

Product Bulletin



CR5500 Series 3 and 4 Port Optical Circulators

Optical circulators are non-reciprocal devices that redirect light from port to port sequentially in only one direction. In advanced optical communication systems, optical circulators are used for bidirectional transmission, WDM networks, fiber amplifier systems, and for optical time domain reflectometer (OTDR) monitoring.

JDS Uniphase's new optical circulators feature a small package, high isolation (45 dB typical) over a wide operational wavelength range; low insertion loss (0.7 dB typical); low polarization dependent loss (PDL, 0.05 dB typical); low polarization mode dispersion (PMD, 0.01 ps typical); and excellent stability.

Key Features

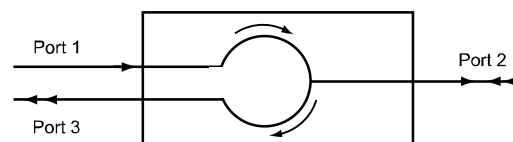
- Low insertion loss
- High isolation
- Low PDL
- Low PMD
- High return loss
- Miniature package

Applications

- Fiber amplifier systems
- WDM add/drop
- WDM networks
- Bidirectional transmission systems
- OTDR and sensing systems
- Test instruments

Configuration

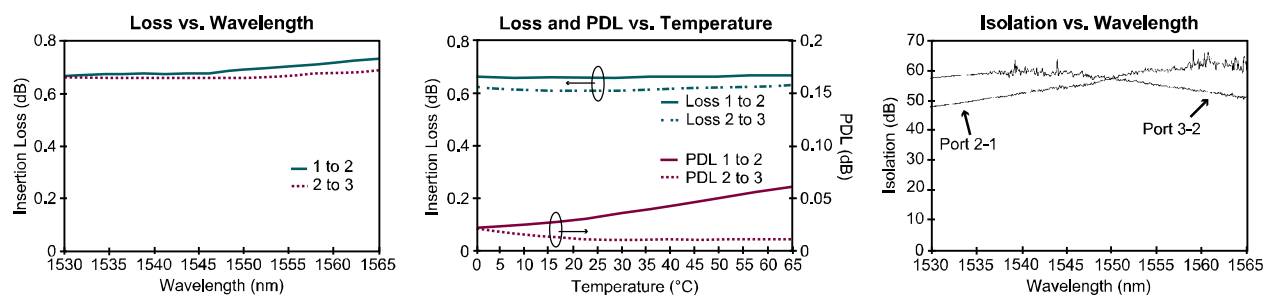
3 Port



Port 1 → Port 2
Port 2 → Port 3

Performance

3 Port



Specifications

Parameter	3 Port Premium Grade – CR5500-P	3 Port Standard Grade – CR5500
Wavelength	1530 to 1565 nm	1530 to 1565 nm
Number of ports	3	3
Optical routing	Port 1→2→3	Port 1→2→3
Insertion loss ¹	0.7 dB typical, 0.9 dB maximum	0.8 dB typical, 1.0 dB maximum
Isolation (over wavelength)	45 dB typical, >40 dB minimum	40 dB typical, >30 dB minimum
PDL	0.05 dB typical, 0.12 dB maximum	0.07 dB typical, 0.15 dB maximum
PMD	0.01 ps typical, 0.05 ps maximum	0.01 ps typical, 0.05 ps maximum
Directivity (1→3)	>50 dB	>50 dB
Return loss ¹	>50 dB	>45 dB
Fiber type	9/125/250 µm SMF	9/125/250 µm SMF
Fiber length	1.5 m (no connectors), 1.0 m (with connectors)	1.5 m (no connectors), 1.0 m (with connectors)
Dimensions (cylindrical D x L)	5.5 x 61 mm	5.5 x 61 mm
Operating temperature	0 to 50 °C	0 to 50 °C
Storage temperature	-40 to 85 °C	-40 to 85 °C

1. Excluding connectors (if installed).

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 local JDS Uniphase sales representative or JDS Uniphase directly at 613 727-1303, or by fax 613 727-8284, or via email at sales@ca.jdsunph.com, or visit our Web site at www.jdsunph.com.

Sample: CR5500+AS3PFP

CR5500+A

Code	Grade
S	Standard
P	Premium

Code	Number of Ports
3P	3

Code	Reconfigured Connector Type
FP	FC/PC
FA	FC/APC
SC	SC/PC
SU	SC/APC
LC	LC
NC	No Connector

Note:
The pigtail length is 1.5 m without connectors and 1.0 m with connectors.

☐ For Internal Use Only



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