40 CH 100G AWG Module (40 CH 100G DWDM Mux/Demux)

OSM offers a full range of AWG products, including 50GHz, 100GHz and 200GHz AWG. Here we present the generic specification for the 40-channel 100GHz AWG MUX/DEMUX component supplied for use in DWDM system.

This component is designed for use within the C -band release of DWDM system. To decrease the power dissipation of the devices in different environmental conditions, the AWG package is special designed with selection of reliable thermal plastic with low thermal conduction, and the AWG operating temperature is controlled by using foil resist heater or Peltier TEC with thermistor temperature sensor. 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 package for different products, including ABS box and 19" 1U rack mount.

Optical Specification: (Flattop AWG)

Parameters	Condition	Specs			Units
		Min.	Typ.	Max.	
Number of Channels			40		
Number Channel Spacing	100GHz		100		GHz
Ch. 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	0.4			nm
-3 dB Channel Bandwidth	Clear channel bandwidth defined by passband shape. For each channel	0.6			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 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	30			dB

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	the ITU grid wavelength to the highest power, all polarizations, within the ITU band of the nonadjacent channels.				
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.		1.0	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			0.5	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 +/-0.1nm window around the ITU wavelength

PDL was measured on average polarization over a +/- 0.1nm 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=Customize	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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