

DOADM | Dense Optical Add Drop Multiplexer

Product Description

DOADM modules, or Dense Optical Add Drop Multiplexers, are essential components in optical networking systems. They serve the purpose of both adding and dropping specific wavelength channels within a multi-wavelength Wavelength Division Multiplexing (WDM) system. Here's a breakdown of their functionalities and applications:

Add Functionality:

The add functionality allows for the integration of one or more new wavelength channels into an existing multi-wavelength WDM system. This effectively expands the capacity of the system by incorporating additional data channels. This feature is particularly useful in scenarios where the demand for bandwidth increases, such as in metro-core networks, metro-access networks, or enterprise environments.

Drop Functionality:

The drop functionality enables the selective removal of one or more channels from the WDM system. This is often necessary for routing specific data channels to their intended destinations or for network maintenance purposes. By dropping unwanted channels, the overall efficiency and performance of the network can be optimized.

Express Port:

DOADM modules typically include an Express port, which allows additional channels to bypass the add/drop functionality and pass through the system without alteration. This ensures seamless transmission of data when necessary.



Applications:

DOADMs find applications in various networking scenarios, including metro-core networks, metro-access networks, and enterprise environments.

They are particularly valuable in situations where there's a need to expand the bandwidth capacity of existing fiber optic infrastructure.

DOADMs support different network configurations, such as point-to-point, ring, or bus configurations, offering flexibility to adapt to diverse networking requirements.

Form Factors:

DOADMs are available in different form factors to suit various deployment scenarios. Common form factors include standard 1RU 19" rackmount units, LGX® modules, and ruggedized cassette housings.

These housings come in high-density, custom-configurable options, allowing network operators to optimize space utilization and tailor the solution to their specific needs.

In summary, DOADM modules play a crucial role in expanding the capacity and flexibility of optical networking systems, catering to the evolving demands of modern telecommunications infrastructure and custom configurable DOADMs.

DOADM | Dense Optical Add Drop Multiplexer

Specifications

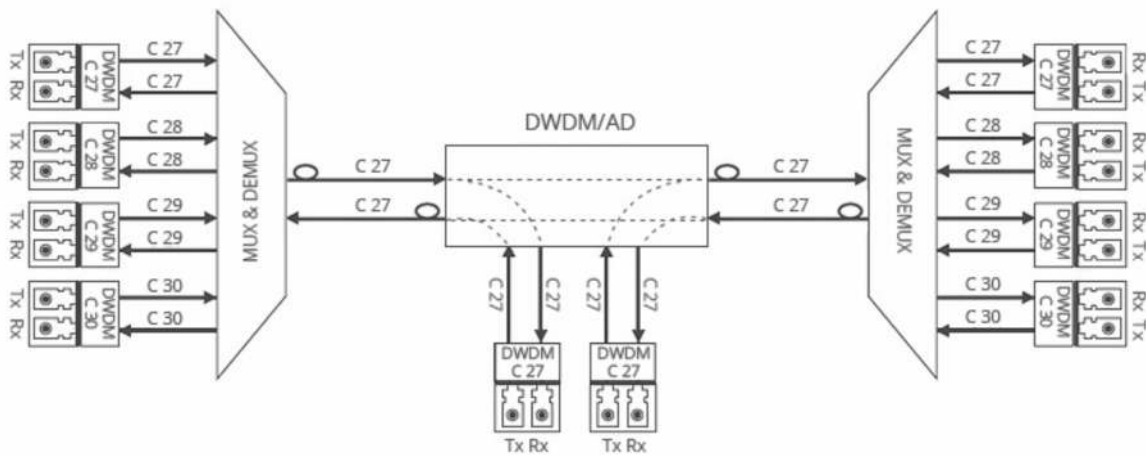
Parameters				
Channel Wavelength	ITU-T DWDM Grid			
Channel Spacing	100 GHz Channels			
Number of Channels	1	2	4	8
Bandwidth @ 0.5dB (nm)	>14	>14	>14	>14
Passband (nm)	$\lambda \pm 6.5$			
Passband flatness (dB)	≤ 0.4	≤ 0.4	≤ 0.4	≤ 0.4
IL(In @ Drop @ λ drop) (dB)	≤ 0.6	≤ 0.9	≤ 2.0	≤ 3.2
IL(Add @ Out @ λ add) (dB)	≤ 0.6	N/A	≤ 2.0	≤ 3.2
IL(In @ Out @ other λ) (dB)	NA	≤ 1.2	≤ 2.5	≤ 4.0
Adjacent isolation (dB)	>30			
Non-adjacent isolation (dB)	>40			
Isolation(In @ Out @ λ drop) (dB)	>25			
Wavelength thermal stability (nm/ °C)	< 0.002	< 0.002	< 0.002	< 0.002
Insertion Loss Thermal Stability (dB/ °C)	< 0.006	< 0.006	< 0.006	< 0.006
PDL (dB)	< 0.15	< 0.15	< 0.15	< 0.2
PMD (ps)	< 0.1	< 0.1	< 0.1	< 0.15
Return Loss (dB)	>45			
Operating Temperature (° C)	-5 to 65			
Storage Temperature (° C)	-40 to 85			

*Note: Insertion Loss values do not include connector losses.

