Lightchip™
Optical Networking

G3-200 OMDM
200 GHz Mux/Demux

Available today - C or L Band

Key Features:
- Ultra low insertion loss (< 4.0 dB typical)
- Passive (no temperature control required)
- Flat top spectral response
- Universal product for both mux and demux applications

Applications:
- Long-haul and metropolitan DWDM networks
- HFC DWDM networks
- Single fiber bi-directional networks

Product Overview

The G3-200 OMDM is an Optical Mux/Demux that is ideal for high performance, high reliability, mid-channel count applications. It is fully interchangeable for either multiplexing or demultiplexing in the full C & L band ranges. It is athermal, and requires no power or temperature control while operating from -5 C to 65° C.

The flat top spectral response provides small insertion loss variation across the passband while minimizing spectral response narrowing due to multiple mux/demux concatenations thus reducing the cost of closed loop laser control.

Excellent channel uniformity across the entire channel plan eliminates the need to gain balance due to mux/demux deficiencies. Ultra low insertion loss across all channels allows for the elimination or reduction of optical amplifiers in the network.

Lightchip's robust dense wave division multiplexer/demultiplexers are built on proven and reliable diffraction grating technology. The high channel count passive solution performs reliably under various environmental conditions allowing for superb network design flexibility. Lightchip's industry leading specifications meet and exceed the exacting requirements of today's world-class optical networks.

The G3-200 OMDM is available in either the performance (P) or high performance (HP) configuration. Channel plans are configurable to user requirements. Customized user specification for channel performance are available as well.

Product Specifications
(Valid over full temperature range)

	P*	HP*
Number of Channels	20[1)]	20[1)]
Channel Spacing	200 GHz	200 GHz
Channel Plan	Customer specified on ITU Grid [2)], C or L Band	
Passband Shape	Flat [3)]	Flat [3)]
Max. Insertion Loss (IL) (within passband, incl. connectors)	4.3 dB	3.8 dB
IL Uniformity Across All Channels (incl. ripples)	≤ 1.0 dB	≤ 1.0 dB
0.5 dB Channel Passband	0.33 nm	0.33 nm
1.0 dB Channel Passband	0.50 nm	0.50 nm
3.0 dB Channel Passband	0.75 nm	0.75 nm
0.5 dB Filter Width	0.52 nm	0.52 nm
Passband Uniformity (ripple)	≤ 0.5 dB	≤ 0.5 dB
Adjacent Crosstalk	≥ 25 dB	≥ 27 dB
Non-adjacent Crosstalk	≥ 30 dB	≥ 30 dB
Polarization Dependent Loss	< 0.5 dB	< 0.5 dB
Optical Return Loss	> 40 dB	> 40 dB
Operating Temperature Range (passive athermal design)	-5 to +65 °C	-5 to +65 °C
Fiber Connector	SC/APC, others upon request	

[1)] Other configurations available from 16 to 24 channels
[2)] ITU offsets available for interleaved solutions
[3)] Passband shape can be tailored upon request

*** Performance (P) or High Performance (HP) versions**
For Product Order Options Contact Lightchip Sales at ext. 242

Telcordia GR-1209-CORE (In process)

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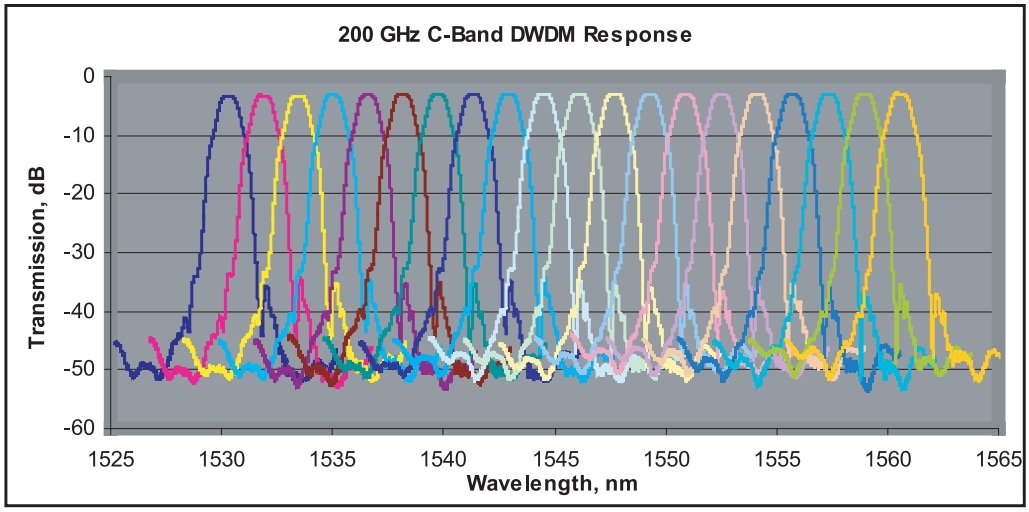
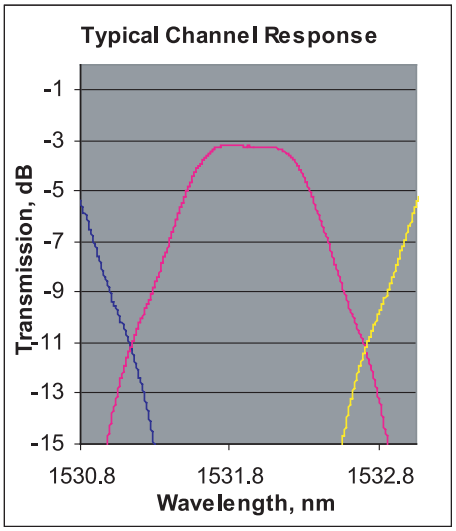
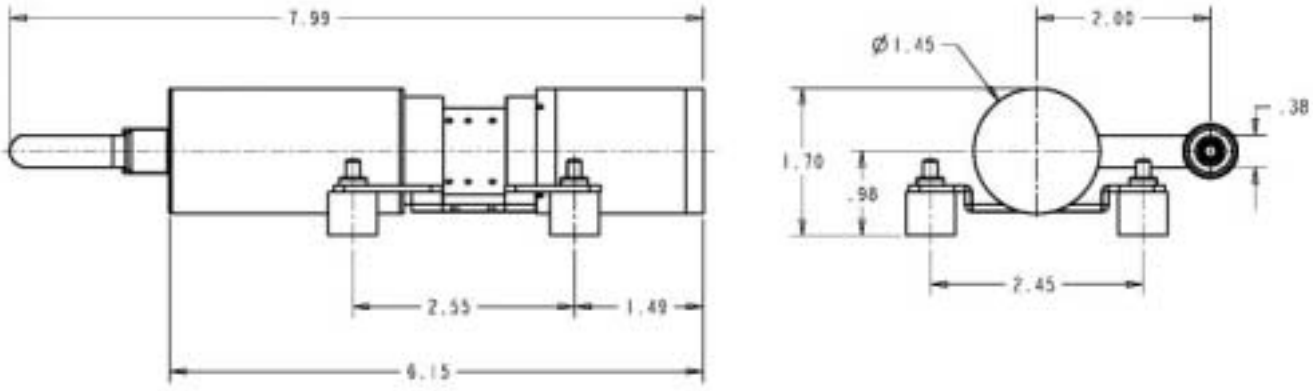
Spectral Response





Mechanical Drawing

Dimensions are in inches.



Specifications Subject to Change With or Without Notice - Rev. 03/04/02