

AAWG5xxxxxxxxxx

50G Athermal Arrayed-Waveguide Grating
Multiplexer/Demultiplexer (Flat Type)



Athermal Arrayed-Waveguide Grating (AAWG) have equivalent performance to thermal AWGs but no any electrical power needed for operation. AAWG is more simple than thermal AWG.

Molex's planar lightwave circuits are well suited for demanding telecom applications in long-haul and metro transmission systems. The AAWG provide extremely excellent optical performance, high reliability, ease of fiber handling and power saving solution in a compact package.



Features and Benefits

Pure Passive

MSA Package

Low Insertion Loss /PDL

Extremely Low Crosstalk

Telcordia GR-1209/1221 qualified

Applications

DWDM Transmission

Wavelength Routing

Optical Add/Drop Multiplexing

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Specifications

Parameters	Min	Typical	Max	Units	Note [1]
Channel Spacing		50		GHz	
Channel Passband		±6.25		GHz	
Channel Number		Up to 96			
Insertion Loss (P grade)		4.5	5.5	dB	[2]
Insertion Loss (A grade)		5.0	6.0	dB	[2]
Uniformity		0.9	1.5	dB	
Ripple		0.35	0.5	dB	
1dB bandwidth	0.2			nm	[3]
3dB bandwidth	0.3			nm	
Polarization Dependent Loss			0.6	dB	
Adjacent Channel Crosstalk	23	28		dB	
Non-adjacent Channel Crosstalk	30	35		dB	
Total Crosstalk	21			dB	
Return Loss	40	45		dB	
Directivity	50			dB	
Chromatic Dispersion	-30		+30	ps/nm	[4]
PMD			0.85	ps	[4]
Maximum Power Handling			300	mW	
Fiber Type	G.652D or equivalent				
Fiber Jacket	Without fan-out	C: 900µm Buffer B: 12-Core Ribbon Fiber			
	With fan-out	C: 900µm Buffer B: 12-Core Ribbon Fiber A: 900µm Loose Tube			
Fiber Length	Refer Ordering Information				
Connector Type	Refer Ordering Information				
Operating Temperature(C-temp)	-5		70	°C	
Operating Temperature (I-temp)	-40		85	°C	
Storage Temperature	-40		85	°C	

Note:

[1] All the parameters are excluding connectors. IL of connectors is 0.2dB/pair for PC/UPC/SPC types and 0.4dB per pair for APC types.

[2] The maximum IL is under all states of polarization and within the full operating temperature and wavelength ranges specified.

[3] Measured from minimum loss to 1dB and 3dB down respectively.

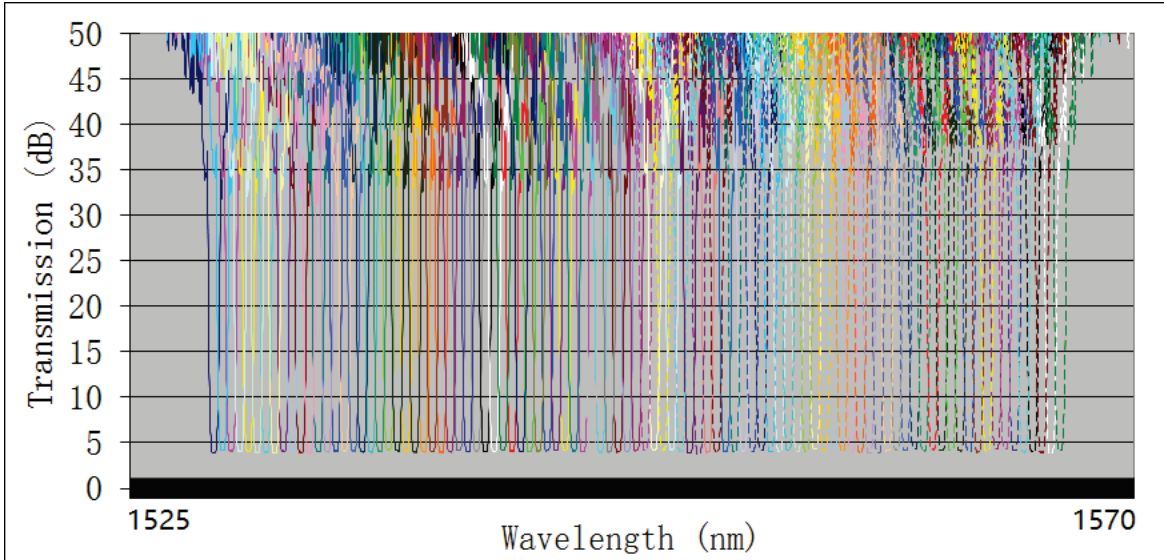
[4] Over ITU band

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Typical Flat-Top 96-Channel Spectrum



