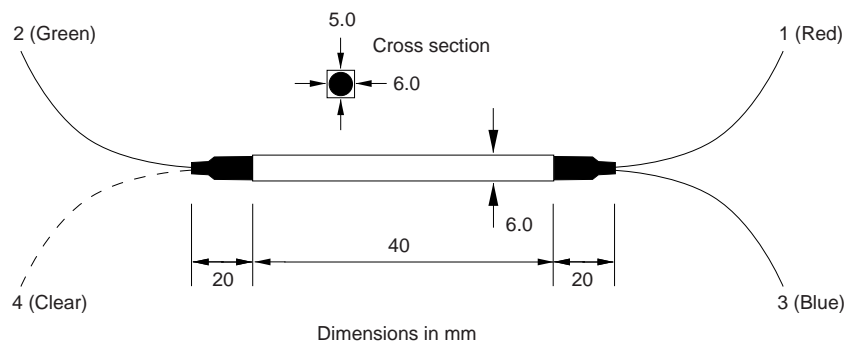


Description

Optical circulators are passive, multi-port, non-reciprocal optical devices that utilise the Faraday effect to route light from port 1 to port 2, port 2 to port 3, etc. The HRC uses a micro-optic two-stage Faraday rotator design with short optical path lengths to achieve

benchmark optical performance with high environmental stability. Our innovative approach gives low polarisation dependence and PMD, with low insertion loss and high isolation over extended temperature and wavelength ranges.

Outline Diagram



High Reliability Optical Circulator

Characteristics

	C Band	L Band
Peak Isolation (2-1, 3-2 and 4-3)	> 50dB	> 50dB
Isolation over operating λ range	> 45dB	> 45dB
Isolation (T=0 to 70°C)	> 40dB	> 40dB
Directivity (port 1-3 and 2-4)	> 55dB	> 55dB
Return Loss	> 50dB	> 50dB
Insertion Loss	< 0.9dB (0.6dB typ)	< 1.0dB (0.7dB typ)
Polarisation Dependent Loss	< 0.15dB (0.05dB typ)	< 0.15dB (0.05dB typ)
Polarisation Mode Dispersion	< 0.05ps	< 0.05ps
Operating Wavelength	1525 - 1565nm	1570 - 1605nm

Device Ordering Information

HRC-[operating wavelength]-Q[number of ports]-101[connector]

1550 for C Band

3

0 No Connector

1590 for L Band

4

1 FC/SPC

2 SC/SPC

3 FC/APC

4 SC/APC

E.g. HRC-1550-Q4-1014 is a 4 port, C Band circulator with SC/APC connectors

Nortel Networks

High Performance Component Optical Solutions

Brixham Road

Paignton

Devon

TQ4 7BE

United Kingdom

Tel: +44 1803 662948

Fax: +44 1803 662801

Email: opticalcomponents@nortelnetworks.com

www.nortelnetworks.com/hpocs

All data in this document is subject to change in accordance with Nortel Networks Corporation policy of continual product improvement. No data in this document is intended to be used in connection with any contract except as may be first confirmed in writing by Nortel Networks Corporation. The publication of information in this document does not imply freedom from patent or other rights of Nortel Networks Corporation or others.

© 2000 Nortel Networks. All rights reserved.

© Nortel Networks, Nortel Networks Logo, the Globemark and Unified Networks are trademarks of Nortel Networks.

Information in this document is subject to change without notice. Nortel Networks assumes no responsibility for errors that might appear in this document. Printed in England.

