The Gemfire 500 Series of Arrayed Waveguide Gratings (AWGs) are cost-effective, high-performance DWDM mux/demux devices operating on 50GHz channel spacing at the C and L Band ITU grid. The PhotonIC™ planar-processed, silica-on-silicon chips use arrayed channel waveguides to separate or combine multiple wavelengths. Gemfire AWGs provide low insertion loss, excellent channel isolation, ease of fiber handling, and long-term reliability in a compact package. The product is offered with wideband or Gaussian passband options in multiple channel counts. Applications include:

- Metro-Area or Long-Haul DWDM Transmission
- Add-Drop Multiplexing
- Wavelength Selective Routing
- Optical Signal Processing

8 to 80 Channels
Low Insertion Loss & PDL
Low Crosstalk
Gaussian & Wide-Band Options
High Uniformity
Internal Thermal Regulation
Electronics Option
Compact Footprint
MSA-Compliant Option Available
Telcordia GR-1209/GR-1221 Qualified

For product sales, call 1-866-4GEMFIRE.
GAUSSIAN | WIDE-BAND
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Number of channels | 8 - 80 | 8 - 80
Channel spacing | 50GHz | 50GHz
Clear window (specification passband) | 12.5GHz | 12.5GHz
Insertion loss (at ITU grid) ¹ | 2.5dB | 4.5dB
Insertion loss (across clear window passband) ¹ | 4.0dB | 5.0dB
Insertion loss uniformity (40 channel) | 1.5dB | 1.0dB
Insertion loss uniformity (80 channel) | 2.0dB | 1.5dB
-1dB passband | 0.1nm | 0.18nm
Passband uniformity | 1.5dB | 0.4dB
Polarization dependent loss (at ITU grid) | 0.2dB | 0.2dB
Polarization dependent loss (across clear window) | 0.5dB | 0.3dB
Chromatic dispersion | <10ps/nm | <10ps/nm
Differential group delay | 0.5ps | 0.5ps
Adjacent channel crosstalk | -25dB | -25dB
Non-adjacent channel crosstalk | -30dB | -30dB
Maximum integrated crosstalk | -22dB | -22dB
Optical return loss | -40dB | -40dB
Dimensions for 40 channel package ² (L x W x H) | 130 x 65 x 14mm | 130 x 65 x 14mm

Qualified to Telcordia GR-1209/GR-1221

All parameters are worst-case across clear window, temperature and polarization
1. Includes connector loss
2. More compact packaging available

Available with multiple connector types and optional internal control electronics.