

G4-100 OMDM Mux/Demux 100 GHz Passive Flat-Top Filter Shape



Available as C Band, L Band or C & L Band

Key Features:

- Ultra low insertion loss
- Passive (no temperature control required)
- Flat top spectral response
- Thin packaging
- 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 G4-100 OMDM is ideal for high performance, high reliability, high (40+) channel count applications. It is interchangeable for either multiplexing or demultiplexing operations on the ITU grid with 100 GHz channel spacing in the C, L or C&L band ranges. It is fully athermal, and requires no power or temperature control while operating from -5 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.

Product Specifications

(Valid over full temperature range)

P*

HP*

Number of Channels	40 ¹⁾	40 ¹⁾
Channel Spacing	100 GHz	100 GHz
Channel Plan.....	Customer specified on ITU Grid ²⁾ C and/or L Band	
Passband Shape	Flat ³⁾	Flat ³⁾
Max. Insertion Loss (IL).....	4.5 dB	4.0 dB
(within passband, incl. connectors)		
IL Uniformity Across All Channels	≤ 1.5 dB	≤ 1.5 dB
(incl. ripples)		
1.0 dB Channel Passband	0.2 nm	0.2 nm
Passband Uniformity (ripple).....	≤ 1.0 dB	≤ 1.0 dB
Adjacent Crosstalk	≥ 25 dB	≥ 25 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....	-5 to +65 °C	-5 to +65 °C
(passively athermal design)		
Fiber Connector.....	SC/APC, others upon request	

¹⁾ Other configurations available up to 48 channels

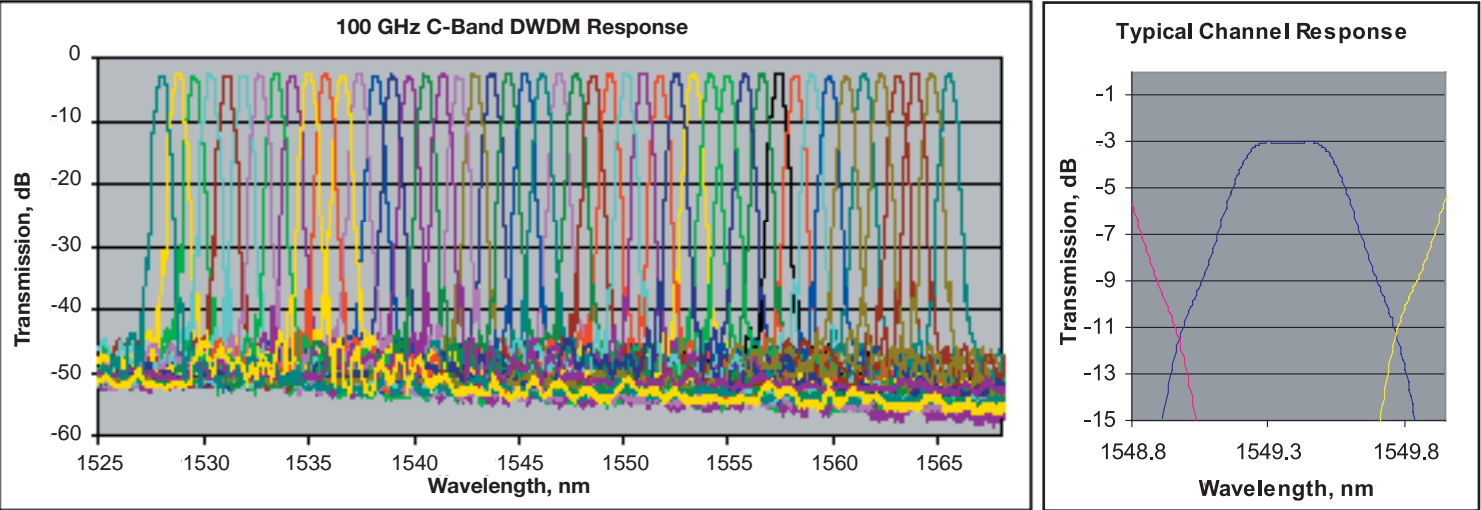
²⁾ ITU offsets available for interleaved solutions

