AAWG 50G 96 Channel DWDM Mux/Demux Module

Agiltron' s Wavelength Division Multiplexer (WDM) is based on AWG technology. This proven technology offers wide channel bandwidth, flexible channel configuration, low insertion loss, and high isolation. This DWDM series modules are passive optical multiplexer/demultiplexer designed for metro access applications that represent the state of the art in fiber optics design. This Mux/Demux module multiplexes and demultiplexes multiple DWDM wavelengths of 100GHz channel spacing into a ring or point-to-point network, ideal for telecommunications and networking.
The Mux/Demux module is packaged with a 1RU, 19'' rack mount chassis for simple installation and modularity. This chassis based system offers network equipment manufacturers a more scalable and higher-density solution to add DWDM capability to their existing and new networks with simple pluggable interface.

Features

- 50 GHz Channel Spacing
- High Channel Isolation
- Low Insertion Loss
- Highly Stable & Reliable

Applications

- Add/Drop Channels
- Dense WDM Systems
- CATV Fiberoptic Links

Specifications

Parameters	Notes	Specifications		Units
		Min	Max	
Channels		96		Ch
Channel Spacing		50		GHz
Reference Pass-band	Relative to ITU Grid	± 0.05		nm
ITU Frequency	See Table 2 Below			THz
ITU Wavelength	See Table 2 Below			nm
Center Frequency Accuracy	Maximum of the absolute deviation of the 3 dB center wavelength from ITU grid over all channels	-0.09	+0.09	nm
Insertion Loss	Maximum of the insertion loss across the ITU pass-band over all channels		7.0	dB
Insertion Loss Uniformity	Maximum insertion loss variance across all Uniformity channels		1.7	dB
Ripple	Maximum of the loss variance across the ITU pass-band over all channels		2.3	dB
3dB Bandwidth	3 dB from min Insertion Loss, full width, average polarization	0.25		nm
20 dB bandwidth	20 dB from min Insertion Loss, full width, average polarization		0.8	nm
Adjacent Channel Isolation	@ITU, average States of Polarization	20		dB
Non-Adjacent Channel Isolation	@ITU, average States of Polarization	30		dB
Total Crosstalk	@ITU, average States of Polarization	17		dB
Polarization Dependent Loss	Maximum ratio of transmissions over all polarization states, over the ITU pass-band		0.9	dB
Return Loss		40		dB
Polarization Mode Delay (PMD)	In Reference Passband over all channels		1.0	ps
Chromatic Dispersion	In Reference Passband over all channels	-35	35	ps/nm
Operating Temperature		-40	+85	°C
Storage Temperature		-40	+85	°C
Relative Humidity		0	90	%

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link]:

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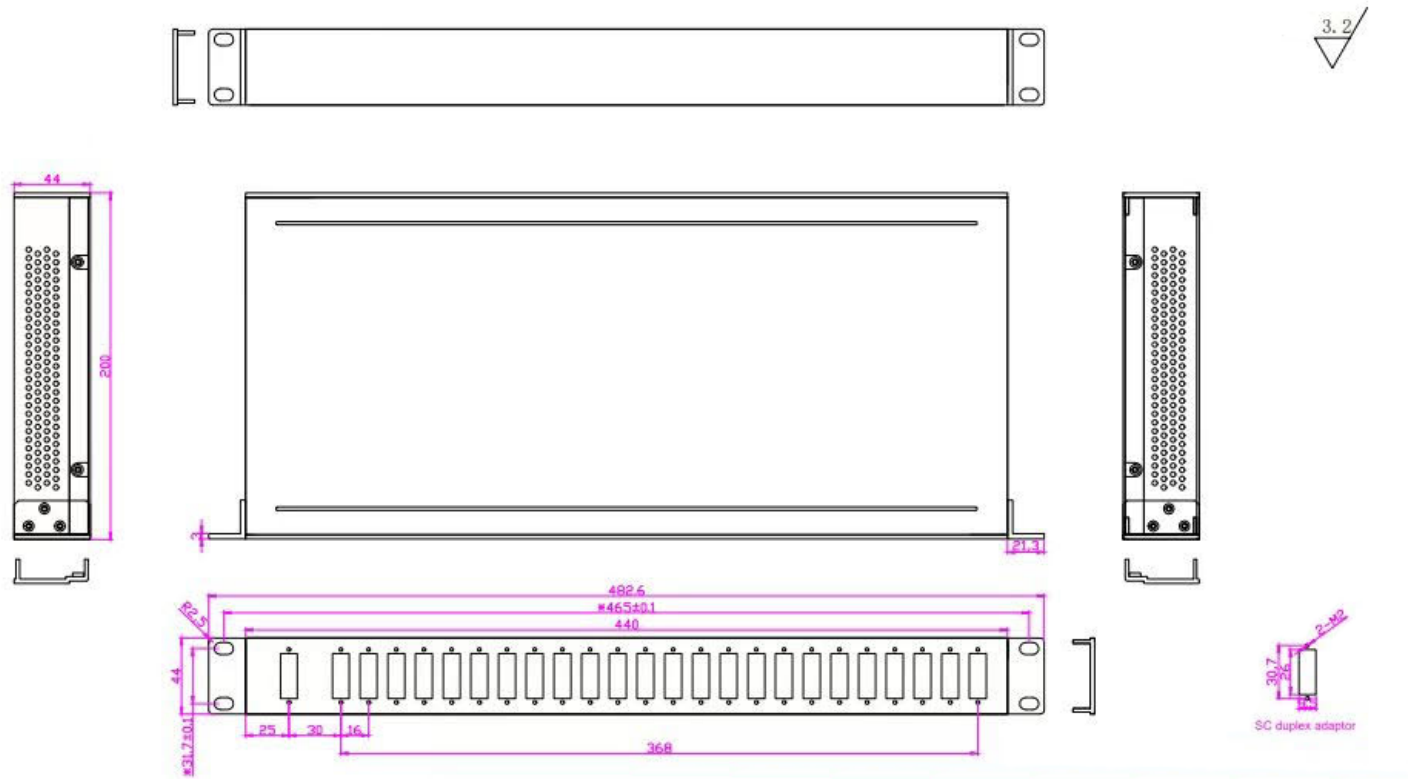
Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information (Part Number)

