50GHz C-band Gaussian 64x64 Array Wavelength Grating Router

F-AWGR-ST1G48C17-55

1. Introduction

The AWGR operates in the C-band and complies with the specifications defined below across the full operating temperature range.

2. Definitions and Notes

All specifications are guaranteed under worst-case polarization conditions, across the entire operating environmental range, and over the product lifetime (end-of-life conditions).

Insertion Loss (IL)
Insertion Loss is defined as the maximum optical loss at a specified wavelength, considering the worst-case polarization state over the full operating temperature range.

Insertion Loss Uniformity
Insertion Loss Uniformity is defined as the difference between the lowest and highest insertion loss values among all channels.

Polarization Dependent Loss (PDL)

Polarization Dependent Loss is defined as the maximum variation in insertion loss between all polarization states at a specified wavelength.

Reference Passband
The Reference Passband is defined as the wavelength range centered around each channel's nominal wavelength. It is used as the basis for crosstalk measurements.

Adjacent Channel Isolation
Adjacent Channel Isolation is defined as the maximum difference between the mean transmission at the ITU grid wavelength and the highest power observed within the ITU bandwidth of the two adjacent channels, considering all polarization states.

Non-Adjacent Channel Isolation
Non-Adjacent Channel Isolation is defined as the maximum difference between the mean transmission at the ITU grid wavelength and the highest power observed within the ITU bandwidth of all non-adjacent channels, considering all polarization states.

Total Crosstalk
Total Crosstalk is defined as the cumulative difference between the mean transmission at the ITU grid wavelength and the highest combined power from all other channels (including both adjacent and non-adjacent channels), across all polarization states within the ITU bandwidth.

Wavelength Accuracy
Wavelength Accuracy is defined as the maximum deviation between the nominal (target) wavelength and the center wavelength of the measured 3 dB passband.

3. Technical Parameter

Parameter	Specification			Units	Notes
	Min	Type	Max		
Channel Spacing	50			Ghz	
Nos of Channel	64X64			Channels	
Channel Frequencies	ITU Grid			THz	
Available Channel Frequency Range	191.70		196.40	THz	
Channel Passband	-5		+5	Ghz	
	-0.10		+0.10	nm	

Center Wavelength Accuracy	-0.1		+0.1	nm	
Insertion lose		8	11	dB	Full Bandwidth
Passband Ripple		1.0	2.0	dB	Full Bandwidth
Bandwidth @1.5dB	10			GHZ	
Bandwidth @3.0dB	20			GHZ	
Bandwidth @20dB			60	GHZ	
Insertion Loss Uniformity at ITU			2.5	dB	
Polarization Dependent Loss			0.5	dB	
Adjacent Channel Isolation	18	25		dB	
Non-Adjacent Channel Isolation	25	35		dB	
Total Cross Talk	22	24		dB	
Directivity	45			dB	
Return Loss with connectors	40	45		dB	
Chromatic Dispersion	-20		+20	ps/nm	
PMD			0.5	ps	
Optical Power Handling of Common Port			24	dBm	

4. Operating Conditions

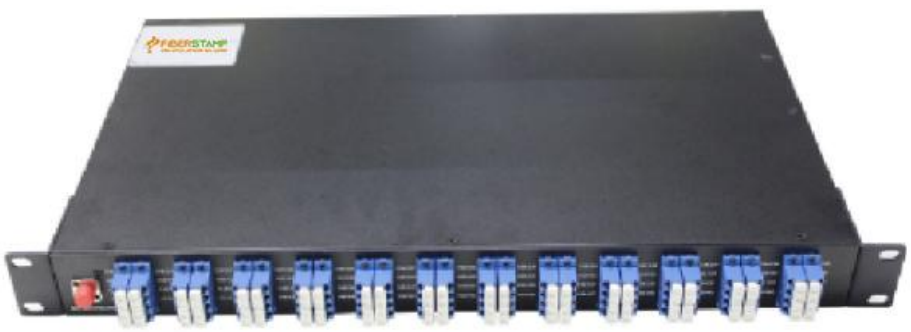
Parameter		**Min**		**Max**	**Units**
Temperature		-5		65	℃
Humidity	Non-condensing	0		90	% R.H.

5. Storage Conditions

Parameter		**Min**		**Max**	**Units**
Temperature		-40		85	℃
Humidity	Non-condensing	0		90	% R.H.

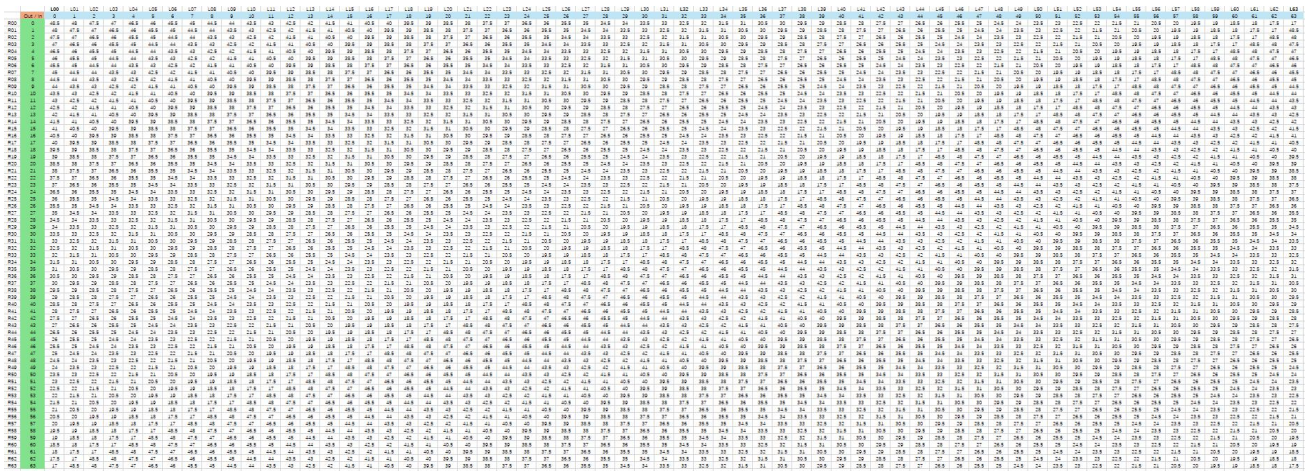
6. Physical Parameters Standard

2U RACK



7. Channel Plan 64x64 Port AWG - On grid

The AWG operate in C-band. The C-band channel allocation is based on ITU-T Grid. The channels are as follows:



8. Ordering information

AWGR	-	××	×	×	××	×××	-	×	×
		Packa ge	Channel Space	Pass band Profile	**Port Configur ation**	Start Chann el		in	out
I A=Array W=Wavelen gth G=Grating R=Router		1U=1U 2U=2U ST=Box	1=100GHz 2=50GHz	F=Flat-top G=Gauss	32=32x32 64=64x64	C17=C 17 H21=C 21		0=None 1=FC/UPC 2=FC/APC 3=SC/UPC 4=SC/APC 5=LC/UPC 6=LC/APC 7=MPO/PC	0=None 1=FC/UPC 2=FC/APC 3=SC/UPC 4=SC/APC 5=LC/UPC 6=LC/APC 7=MPO/PC

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