41ch 100G Athermal AWG

HighEasy offers a full range of Thermal/Athermal AWG products, including 50GHz, 100GHz and 200GHz Thermal/Athermal AWG. Here we present the generic specification for the 41-channel 100GHz Gaussian Athermal AWG (41 channel AAWG) MUX/DEMUX component supplied for use in DWDM system.

Athermal AWG(AAWG) have equivalent performance to standard Thermal AWG(TAWG) but require no electrical power for stabilization. They can be used as direct replacements for Thin Film Filters(Filter type DWDM module) for cases where no power is available, also suitable for outdoor applications over -30 to +70 degree in access networks. HighEasy's Athermal AWG(AAWG) provide excellent optical performance, high reliability, ease of fiber handling and power saving solution in a compact package. Different input and output fibers, such as SM fibers, MM fibers and PM fiber can be selected to meet different applications. We can also offer different product packages, including special metal box and 19" 1U rack mount.

The planar DWDM components (Thermal/Athermal AWG) are fully qualified according to Telcordia reliability assurance requirements for fiber optic and opto-electronic components (GR-1221-CORE/UNC, Generic Reliability Assurance Requirements for Fiber Optic Branching Components, and Telcordia TR-NWT-000468, Reliability Assurance Practices for Opto-electronic Devices).

Optical Specification: (Gaussian Athermal AWG)

Parameters	Condition	Specs			Units
		Min	Typ	Max	
Number of Channels			41		
Number Channel Spacing	100GHz		100		GHz
Cha. Center Wavelength	ITU frequency.		C -band		nm
Clear Channel Passband			±12.5		GHz
Wavelength Stability	Maximum range of the wavelength error of all channels and temperatures in average polarization.		±0.05		nm
-1 dB Channel Bandwidth	Clear channel bandwidth defined by passband shape. For each channel	0.24			nm
-3 dB Channel Bandwidth	Clear channel bandwidth defined by passband shape. For each channel	0.43			nm
Optical Insertion Loss at ITU Grid	Defined as the minimum transmission at ITU wavelength for all channels. For each channel, at all temperatures and		4.5	6.0	dB

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	polarizations.				
Adjacent Channel Isolation	Insertion loss difference from the mean transmission at the ITU grid wavelength to the highest power, all polarizations, within the ITU band of the adjacent channels.	25			dB
Non-Adjacent, Channel Isolation	Insertion loss difference from the mean transmission at the ITU grid wavelength to the highest power, all polarizations, within the ITU band of the nonadjacent channels.	29			dB
Total Channel Isolation	Total cumulative insertion loss difference from the mean transmission at the ITU grid wavelength to the highest power, all polarizations, within the ITU band of all other channels, including adjacent channels.	22			dB
Insertion Loss Uniformity	Maximum range of the insertion loss variation within ITU across all channels, polarizations and temperatures.			1.5	dB
Directivity (Mux Only)	Ratio of reflected power out of any channel(other than channel n)to power in from the input channel n	40			dB
Insertion Loss Ripple	Any maxima and any minima of optical loss across ITU band, excluding boundary points, for each channel at each port			1.2	dB
Optical Return loss	Input & output ports	40			dB
PDL/Polarization Dependent Loss in Clear Channel Band	Worst-case value measured in ITU band		0.3	0.5	dB
Polarization Mode Dispersion				0.5	ps
Maximum Optical Power				23	dBm
MUX/DEMUX Input/ Output Monitoring Range		-35		+23	dBm

IL Represents the worst case over a +/-0.01nm window around the ITU wavelength;
PDL was measured on average polarization over a +/- 0.01nm window around the ITU wavelength.

Nomenclature:

AWG	X	XX	X	XXX	X	X	X	XX
	Band	Number of Channels	Spacing	1st Channel	Filter Shape	Package	Fiber Length	In/Out Connector
	C=C-Band L=L-Band D=C+L-Band X=Special	16=16-CH 32=32-CH 40=40-CH 48=48-CH XX=Special	1=100G 2=200G 5=50G X=Special	C60=C60 H59=H59 C59=C59 H58=H58 XXX=special	G=Gaussian B=Broad Gaussiar F=Flat Top	M=Module R=Rack X=Special	1=0.5m 2=1m 3=1.5m 4=2m 5=2.5m 6=3m S=Specify	0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=LC/APC 6=LC/PC 7=ST/UPC S=Specify

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