

CIR and NCIR Three Port Circulators



General Photonics' fiber optic circulators are compact, high-performance light-wave components that separate signals traveling in opposite directions along fibers by transmitting signals from port 1 to port 2 and port 2 to port 3, while blocking signals traveling in the opposite directions. They offer excellent performance characteristics, including low insertion loss and high isolation. They are ideal components for add/drop filters, EDFAs, dispersion compensation, bi-directional communication and other applications.

Specifications:¹

Center Wavelength	1310, 1550 nm		1064 nm	
Fiber Type	SM	PM ⁴	SM	PM
Bandwidth	±20 nm	±30 nm	±5 nm	±5 nm
Insertion Loss ²	0.6 dB typical 0.8 dB max.	0.7 dB typical 0.9 dB max.	1.8 dB typical 2.2 dB max.	1.8 dB typical 2.1 dB max.
Return Loss	50 dB	55 dB	50 dB	50 dB
PDL	0.1 dB	N/A	0.2 dB	N/A
PMD	0.1 ps	N/A	0.1 ps	N/A
Extinction Ratio	N/A	22 dB min.	N/A	20 dB min.
Isolation (2 → 1 or 3 → 2, 23 °C)	50 dB typical 40 dB min.		28 dB typical 20 dB min.	30 dB typical 25 dB min.
Cross Talk	50 dB		45 dB	50 dB
Optical Power Handling	300 mW			
Operating Temperature	0 to 70 °C		0 to 50 °C	
Storage Temperature	-40 to 85 °C			
Dimensions	Ø 5.5 x 50 mm (SM pigtailed, 1310 or 1550 nm) 34 x 8.4 x 8.4 mm (L x W x H) (SM 1064 nm) Ø 5.5 x 35 mm (PM pigtailed) 3.5" (L) x 1.5" (W) x 5/8" (H) (NoTail™) ³			

Notes:

1. Values are referenced without connectors
2. Insertion loss for NoTail™ version can be 0.1 dB + connector loss higher.
3. 1064 nm SM version not available in NoTail configuration.
4. Standard configuration for PM circulators is fast axis blocked. Versions with both axes open may be available, but with different package size and specs.