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

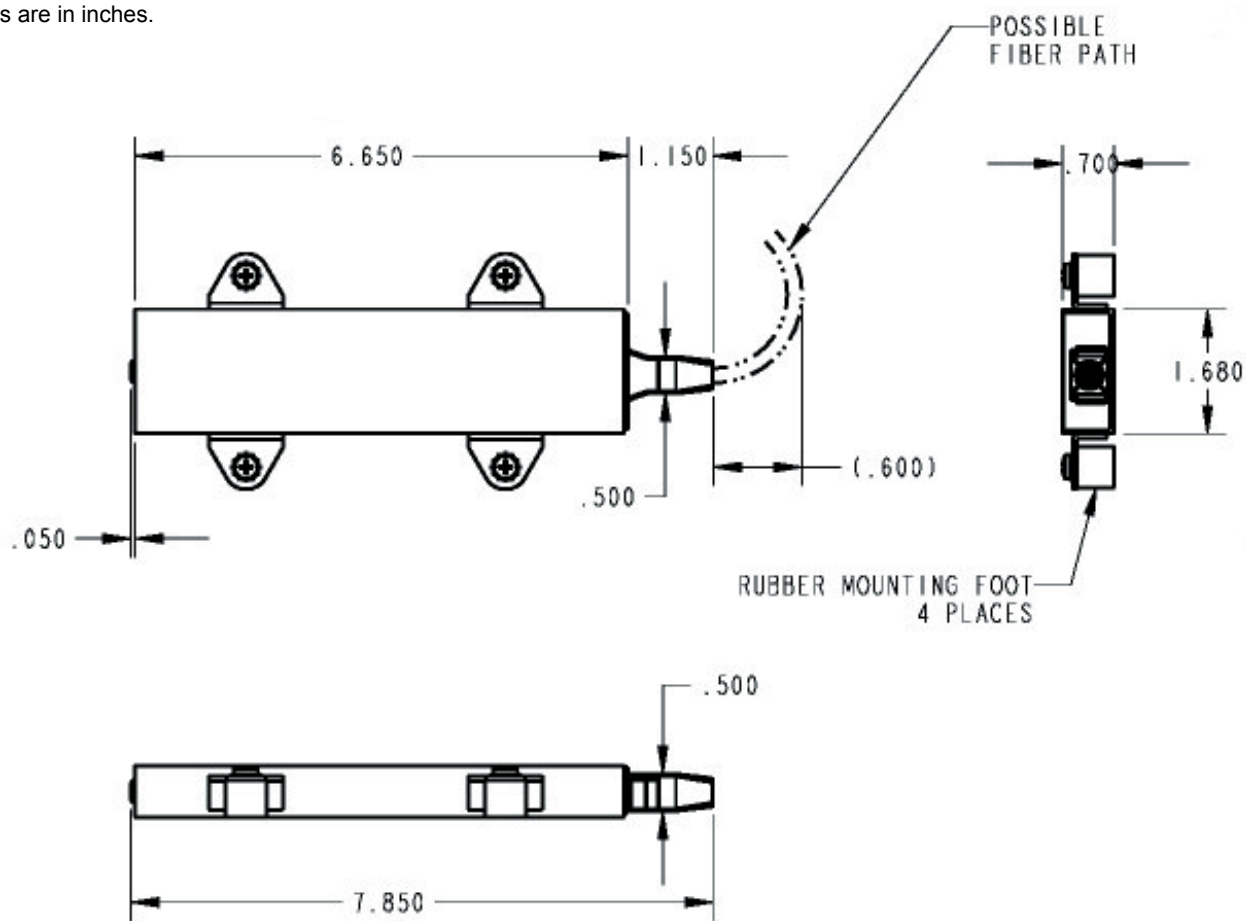
Specifications Subject to Change Without Notice - Rev. 03/04/02

Spectral Response



Mechanical Drawing

Dimensions are in inches.



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