

## Flyin 40-CH 100G Athermal AWG

Flyin Optronics 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 40-channel 100GHz Gaussian Athermal AWG (40 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. Flyin'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 rackmount.

The planar DWDM components(Thermal/Athermal AWG) from Flyin Optronics 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).

### Features

- Low Insertion Loss
- Established silica-on-silicon
- Low PDL
- Low chromatic dispersion
- Telcordia GR-1221-CORE qualified

### Applications

- DWDM transmission
- Wavelength Routing
- Optical add/drop multiplexing



### Optical Specification (Flat Top Athermal AWG)

Parameters	Condition	Specs			Units
		Min	Typ	Max	
Number of Channels		40			
Number Channel Spacing	100GHz	100			GHz
Cha. Center Wavelength	ITU frequency.	C -band			nm
Clear Channel Passband		±0.1			nm
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	0.36			nm
-3 dB Channel Bandwidth	Clear channel bandwidth defined by passband	0.51			nm

	shape. For each channel				
Optical Insertion Loss at ITU grid	Defined as the minimum transmission at ITU wavelength for all channels. For each channel, at all temperatures and polarizations.		4.5	6.0	dB
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.	30			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.	24			dB
Insertion Loss Uniformity	Maximum range of the insertion loss variation within ITU across all channels, polarizations and temperatures.			1.0	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			1.0	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
Operating Temperature		-5	+25	+65	°C
Operating Humidity		5		95	%RH
Storage Temperature		-40		+85	
Storage Humidity		5		95	
Package Size		120 x 70 x 10			mm
Size between screws		110 x 60			mm

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.

### Ordering Information

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	16=16-CH	1=100G	C60=C60	G=Gaussian	M=Module	1=0.5m	0=None
	L=L-Band	32=32-CH	2=200G	H59=H59	B=Broad	R=Rack	2=1m	1=FC/APC
	D=C+L-Band	40=40-CH	5=50G	C59=C59	Gaussiar	X=Special	3=1.5m	2=FC/PC
	X=Special	48=48-CH	X=Special	H58=H58	F=Flat Top		4=2m	3=SC/APC
		XX=Special		XXX=special			5=2.5m	4=SC/PC
							6=3m	5=LC/APC
							S=Specify	6=LC/PC
								7=ST/UPC
								S=Specify