

Athermal Arrayed Waveguide Grating (AAWG) Dense Wavelength Division Multiplexer (DWDM)

Features

- ✓ Low Insertion Loss (IL)
- ✓ High isolation
- ✓ Low Polarization Dependent Loss (PDL)
- ✓ Available up to 96 channels with compact design
- ✓ High reliability and high stability
- ✓ Telcordia GR-1209-CORE-2001 compliant
- ✓ Telcordia GR-1221-CORE-1999 compliant
- ✓ ITU-T G.694.1 compliant
- ✓ RoHS-6 compliant (lead free)



Applications

- ✓ DWDM Networks

Description

The Gigalight Athermal Arrayed Waveguide Grating (AAWG) Dense Wavelength Division Multiplexer (DWDM) based on silica on silicon technology is designed for ITU channel spacing applications where no electrical power is required. It operates at 50GHz or 100GHz channel spacing ITU Grid DWDM wavelengths from 1526nm to 1565nm. The AAWG DWDM can be used to replace the filter-type DWDM Mux DeMux for cases where no power is available. The low cost and high performance make it the ideal solution for metro and long-haul DWDM applications. Gigalight provides a series of customized AAWG DWDM within standard metal box or rack mount to meet different requirements on Port Configuration (32 to 96 channels, 1310nm/monitoring ports available), Operating Wavelength, Fiber Type, Fiber Length, Input Connector, and Output Connector.

Specifications

Parameters	AAWG DWDM					
	50GHz		100GHz			
Channel Space (GHz)	50GHz		100GHz			
Pass Band Type	Flat-top		Gaussian		Flat-top	
Grade	Typical	Min	Typical	Min	Typical	Min
Channel Number	80/96		32/40/48			
Wavelength Accuracy (nm)	±0.04		±0.05			
Pass Band @1dB (nm)	> 0.2		> 0.2		> 0.38	
Pass Band @3dB (nm)	> 0.4		> 0.4		> 0.58	
Insertion Loss ¹ (dB)	< 7.0	< 6.0	< 4.0	< 3.5	< 6.5	< 5.0
Adjacent Crosstalk (dB)	> 26		> 26		> 23	
Non-Adjacent Crosstalk (dB)	> 26					
Total Crosstalk (dB)	> 20		> 21			
Return Loss (dB)	> 40					

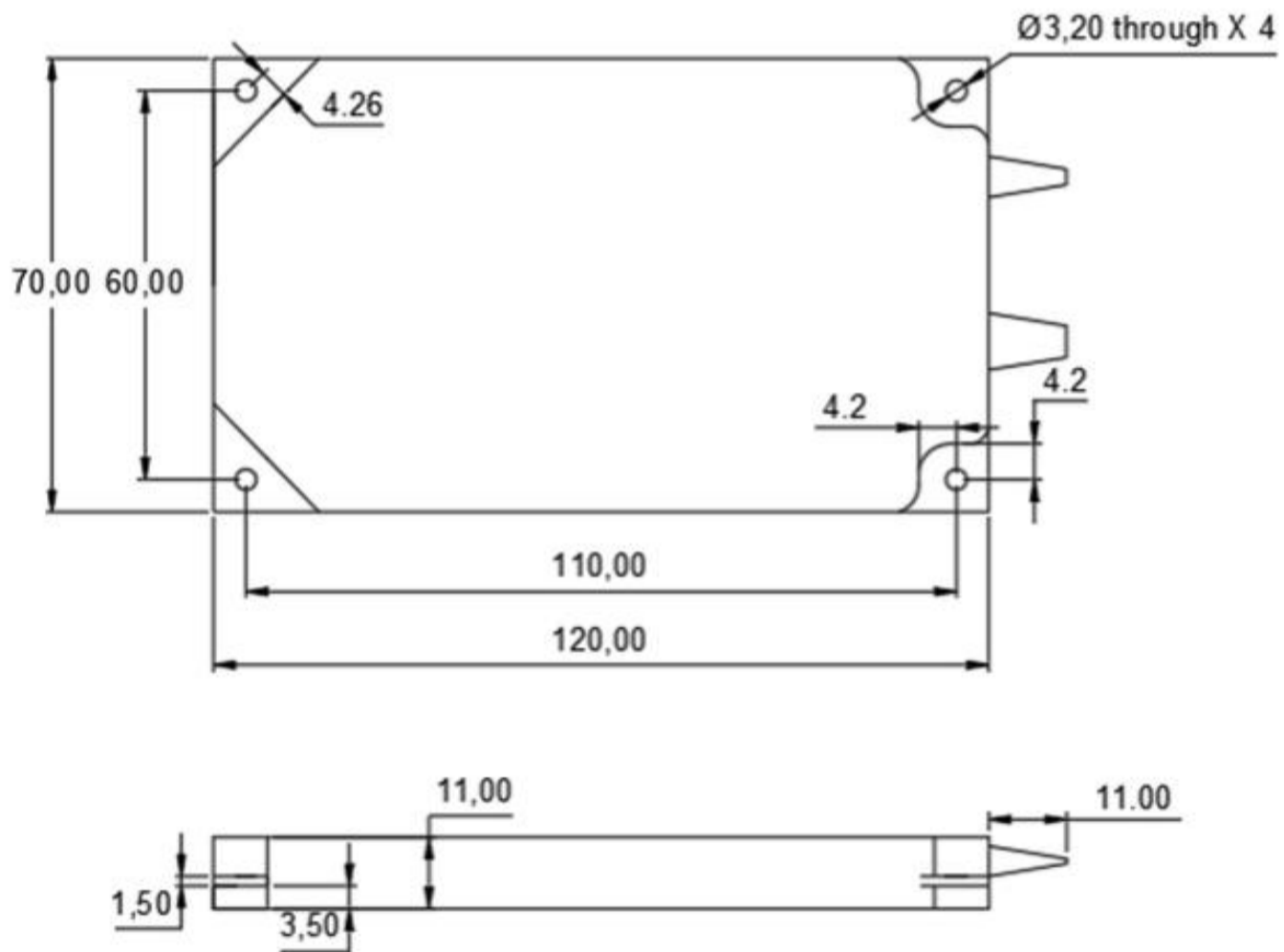
Ripple (dB)	< 1.5		< 0.5		
Uniformity (dB)	< 1.5				
PDL (dB)	< 0.7		< 0.6	< 0.5	< 0.4
PMD ² (ps)	< 0.5				
Chromatic Dispersion ² (ps/nm)	±30		±20		
Operating Temperature (°C)	-5 ~ 75				
Storage Temperature (°C)	-40 ~ 85				
Package L×W×H (mm)	Rack Mount: 484×245×44 (1U, 2U) (interleaved)		Standard Metal Box: 120×70×11 Rack Mount: 484×245×44 (1U, 2U)		

