

Key Features

- Low Insertion Loss
- Passive, Athermal Design
- Flat-Top Spectral Response
- Customized Channel Plans and Spectral Characteristics

Applications

- Long-Haul and Metropolitan DWDM Networks
- HFC DWDM networks
- Single-Fiber Bi-Directional Networks



Product Overview

Confluent Photonics' G3-200 is an industry leading Mux/Demux component for DWDM networks requiring 200 GHz channel spacing. Simultaneously providing unsurpassed specifications for insertion loss, flat filter shape, and crosstalk, the G3-200 is ideal for applications where high performance and high reliability are required such as long-haul, metropolitan, and HFC DWDM. The G3-200 is completely athermal and requires no power or temperature-control infrastructure while operating from -5°C to 65°C (standard) or -40°C to +85°C (extended range). Ultra-low insertion loss across all channels (typically less than 3.0 dB) means you can reduce or eliminate optical amplifier usage. The flat-top spectral response provides low passband ripple while minimizing CSO distortions that can occur to analog signals in Gaussian filter. The G3-200 is built on Confluent Photonics' proven and reliable free-space diffraction grating technology platform. This component performs reliably under various environmental conditions, exceeding the exacting requirements of today's world-class optical networks.

Product Specifications

(Valid over full temperature range, within specified passband, across all channels and polarizations)

Channel Count	20 ¹	Typical Insertion Loss (IL)	3.0 dB
Channel Spacing	200 GHz	IL Uniformity Across All Channels	≤1.0 dB
Channel Plan	Customer specified on ITU Grid ² , C- and/or L-Band	Ripple	≤0.5 dB
Filter Shape	Flat ³	Adjacent Isolation	≥27 dB
0.5-dB Filter Width	0.52 nm	Non-adjacent Isolation	≥35 dB
Channel Passband	0.33 nm	Polarization Dependent Loss (Typ.)	<0.35 dB
Fiber Connector	SC/APC, others upon request	Optical Return Loss	>40 dB
Operating Temperature Range (passive athermal design)	-5 to +65 °C ⁴	Chromatic Dispersion	<5 ps/nm
Package Dimensions (fiber management included)	8" L x 3.8" W x 1.7" H	Polarization Mode Dispersion	<0.1 ps/nm

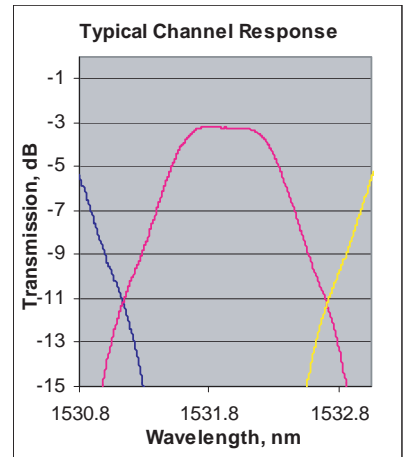
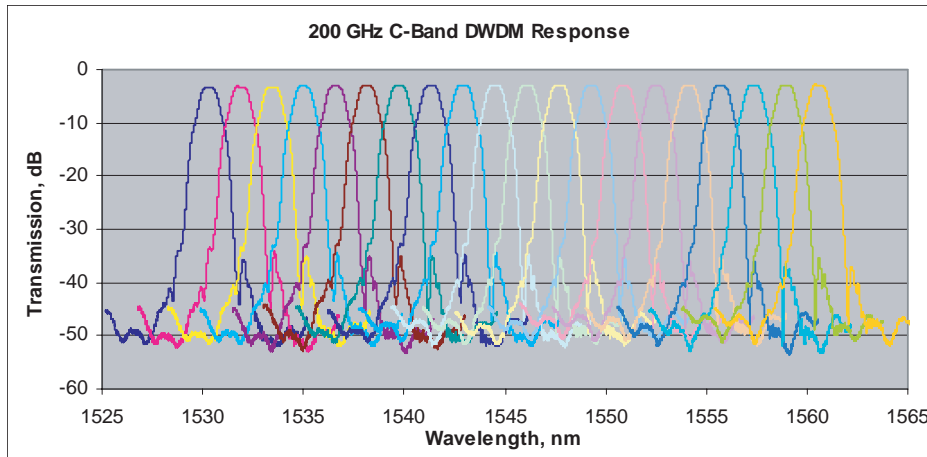
¹ Other configurations available up to 52 channels

² ITU offsets available for interleaved solutions

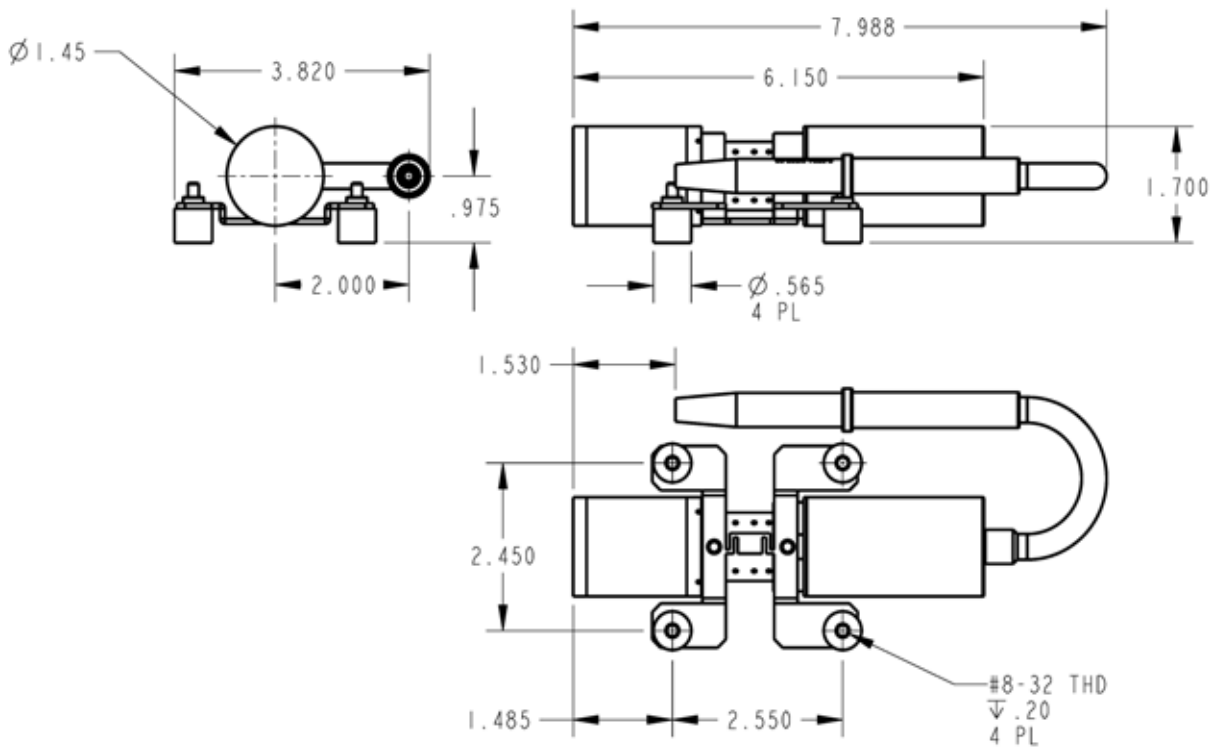
³ Several filter shape options available

⁴ Extended temperature range of -40 to +85°C available

Spectral Response



Mechanical Drawing (All dimensions in inches)



Specifications subject to change without notice. Rev. 10/04
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