

50GHz AWG MULTIPLEXER/DEMULTIPLEXER (APMUX1050/APDMX1050)

Enablence Technologies' APMUX1050 and APDMX1050 are arrayed-waveguide grating (AWG) wavelength division multiplexers and demultiplexers with 50 GHz channel spacing. The AWG circuit chips, which are planar lightwave circuits (PLCs) are fabricated using Enablence' patented CVD fabrication system. These silica-on-silicon waveguide exhibit exceptional material uniformity, low propagation loss, and low polarization dependence.



BENEFITS

- Channel Count: 4 ~ 80 or Custom
- Channel Spacing: 12.5~ 200GHz
- ITU Grids in L, C, O, and E-Band
- Custom Packaging
- RTD/Thermistor Sensor
- Fully Programmable Integrated Temp Control

FEATURES

- Low Insertion Loss, Crosstalk, PDL, and Chromatic Dispersion
- Telcordia GR-1221-CORE Qualified

APPLICATIONS

- DWDM Transmission
- Wavelength Routing
- Optical Add/Drop

Automated multi-fiber attachment and robust packaging techniques result in rugged modules perfectly suited for demanding DWDM long-haul and metro applications. AWG modules offer low insertion loss, accurate channel alignment to the ITU grid, low crosstalk and high channel-to-channel uniformity. The AWG modules are compliant with Telcordia GR-1221-CORE requirements.

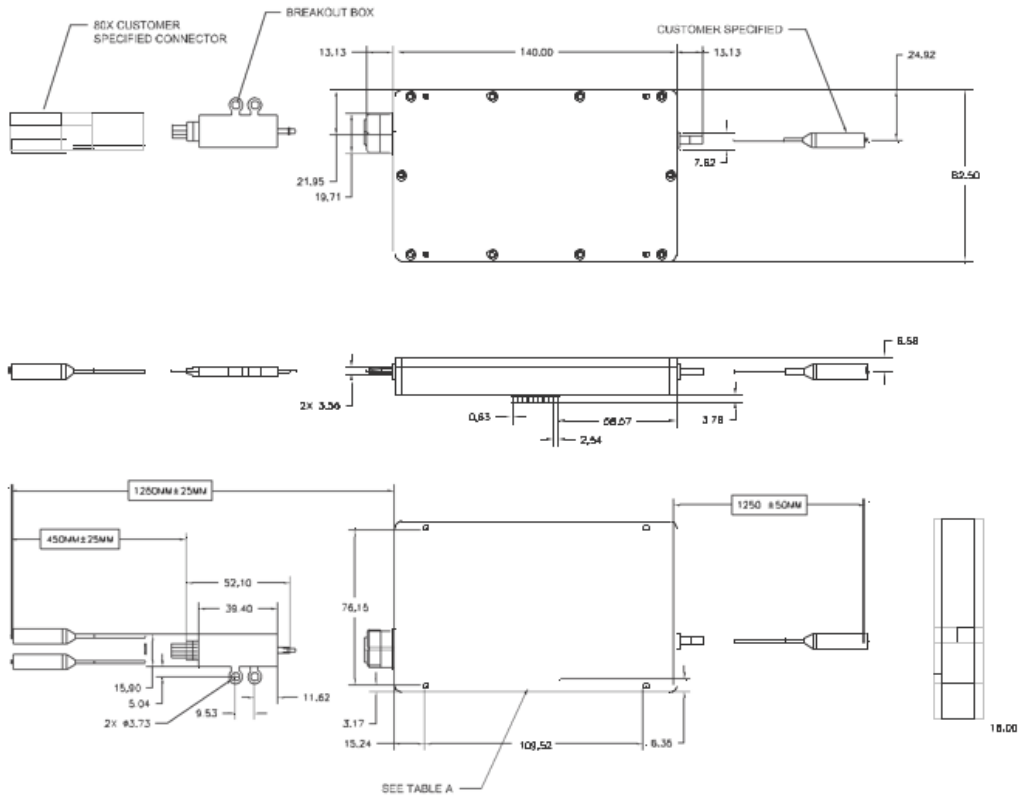
OPTICAL PERFORMANCE

Parameter	Specification		Units	Comment
	Gaussian	Flat-top		
Channel Spacing	50		GHz	
Number of Channels	Up to 80		Ch	
Wavelength Accuracy	$\leq \pm 0.04$ (80Ch) $\leq \pm 0.03$ (32 ~ 40Ch) $\leq \pm 0.02$ (8 ~ 24Ch)		nm	
ITU Band	± 6.25		GHz	Centered at each ITU frequency
Insertion Loss	≤ 4.0	≤ 6.0	dB	Max in ITU band, all polarizations
Loss Uniformity	≤ 1.5 (80Ch) ≤ 1.2 (32 ~ 40Ch) ≤ 1.0 (8 ~ 24Ch)		dB	Loss variation across all channels
Polarization Dependent	≤ 0.5		dB	Maximum ITU band
1 dB Passband	≥ 0.10	≥ 0.20	nm	Passband width 1dB below peak
3 dB Passband	≥ 0.20	≥ 0.28	nm	Passband width 3dB below peak
Adjacent Channel Crosstalk	≤ -25		dB	
Non-Adjacent Crosstalk	≤ -35		dB	
Total Crosstalk	≤ -20 (80Ch), ≤ -22 (8 ~ 40Ch)		dB	Cumulative sum of all AX and NX
Return Loss	> 45		dB	
Power Consumption	< 5		W	

PHYSICAL DIMENSIONS AND MECHANICAL SPECIFICATIONS

Packaging Options: Many different packaging options are available to meet your requirements. Please inquire about our various packaging options including Compact Internal Temperature Controller.

STANDARD 80-CHANNEL PACKAGE (UNITS: MM)



AWG PIN-OUTS

Pin	RTD	Thermistor	ITC
1	Heater +	Heater +	N.C.
2	Heater -	Heater -	+5V
3	RTD1 B1	N.C.	+5V
4	RTD1 B2	Thermistor1	Ready
5	RTD 1 A	Thermistor1	Error / Alarm
6	N.C.	N.C.	Reset / Enable
7	RTD2 A	Thermistor2	TX
8	RTD2 B1	Thermistor2	GND
9	RTD2 B2	N.C.	RX
10	N.C.	N.C.	GND

For more information
visit www.enablence.com