NxN AWG MULTIPLEXERS AND DEMULTIPLEXERS ROUTER MODULE

(APRTE)

Enablence's N-by-N arrayed-waveguide grating (AWG) wavelength division multiplexers and demultiplexers are based on our patent-pending CVD process. These silica-on-silicon waveguides exhibit exceptional material uniformity. Complemented with our automated robust packaging, Enablence's planar lightwave circuits (PLC) are well suited for demanding telecom applications such as DWDM, long-haul, and metro transmission systems.

BENEFITS

- 4, 8, 16, 24, and 32CH Capability
- 50 and 200 GHz Channel Spacing
- Custom Packaging
- Choice of Connector and Polish

FEATURES

- Compact and High-Performance WDW Filters
- Low Insertion Loss and Cross Talk
- Can be used as MUX or DMEUX
- High Uniformity and Reliability

APPLICATIONS

- Mesh-Type DWDM Networks
- Wavelength Routing

DATA SHEET

Enablence

Enablence's N-by-N arrayed waveguide grating (AWG) can be used in WDM networks with mesh structures. It offers accurate channel alignment, low crosstalk and high channel-to-channel uniformity. In addition, these modules can be used either as muxtiplexer or as demuxtiplexer functions. This product family complies with Telcordia GR-1221-CORE requirements.

CYCLICAL NXN CHANNEL C-BAND AWG ROUTERS OPTICAL SPECIFICATIONS

Parameters		Symbol	Specifications			Units	Comments
			Min	Typ	Max		
Input Channels				N		-	N: 4, 8, 16, 24, 32
Output Channels				N		-	N: 4, 8, 16, 24, 32
Channel Spacing				100		GHz	
Free Spectral Range		FSR		100*N		GHz	Centered at each ITU frequency
Channel Frequencies (Input at (N/2 + 1) to Outputs 1-N)		f_c		C or L-Bands			
ITU Band			-12.50		+12.50	GHz	Centered at each ITU frequency
Wavelength Accuracy	N=32	Δλc	-0.12		+0.12	nm	Offset from ITU grid
	N=24	Δλc	-0.10		+0.10	nm	
	N=16	Δλc	-0.06		+0.06	nm	
	N=8	Δλc	-0.03		+0.03	nm	
	N=4	Δλc	-0.02		+0.02	nm	
Insertion Loss	N=32	IL		7.00		dB	Measured at peak transmission. Measured as 1xN and Nx1 (Input (N/2 +1) to Outputs 1 ~ N And inputs 1 ~ N to output (N/2 +1)
	N=24	IL		6.50		dB	
	N=16	IL		6.00		dB	
	N=8	IL		5.00		dB	
	N=4	IL		5.00		dB	
Insertion Loss Uniformity	N=32	ΔIL		3.00		dB	Any one input to all outputs
	N=24	ΔIL		2.50		dB	
	N=16	ΔIL		2.50		dB	
	N=8	ΔIL		2.00		dB	
	N=4	ΔIL		2.00		dB	
Polarization Dependent Loss		PDL			0.40	dB	Measured at ITU grid frequency
1dB Passband		δ1dB	0.20			nm	Measure 1dB down from min IL
3dB Passband		δ1dB	0.40			nm	Measure 1dB down from min IL
Adjacent Channel Crosstalk		AX			-25.00	dB	At ITU grid frequency
Non-Adjacent Channel Crosstalk		NX			-30.00	dB	At each ITU grid frequency
Total Crosstalk		TX			-22.00	dB	At ITU grid frequency, cumulative sum of all AX and NX
Return Loss		RL	40.00	45.00		dB	

PHYSICAL DIMENSIONS AND MECHANICAL SPECIFICATIONS

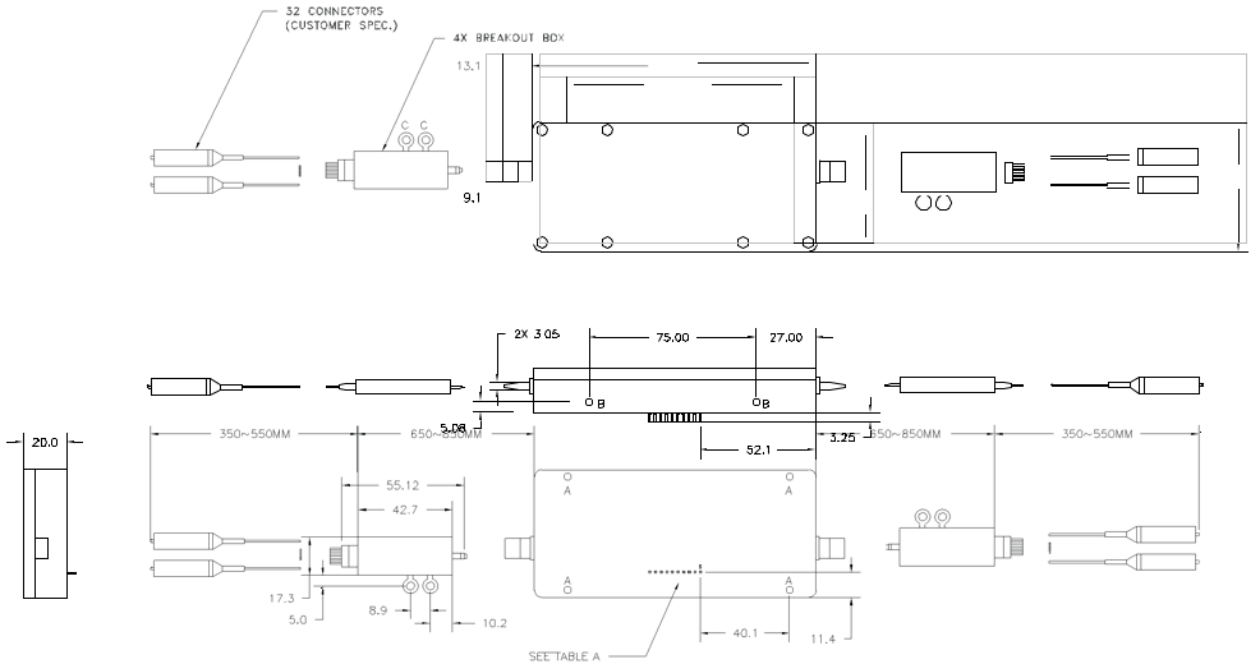

TABLE A: AWG PIN-OUTS OPTIONS

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
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