



INTEGRATED VARIABLE MULTIPLEXER (V-MUX)



The Gemfire Variable Multiplexer (V-Mux) offers best-in-class performance by uniting our unique Variable Optical Attenuator array with our well-established silica

Arrayed Waveguide Grating technology. The result is a device that offers convenient digital control with low power consumption, fast response time, and outstanding optical performance. The V-Mux is available in various configurations of 8-80 channels with an attenuation range of 10, 15 or 20dB, and is offered in both Gaussian and wide-band versions. Example applications for the Gemfire V-Mux include:

- Pre-emphasis at Transmitters
- Dynamic Channel Balancing at MUX Location
- Dynamic Channel Leveling at Add/Drop Sites
- Receiver Overload Control
- Optical Channel Blocking

Low Power Consumption

Wide Attenuation Range

Compact Footprint

Very Low PDL At All Attenuation Levels

8-80 Channels

Gaussian And Wide-Band Options

**Integrated AWG
Temperature Control**



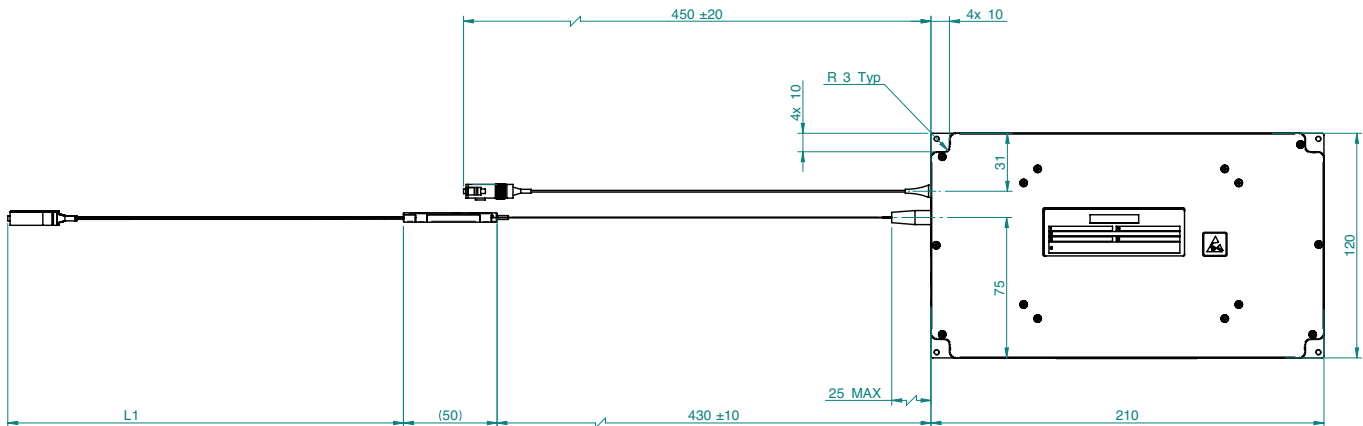
40&48-Channel Wide-Band Specifications (Gaussian option also available)

| | |
|--|------------------|
| Channel Count | 40-48 |
| Channel Spacing | 100GHz |
| Wavelength Range ¹ | 1529-1604nm |
| Clear Window | 200pm |
| Insertion Loss (across clear window) | 7dB |
| Insertion Loss Uniformity | 1.2dB |
| -1dB Passband | 0.4nm |
| Polarization dependent loss (across clear window) ² | 0.6dB |
| Attenuation range ³ | 10dB |
| Chromatic Dispersion | ±20ps/nm |
| Adjacent Channel Crosstalk | -25dB |
| Non-Adjacent Channel Crosstalk | -30dB |
| Maximum Integrated Crosstalk | -22dB |
| Optical Return Loss | -40dB |
| Dimensions (L x W x H) ⁴ | 210 x 120 x 18mm |

All parameters are worst-case across clear window, temperature and polarization

1. Multiple variants offered for C- and L-Band
2. At 0dB of attenuation. Maximum PDL @ 10dB: 0.8dB across clear window
3. 15 or 20dB upon request
4. Standard 40- & 48-channel package. More-compact and custom packages also available.

40- & 48-Channel Standard Package



Available in 8-80 channel configurations with multiple connector types and custom packaging.

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