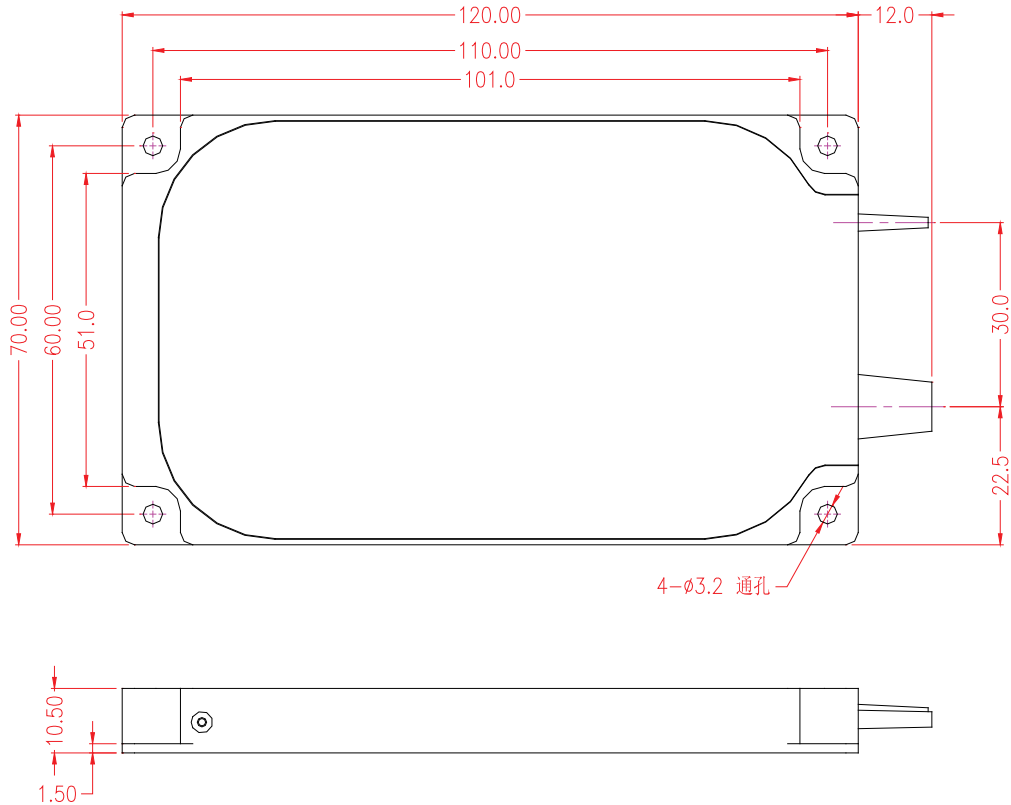
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Mechanical Drawing (Unit: mm):

*The mechanical tolerance should be ± 0.2 mm on all package dimensions unless otherwise specified.



NOTE:

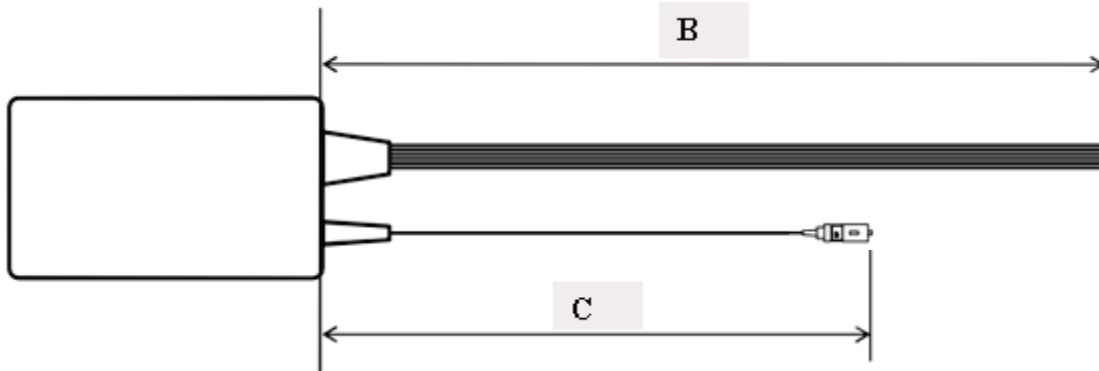
1. MAT'L OF HSG & CVR: ALUM 6061-T6.
2. FINISH: BLACK ANODIZE.
3. UNITS: mm.
4. TOL'S: .X= ± 0.5
.XX= ± 0.2 .
5. PROJECTION:

