

Athermal AWG DWDM 100GHz 16~48 Channel module in 1U/2U Rack

Part Number: DWDM-CH40



Overview

Ficer's Dense Wavelength Division Multiplexer modules are part of a series of high performance products based on silica-on-silicon planar technology and a unique athermal packaging design requiring no electrical power, software or temperature control for a completely passive DWDM solution. This product range offers a combination of very low loss and high channel isolation along with long term reliability and low cost per channel for 40 channel, 100GHz solutions. Each module can perform Mux and Demux functions. The 1U Rack package allow users install such module easily in sites.

Applications

- DWDM systems
- WDM based on ADM
- Metro and Long-hual networks
- Wavelength selective routing

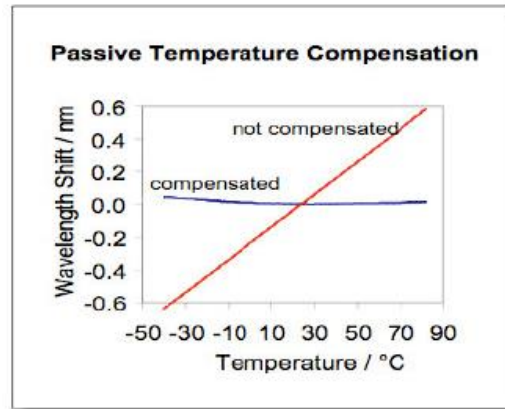
Features

- High Stability and Reliability
- Low Insertion Loss
- Low PDL
- High Channel Isolation
- No electrical power required
- No temperature control required

Absolute Maximum Ratings

Parameters	Min.	Max.	Unit
Operating Temperature	-5	+65	°C
Operating Humidity	5	95	%RH
Storage Temperature	-40	+85	°C
Storage Humidity	5	95	%RH