	☐	☐☐	☐	☐☐	☐	1	8
Prefix	**Ch. Spacing**	**Number of Channels**	**Type**	**1st ITU Channel Number * (for example)**	**Configuration**	**Monitor**	**Connector[1]**
AAWG-	50G = 2	96 Channel = 96 48 Channel = 48	Flat Top = 1 Gaussian = 2	1535.04nm = 21 1542.94nm = 41	MUX or DEMUX = 1 MUX+DEMUX = 2 Special = 0	With monitor port = 1 Special = 0	Duplex LC/PC = 8 Special = 0

* Refer ITU Channel Table

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

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Table 2 *Channel Plan*

First Channel Frequency (THz)	Last Channel Frequency (THz)	First Channel Wavelength (nm)	Last Channel Wavelength (nm)
196.00	192.05	1529.553	1561.013

Table 1 *Channels List：Passbands for 80 channel AAWG*

Label	Frequency(THz)	Wavelength(nm)	Label	Frequency(THz)	Wavelength(nm)
C60	196.00	1529.553	C40	194.00	1545.322
H59	195.95	1529.944	H39	193.95	1545.720
C59	195.90	1530.334	C39	193.90	1546.119
H58	195.85	1530.725	H38	193.85	1546.518
C58	195.80	1531.116	C38	193.8	1546.917
H57	195.75	1531.507	H37	193.75	1547.316
C57	195.70	1531.898	C37	193.7	1547.715
H56	195.65	1532.290	H36	193.65	1548.115
C56	195.60	1532.681	C36	193.6	1548.515
H55	195.55	1533.073	H35	193.55	1548.915
C55	195.50	1533.465	C35	193.5	1549.315
H54	195.45	1533.858	H34	193.45	1549.715
C54	195.40	1534.250	C34	193.4	1550.116
H53	195.35	1534.643	H33	193.35	1550.517
C53	195.30	1535.036	C33	193.3	1550.918
H52	195.25	1535.429	H32	193.25	1551.319
C52	195.20	1535.822	C32	193.2	1551.721
H51	195.15	1536.216	H31	193.15	1552.122
C51	195.10	1536.609	C31	193.1	1552.524
H50	195.05	1537.003	H30	193.05	1552.926
C50	195.00	1537.397	C30	193	1553.329
H49	194.95	1537.792	H29	192.95	1553.731
C49	194.90	1538.186	C29	192.9	1554.134
H48	194.85	1538.581	H28	192.85	1554.537
C48	194.80	1538.976	C28	192.8	1554.94
H47	194.75	1539.371	H27	192.75	1555.343
C47	194.70	1539.766	C27	192.7	1555.747
H46	194.65	1540.162	H26	192.65	1556.151
C46	194.60	1540.557	C26	192.6	1556.555
H45	194.55	1540.953	H25	192.55	1556.959
C45	194.50	1541.349	C25	192.5	1557.363
H44	194.45	1541.746	H24	192.45	1557.768
C44	194.40	1542.142	C24	192.4	1558.173
H43	194.35	1542.539	H23	192.35	1558.578
C43	194.30	1542.936	C23	192.3	1558.983
H42	194.25	1543.333	H22	192.25	1559.389
C42	194.20	1543.730	C22	192.2	1559.794
H41	194.15	1544.128	H21	192.15	1560.2
C41	194.10	1544.526	C21	192.1	1560.606
H40	194.05	1544.924	H20	192.05	1561.013

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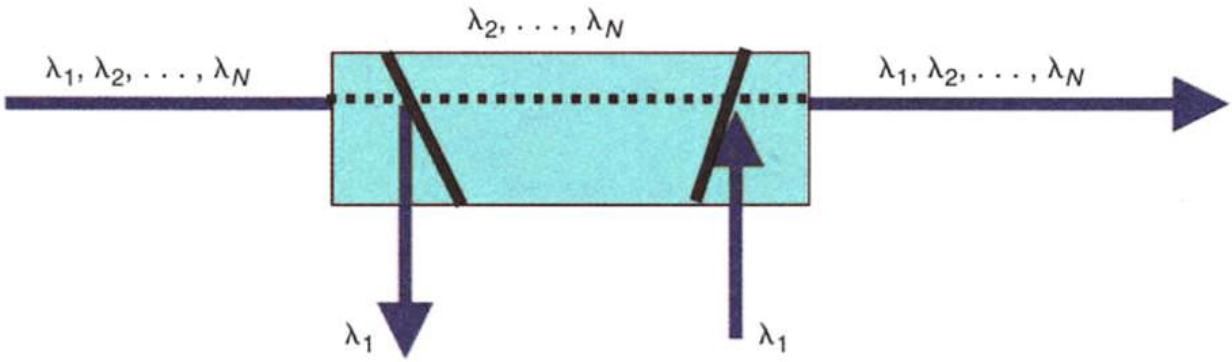
Optical Function Path Illustration

Wavelength multiplexing and Demultiplexing can be illustrated below in a single-channel optical add-drop case.



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