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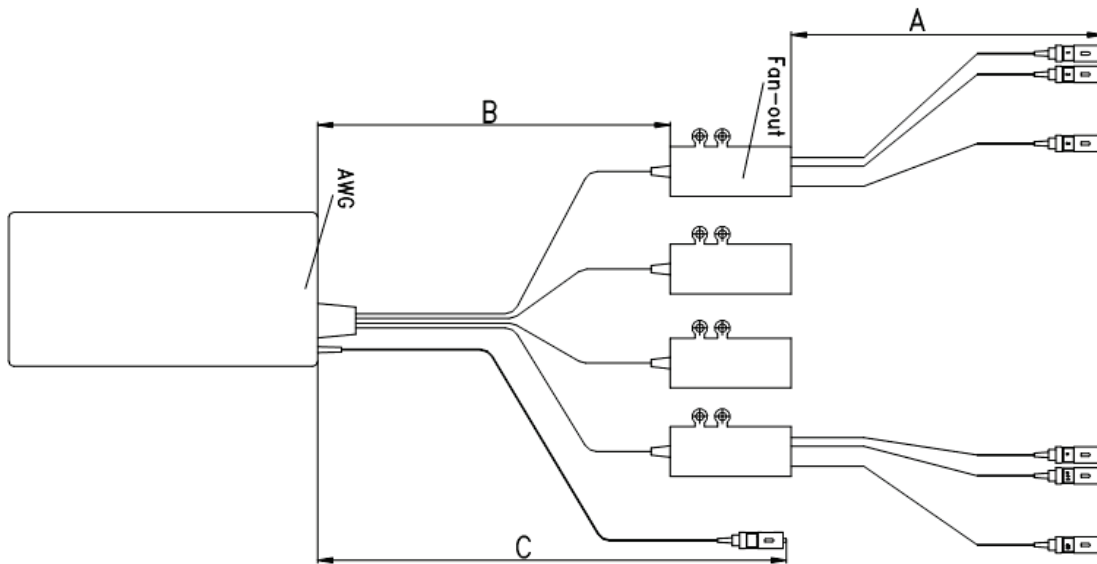
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Definition of Fiber Length B and C (without fan-out):



Definition of Fiber Length A, B and C (with fan-out):



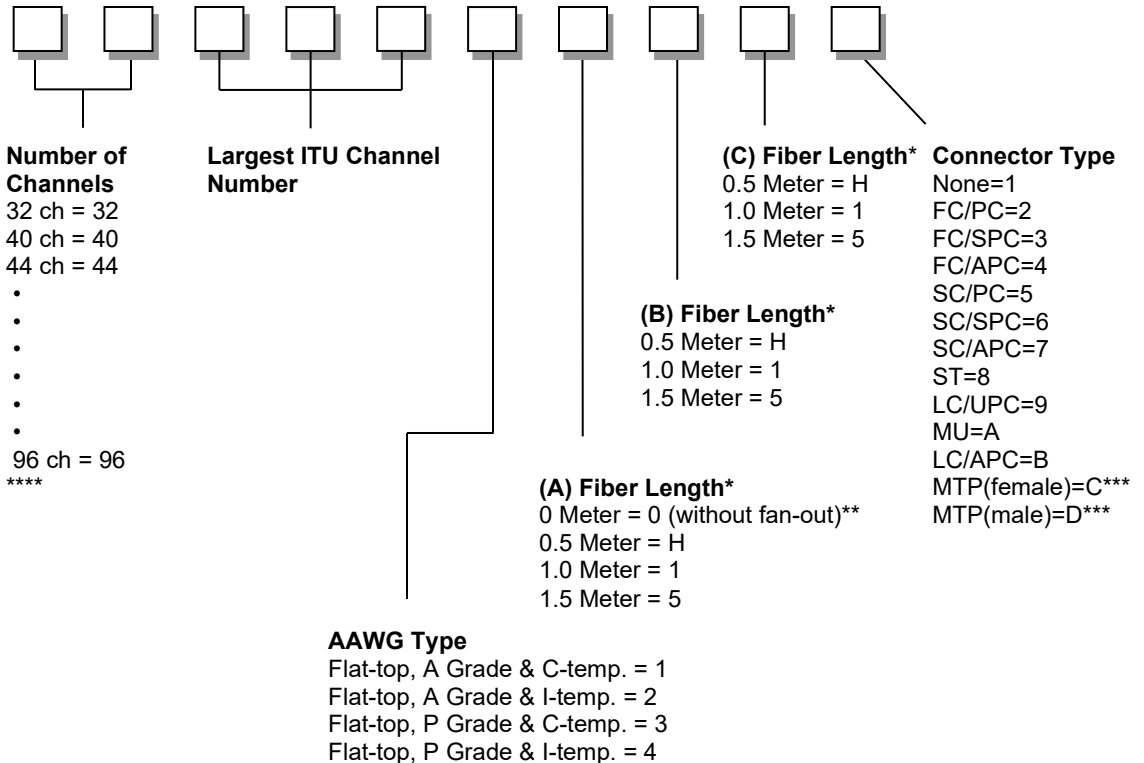
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Ordering Information

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Notes:

* The tolerance of fiber length is +/-0.1m.

** Only MTP Connectors are available if the length of fiber A is 0(without fan-out). Please choose 1 or C or D for the last digit of Oplink Part Number.

*** When MTP option was available, it must be LC/UPC option for fiber C.

****For other number of channels, please contact Oplink's sales department for further information.

For example, AAWG596C61F1119 represents one 50G 96-ch (191.35~196.10THz) Flat-Top type and with 1.0+/-0.1m fiber length on fiber C, 1.0+/-0.1m fiber length on fiber B, 1.0+/-0.1m fiber length on fiber A , all with LC/UPC connectors.