Planar Waveguide Components

100GHz POLARIZATION MAINTAINING AWG MULTIPLEXER/DEMULTIPLEXER (APMUX1100PM / APDMX1100PM)

APMUX1100PM and APDMX1100PM are arrayed-waveguide grating (AWG) dense wavelength division multiplexers and demultiplexers at 100GHz channel spacing pigtailed with precision-aligned polarization maintaining (PM) fibers. Based on ANDevices' patent-pending CVD processing, these silica-on-silicon waveguides exhibit exceptional material uniformity. Complemented with our automated and robust packaging, ANDevices' PM planar lightwave modules are well suited for demanding telecom applications such as polarization interleaving, DWDM transmission and ultra long-haul transmission. The PM AWG offers high polarization extinction ratio, low insertion loss, accurate channel alignment, very low crosstalk and high channel-to-channel uniformity

Features

- High Polarization Extinction Ratio
- Established Silica/Silicon Technology
- Low Insertion Loss
- Extremely Low Crosstalk

Applications

- Polarization Interleaving
- DWDM Transmission
- Ultra Long-haul Transmission

Options

- Channel Count: 8 to 40
- Channel Spacing: 50GHz to 200GHz
- Wavelength Plan: C, L or S-Band

Optical Performance

Parameter	Specification				Comments
	Gaussian	Mod. Broad	Flat-Top	Units	
Channel Spacing	100			GHz	
Number of Channels	Up to 40			Ch	
Wavelength Accuracy	≤±0.03 (8, 16, 24Ch), ≤±0.04 (32, 40Ch)			nm	
ITU Band	±12.5			GHz	Centered at each ITU frequency
Insertion Loss	≤4.0	≤5.0	≤6.0	dB	Max in ITU band, all polarizations
Loss Uniformity	≤1.0 (8, 16, 24Ch), ≤1.5 (32, 40Ch)			dB	Loss variation across all channels
1 dB Passband	≥0.20	≥0.32	≥0.40	nm	Passband width 1dB below peak
3 dB Passband	≥0.40	≥0.48	≥0.55	nm	Passband width 3dB below peak
Adjacent Channel Crosstalk	≤-26			dB	Worst case in ITU band
Non-Adjacent Crosstalk	≤-35			dB	Worst case in ITU band
Total Crosstalk	≤-23 (40Ch)			dB	Cumulative sum of all AX and NX
Polarization Extinction Ratio	≥18 (8, 16, 24Ch), ≥16 (32, 40Ch)			dB	
Return Loss	>45			dB	Depending on connector type
Temperature Control	2.5Ω Heater				TEC option available
Temperature Sensor	RTD, 50KΩ or 10KΩ Thermistor				

Corporate Office
2933 Bayview Drive
Fremont, CA 94538
Tel: (510) 226-8900
Fax: (510) 226-8333

sales@andevices.com
www.andevices.com

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 Internal Fan-out, Zero degree packaging (all fiber pigtails exit same side of package) and integrated internal temperature controller.

Standard Package (units:mm)

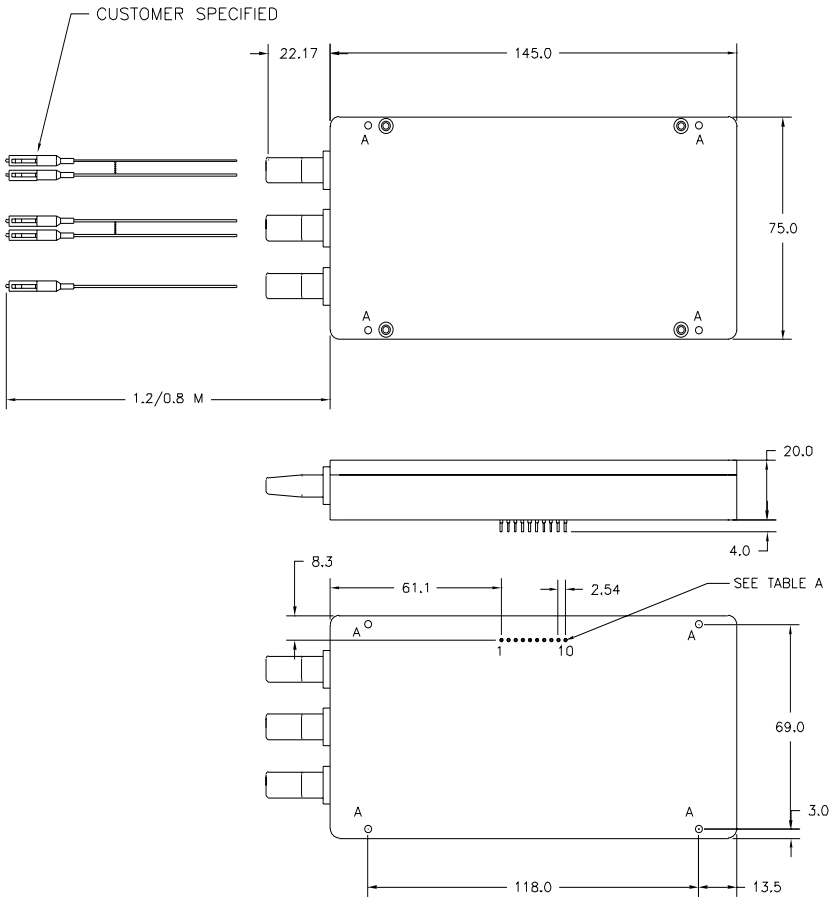

Table A Standard Pin-Out

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

Ordering Information

For more information on this product or other products now available from ANDevices, please contact us at sales@andevices.com