

AWGM5xxxxxxxxxx

50G Arrayed-Waveguide Grating Multiplexer/Demultiplexer

molex

Arrayed-waveguide grating (AWG) wavelength division multiplexers and demultiplexers at 50GHz channel spacing are based on patent-pending CVD process. These silica-on-silicon waveguides exhibit exceptional material uniformity.

Complemented by our automated robust packaging, Molex's planar lightwave circuits are well suited for demanding telecom applications such as DWDM, long-haul, and metro transmission systems. The AWG offers low insertion loss, accurate channel alignment, very low crosstalk and high channel-to-channel uniformity. This product family complies with Telcordia GR-1221-CORE.

Molex can provide customized designs to meet specialized feature applications. Also, Molex offers modular assemblies that integrate other components to form a full function module.



Performance Specification

AWGM5 Parameters	Gaussian	Flat-top	Unit
Channel Spacing	50		GHz
Number of Channels	Up to 88		
Channel Passband	± 6.25		GHz
Insertion Loss ¹⁾	< 4.0	< 6.0	dB
Uniformity	< 1.5		dB
Polarization Dependent Loss	< 0.5		dB
Adjacent Channel Crosstalk	> 25		dB
Non-adjacent Channel Isolation	> 30		dB
Total Crosstalk	> 20		dB
Return Loss	> 40		dB
Directivity	> 50		dB
Power Consumption	4		W
Maximum Power Handling	300		mW
Fiber Type	Corning SMF-28		
Operating Temperature	-5 to +70		°C
Storage Temperature	-40 to +85		°C

Notes:

[1] The maximum IL is under all states of polarization and within the full operating temperature and wavelength ranges specified.

[2] All the parameters are excluding connectors.

Features

- ◆ Established Silica-on-Silicon Technology
- ◆ Low Insertion Loss
- ◆ Low PDL
- ◆ Extremely Low Crosstalk
- ◆ Low Chromatic Dispersion
- ◆ Telcordia GR-1221-CORE Qualified

Applications

- ◆ DWDM Transmission
- ◆ Wavelength Routing
- ◆ Optical Add/Drop Multiplexing

Options

- ◆ Channel Count: 40, 44, 80, 88 or Customized
- ◆ Wavelength Plan: ITU Grid in C or L-Band
- ◆ Custom Packaging Available
- ◆ RTD/Thermistor Temperature Sensor or Internal Temp Control Option