Housing type

LGX[®] Module | Rack-Mount 19 / 23" | Ruggedized Cassette | Steel tube | High-Density Custom Configurable Options

Applications



1-Channel Duplex Add/Drop MUX/DEMUX

DOADM | Dense Optical Add Drop Multiplexer

Ordering Information

M W - A D - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9

1. Number of Add/Drop Channels:

1	1 Add; 1 Drop
2	2 Add; 2 Drop
4	4 Add; 4 Drop
8	8 Add; 8 Drop
12	12 Add; 12 Drop
16	16 Add; 16 Drop
18	18 Add; 18 Drop

Note: Available in other A/D channels

2. Starting Wavelength (nm):

C21, C22, C23, C24 etc.

Refer to ITU-T standard wavelength reference table below

3. Housing Type:

C	Ruggedized Cassette
M	LGX® Module
R	Rack-Mount
T	Steel Tube 5.5x34mm

Please inquire for High-Density;
Custom Configurable Options

4. Adapter / Connector Type:

AFC	FC/APC
FCU	FC/UPC
ALC	LC/APC
LCU	LC/UPC
ASC	SC/APC
SCU	SC/UPC
PL	Pigtail

5. Fiber Length Input / Output (m):

1, 2, 3, 4, 5

Note: For specifying fiber cable leads on housings with connectors or pigtails;
Leave Blank if not specifying fiber cable leads

6. Fiber Cable Type Options:

9	900um loose-tube cable
2	2.0mm diameter
3	3.0mm diameter

Note: For specifying fiber cable leads on housings with connectors or pigtails;
Leave Blank if not specifying fiber cable leads

7. Additional Wideband Port:

31	1310±40nm wideband
55	1550±40nm wideband

Note: Leave Blank if not specifying Express port

8. Monitor Port:

M1	1% Monitor Port
M2	2% Monitor Port
M3	3% Monitor Port
M4	4% Monitor Port
M5	5% Monitor Port

Note: Leave Blank if not specifying Monitor port

9. Express Port:

E Express

Note: Leave Blank if not specifying Express port

DOADM | Dense Optical Add Drop Multiplexer

DWDM ITU Grid; C-Band; 100GHz Spacing

Channel no.	Wavelength (nm)	Frequency (GHz)	Channel no.	Wavelength (nm)	Frequency (GHz)
C1	1577.03	190100	C37	1547.72	193700
C2	1576.20	190200	C38	1546.92	193800
C3	1575.37	190300	C39	1546.12	193900
C4	1574.54	190400	C40	1545.32	194000
C5	1573.71	190500	C41	1544.53	194100
C6	1572.89	190600	C42	1543.73	194200
C7	1572.06	190700	C43	1542.94	194300
C8	1571.24	190800	C44	1542.14	194400
C9	1570.42	190900	C45	1541.35	194500
C10	1569.59	191000	C46	1540.56	194600
C11	1568.11	191100	C47	1539.77	194700
C12	1567.95	191200	C48	1538.98	194800
C13	1567.13	191300	C49	1538.19	194900
C14	1566.31	191400	C50	1537.40	195000
C15	1565.50	191500	C51	1536.61	195100
C16	1564.68	191600	C52	1535.82	195200
C17	1563.86	191700	C53	1535.04	195300
C18	1563.05	191800	C54	1534.25	195400
C19	1562.23	191900	C55	1533.47	195500
C20	1561.42	192000	C56	1532.68	195600
C21	1560.61	192100	C57	1531.90	195700
C22	1559.79	192200	C58	1531.12	195800
C23	1558.98	192300	C59	1530.33	195900
C24	1558.17	192400	C60	1529.55	196000
C25	1557.36	192500	C61	1528.77	196100
C26	1556.56	192600	C62	1527.99	196200
C27	1555.75	192700	C63	1527.22	196300
C28	1554.94	192800	C64	1526.44	196400
C29	1554.13	192900	C65	1525.66	196500
C30	1553.33	193000	C66	1524.89	196600
C31	1552.52	193100	C67	1524.11	196700
C32	1551.72	193200	C68	1523.34	196800
C33	1550.92	193300	C69	1522.56	196900
C34	1550.12	193400	C70	1521.79	197000
C35	1549.32	193500	C71	1521.02	197100
C36	1548.52	193600	C72	1520.25	197200
			C73	1519.48	197300

DOADM | Dense Optical Add Drop Multiplexer