

Specification of Athermal 40-CH 100GHz Flat AWG Multiplexer/Demultiplexer

Model: **AWG-F-100G-40-001-C-VT Rev: 0 (DMX)**
 AWG-F-100G-40-002-C-VT Rev: 0 (MUX)

Description: **Athermal 40-CH 100GHz Flat WG Multiplexer/Demultiplexer, C-Band, C21-C60**

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Prepared by: **HJL**

1. Optical Specifications

Parameter	Symbol	Specification			Unit	Comments
		MIN	TYP	MAX		
Number of Channels	-	40			-	
Channel Spacing	-	100			GHz	
Channel Frequencies	f_c	192.10~196.00			THz	1529.553~1560.606nm
Wavelength Accuracy	$\Delta\lambda_c$	-50	± 30	+50	pm	Offset from ITU Frequencies
ITU Band	PB	-12.5		+12.5	GHz	Centered at Each ITU Channel Frequency, f_c
Insertion Loss (ITU Band)	IL_{MAX}			5.5	dB	Maximum within ITU Band and PDL
Insertion Loss Uniformity	ΔIL		0.5	1.0	dB	Over All Channels and PDL
Ripple	R		0.4	0.5	dB	Loss Variation within ITU Band, Unpolarized
Polarization Dependent Loss	PDL		0.35	0.5	dB	Maximum within ITU Band
1dB Passband	$\delta 1dB$	0.40	0.45		nm	Measure 1dB down from Min IL, Unpolarized
3dB Passband	$\delta 3dB$	0.55	0.65		nm	Measure 3dB down from Min IL, Unpolarized
Adjacent Channel Isolation	AX MUX	16	26		dB	Worst-case within ITU Band, Unpolarized
	AX DMX	24	26		dB	
Non-Adjacent Channel Isolation	NX MUX	16	38		dB	Worst-case within ITU Band, Unpolarized
	NX DMX	28	38		dB	
Total Crosstalk	TX MUX		23		dB	Cumulative Sum of All AX and NX
	TX DMX	21	23		dB	
Return Loss	RL	45	55		dB	Over All Channels and PDL
Chromatic Dispersion	CD	-20		+20	ps/nm	Over ITU Band , Guaranteed by Design
Polarization Mode Dispersion	PMD		0.3	0.5	ps	Over ITU Band, GBD

2. Channel Frequencies and Wavelengths (ITU Frequencies)

ITU	Frequency (THz)	Wavelength (nm)
60	196.00	1529.553
59	195.90	1530.334
58	195.80	1531.116
57	195.70	1531.898
56	195.60	1532.681
55	195.50	1533.465
54	195.40	1534.250
53	195.30	1535.036
52	195.20	1535.822
51	195.10	1536.609
50	195.00	1537.397
49	194.90	1538.186
48	194.80	1538.976
47	194.70	1539.766
46	194.60	1540.557
45	194.50	1541.349
44	194.40	1542.142
43	194.30	1542.936
42	194.20	1543.730
41	194.10	1544.526
Common	Trunk (Common Fiber)	

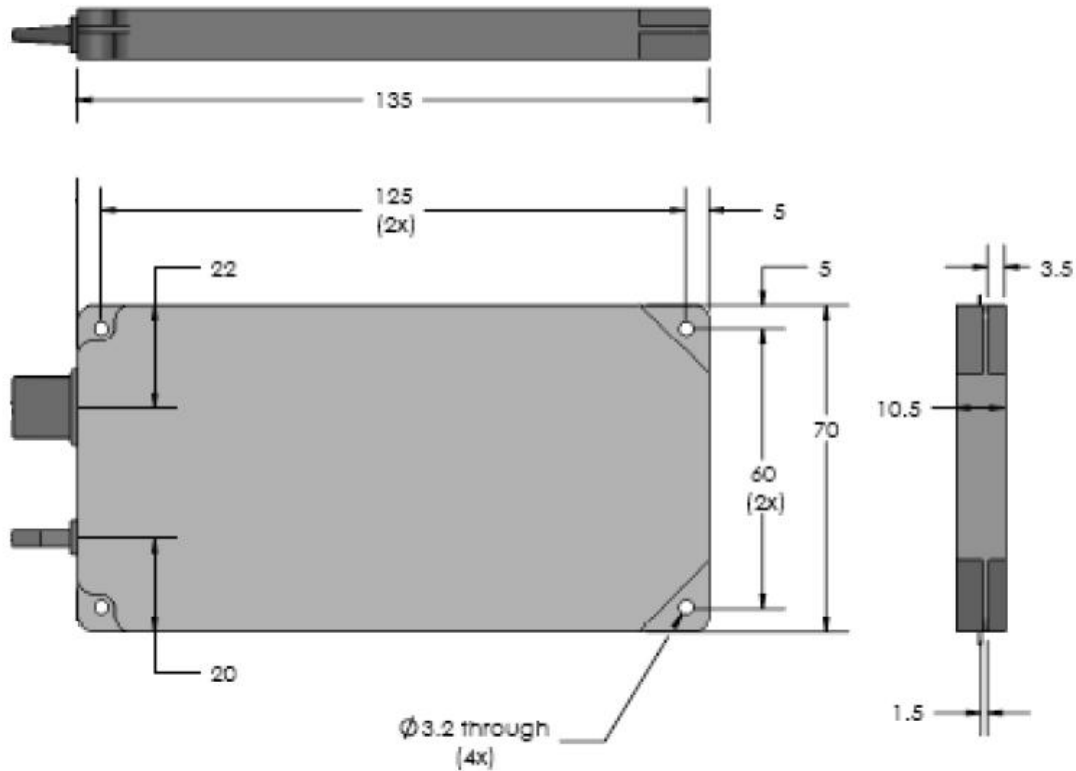
ITU	Frequency (THz)	Wavelength (nm)
40	194.00	1545.322
39	193.90	1546.119
38	193.80	1546.917
37	193.70	1547.715
36	193.60	1548.515
35	193.50	1549.315
34	193.40	1550.116
33	193.30	1550.918
32	193.20	1551.721
31	193.10	1552.524
30	193.00	1553.329
29	192.90	1554.134
28	192.80	1554.940
27	192.70	1555.747
26	192.60	1556.555
25	192.50	1557.363
24	192.40	1558.173
23	192.30	1558.983
22	192.20	1559.794
21	192.10	1560.606

3. Mechanical Specifications

Parameter	Symbol	Specification			Units	Comments
		MIN	TYP	MAX		
Connector						LC/PC
Fiber Type						Corning SMF-28e Compatible
Input Fiber Length (Trunk)	Common		1000		mm	0.9mm Buffer, To Connector Tip
Output Fiber Length	Out		1500		mm	4x(8/10/12-F Ribbon) with 0.9mm Buffer, To Connector Tip
Package Dimensions					mm	120x70x10.5

4. Package Drawing

Unit: mm



5. Environmental Specifications

Parameter	Symbol	Specification			Units	Comments
		MIN	TYP	MAX		
Input Optical Power				250	mW	
Operating Temperature		-5		65	°C	
Operating Relative Humidity				90	%	Non-condensing
Storage Temperature		-40		85	°C	
Storage Relative Humidity		5		95	%	Non-condensing

6. Revision History

Revision	Initials	Date	Description
0	HJL	2/20/2017	Initial Specification

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