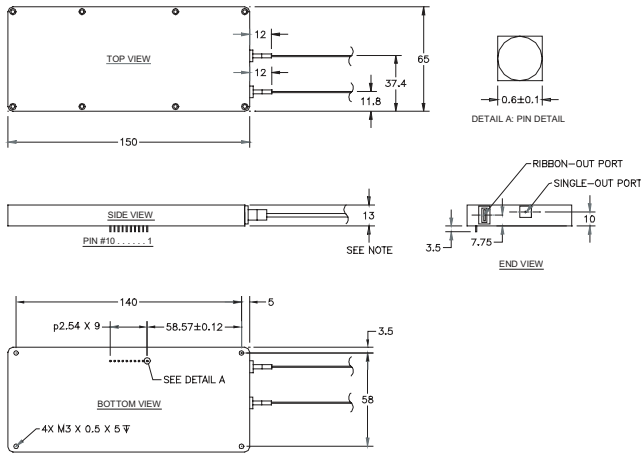
AWGM5xxxxxxxxxx

50G Arrayed-Waveguide Grating
Multiplexer/Demultiplexer



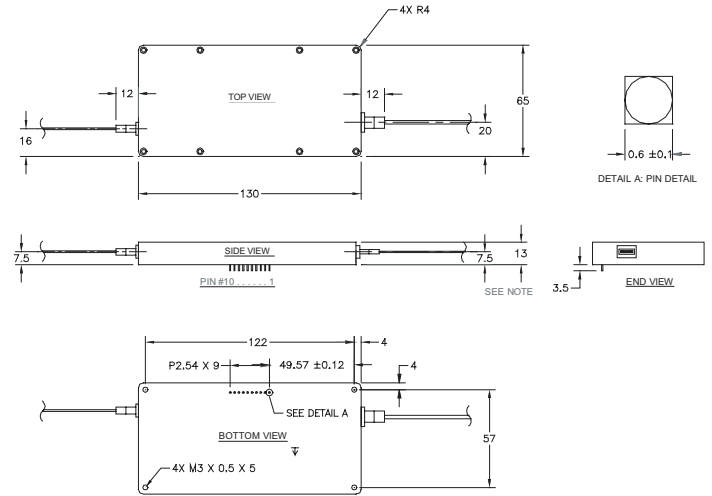
Mechanical Drawing / Package Dimensions

P1:



NOTE:
1. THICKNESS INCREASES TO 16MM FROM 13MM FOR
INTERNAL TEMPERATURE CONTROLLER.

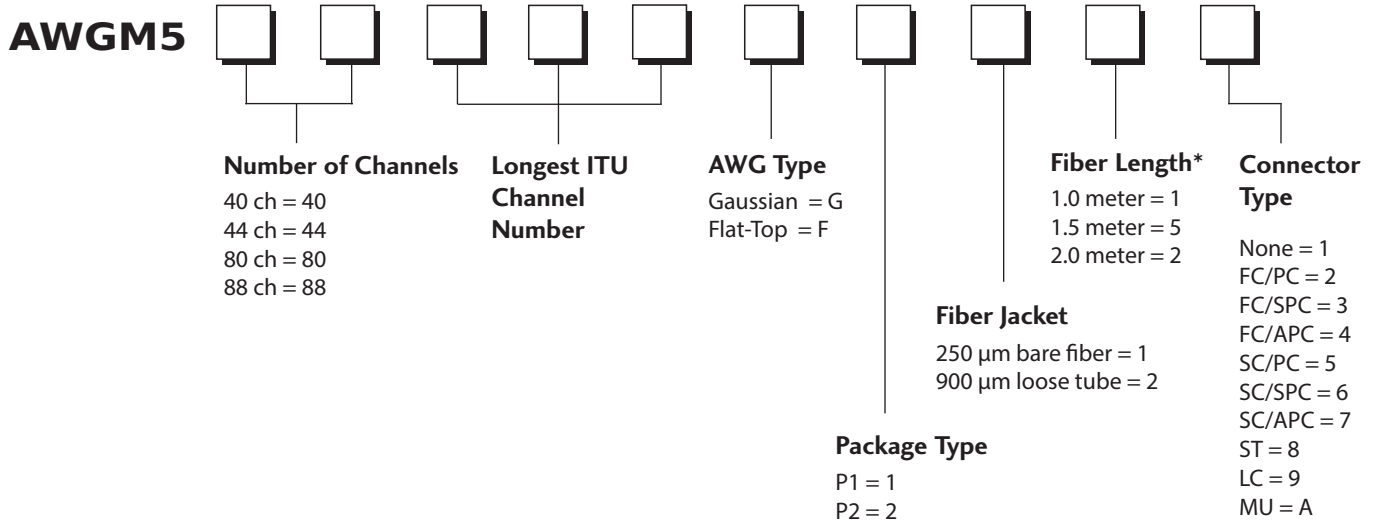
P2:



NOTE:
1. THICKNESS INCREASES TO 16MM FROM 13MM FOR
INTERNAL TEMPERATURE CONTROLLER.

* The mechanical tolerance should be +/-0.2mm on all package dimensions unless otherwise custom specified

Ordering Information



*The tolerance of fiber length is +/-0.1m. 1 meter is standard. The lead-time for special fiber length will be longer.

For example, AWGM580H60G1219 represents one 50G 80-ch (C21~H60) Gaussian-Type AWG module with P1 package, 900μm loose tube, 1.0+/-0.1m fiber length and LC connectors.