Temperature Compensation Chart



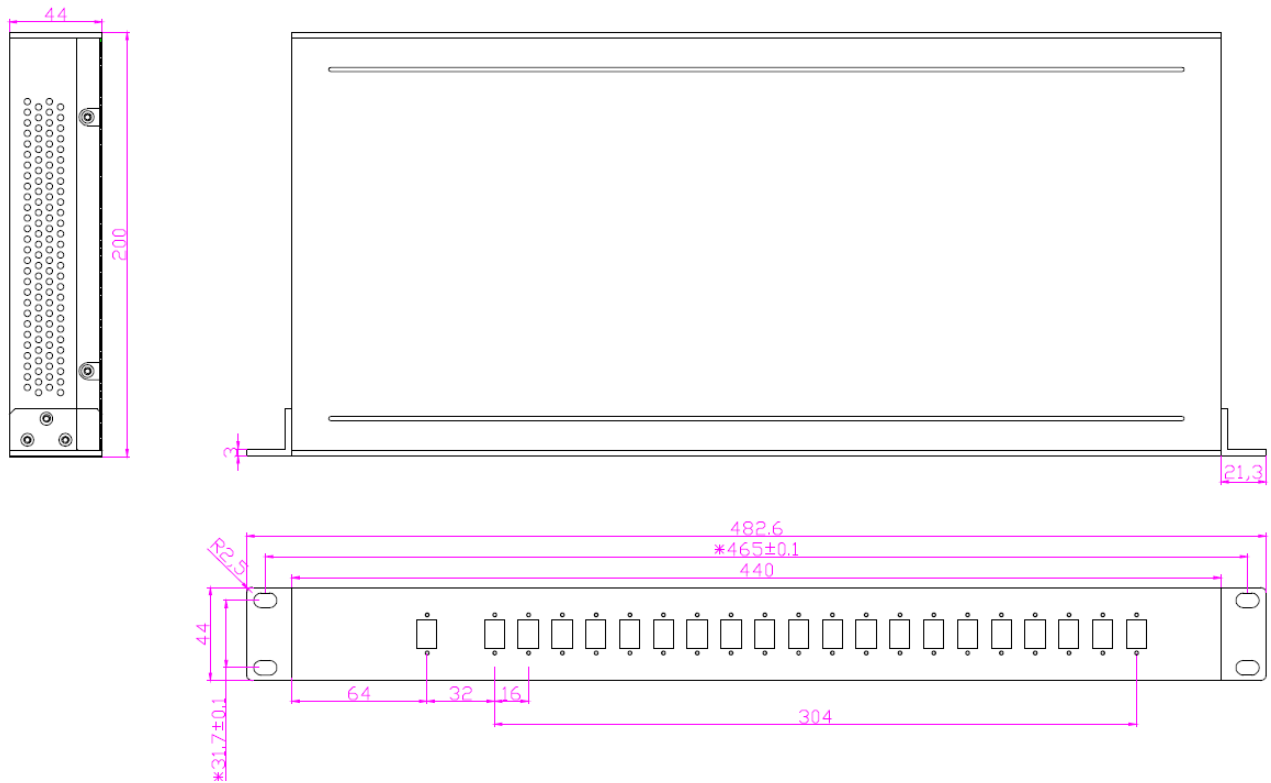
Optical Specifications

Parameters	Min.	Typ.	Max.	Unit	Note
Number of Channels	16, 20, 24, 32, 40, 44, 48				
Number Channel Spacing	100			GHz	
Center Wavelength	C-band			nm	
Clear Channel Pass Band	±0.1			nm	
Wavelength Stability	±0.05			Nm	
-1dB Channel Bandwidth	0.24			Nm	
-3dB Channel Bandwidth	0.43			nm	
Optical Insertion Loss at ITU grid		4.5	6.0	dB	1
Adjacent Channel Isolation	25			dB	
Non-Adjacent Channel Isolation	29			dB	
Total Channel Isolation	22			dB	
Insertion Loss Uniformity		0.8	1.5	dB	1
Insertion Loss Ripple			1.2	dB	1
Optical Return Loss	40			dB	
PDL / Polarization Dependent Loss		0.3	0.5	dB	2
Polarization Mode Dispersion			0.5	Ps	
Maximum Optical Power			23	dBm	
Monitoring Range	-35		+23	dBm	

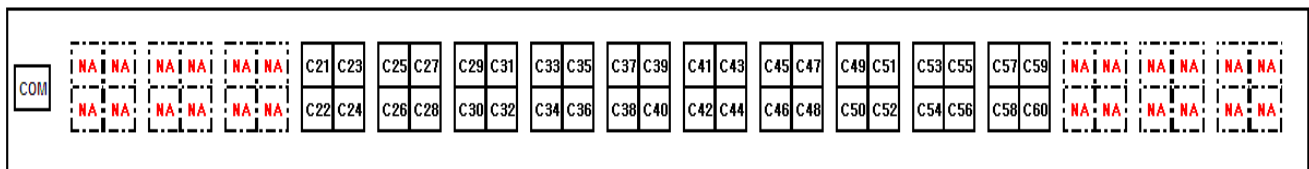
Note 1. The Insertion Loss values not including Connector Loss.

Note 2. 16CH & 18CH are with Band Splitter.

Mechanical Dimensions



40 channel scheme



Note: NA means for empty adaptor slots for expansion.

Ordering Information

DWDM-CH40-A ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ -RBA ☐ U- ☐ ☐

Channel Counts

16: 16Ch 40: 40Ch
20: 20Ch 44: 44Ch
24: 24Ch 48: 48Ch
32: 32Ch

Optical Route

M: Mux P: Mux*2
D: Demux Q: Demux*2
U: Mux+Demux

Begin Channel

17: 1563.86nm
18: 1563.05nm
.....
60: 1529.55nm
61: 1528.77nm

End Channel

17: 1563.86nm
18: 1563.05nm
.....
60: 1529.55nm
61: 1528.77nm

Monitor Port

1: 1% 3: 3%
2: 2% None: None

Rack Height

1: 1U 2: 2U

Connector / Adaptor Type



F- FC type P- PC type
S- SC type A- APC type
T- ST type X: None
L- LC type
C: DSC
D: DLC
U: MU
E: E2000
X: None

Appendix A: 100GHz ITU Grid DWDM Central Wavelength Table

Channel	Central Wavelength(nm)	Frequency (THZ)
CH61	1528.77	196.1
CH60	1529.55	196.0
CH59	1530.33	195.9
CH58	1531.12	195.8
CH57	1531.90	195.7
CH56	1532.68	195.6
CH55	1533.47	195.5
CH54	1534.25	195.4
CH53	1535.04	195.3
CH52	1535.82	195.2
CH51	1536.61	195.1
CH50	1537.40	195.0
CH49	1538.19	194.9
CH48	1538.98	194.8
CH47	1539.77	194.7
CH46	1540.56	194.6
CH45	1541.35	194.5
CH44	1542.14	194.4
CH43	1542.94	194.3
CH42	1543.73	194.2
CH41	1544.53	194.1
CH40	1545.32	194.0
CH39	1546.12	193.9
CH38	1546.92	193.8
CH37	1547.72	193.7
CH36	1548.51	193.6
CH35	1549.32	193.5
CH34	1550.12	193.4
CH33	1550.92	193.3
CH32	1551.72	193.2
CH31	1552.52	193.1
CH30	1553.33	193.0
CH29	1554.13	192.9
CH28	1554.94	192.8
CH27	1555.75	192.7
CH26	1556.55	192.6
CH25	1557.36	192.5
CH24	1558.17	192.4
CH23	1558.98	192.3
CH22	1559.79	192.2
CH21	1560.61	192.1
CH20	1561.42	192.0
CH19	1562.23	191.9
CH18	1563.05	191.8
CH17	1563.86	191.7