Notes:

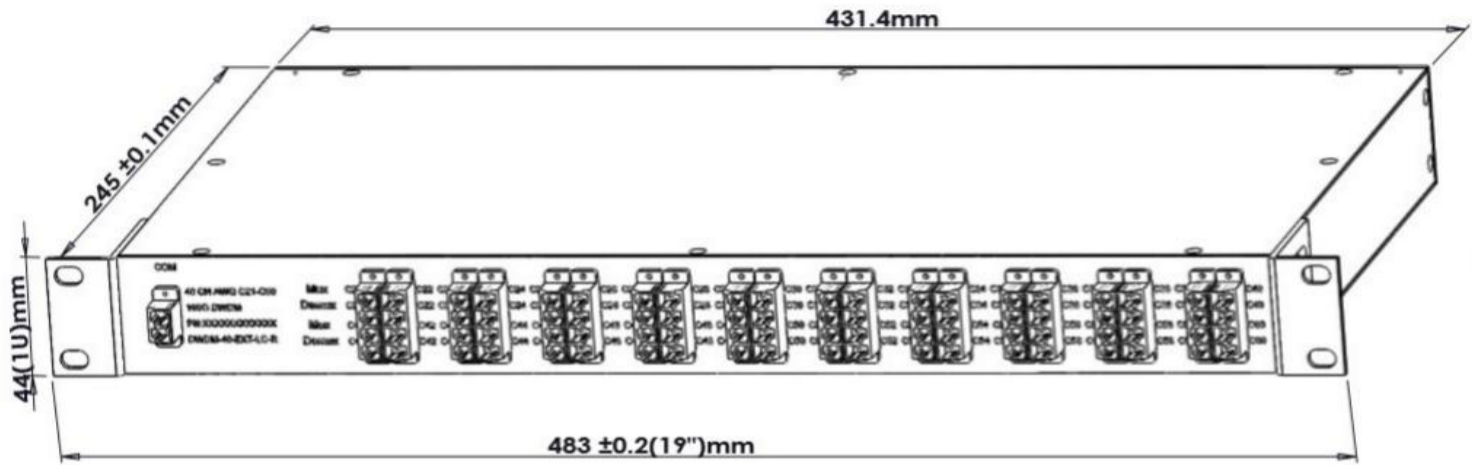
1. All specifications are based 19-inch rack mount with adapters, and guaranteed over wavelength, polarization and temperature; fiber type is G657A1.
2. PMD and chromatic dispersion values are guaranteed by design.

Mechanical Dimensions

Standard Metal Box:



19-inch 1U Rack Mount:



Ordering Information

GAAWG-	XX	X	XX	XX	XX	X	XX	XX-	X	X
	Channel Space Spectrum Shape	Mux/DeMux Type	Port Configuration	Initial Wavelength	Package Type	Fiber Type	Input Fiber Length	Output Fiber Length	Input Connector	Output Connector
AAWG DWDM	1G=100GHz Gaussian	M=Mux	32=32CH	C15=C15	ST=Standard Metal Box	N=N/A	10=1.0m	10=1.0m	0=None	0=None
	1F=100GHz Flat-top	D=DeMux	40=40CH	H15=H15	1U=19-inch 1U Rack Mount	2=0.9mm loose tube	15=1.5m	15=1.5m	1=FC/UPC	1=FC/UPC
	2=50GHz Flat-top	MD=Mux & DeMux	48=48CH	C16=C16	2U=19-inch 2U Rack Mount		20=2.0m	20=2.0m	2=FC/APC	2=FC/APC
		3=Mux with 1310nm port	...	H16=H16			25=2.5m	25=2.5m	3=SC/UPC	3=SC/UPC
		4=DeMux with 1310nm port	80=80CH	4=SC/APC	4=SC/APC
		34=Mux & DeMux with 1310nm port	96=96CH	C63=C63					5=LC/UPC	5=LC/UPC
		7=Mux with 1310nm & MON ports		H63=H63					6=LC/APC	6=LC/APC
		8=DeMux with 1310nm & MON ports		C64=C64						
		78=Mux & DeMux with 1310nm & MON ports		H64=H64						

Notes:

1. The 100GHz AAWG is available with 32/40/48 channels, and the 50GHz AAWG is available with 80/96 channels.
2. The 50GHz AAWG is designed based on the interleaved technology and only available with rack mount package.
3. If there is a demand for orders that are different from those described above, please contact Gigalight sales.

E-mail: sales@gigalight.com

Official Site: www.gigalight.com