

DWDM Multiplexer



Description

WDM Multiplexer module of TELNET allows to integrate up to 16 channels of information on a single pair of optical fiber. In this way, a fiber can carry multiple services. 200 GHz DWDM (Dense Wave Division Multiplexing, the ITU-T G.694.1) defines 24 wavelengths separated by 1.6 nm (200GHz).

Each of the optical carriers provides an independent optical channel which can carry any service: TDM, SDH, Gigabit, Fiberchannel, including 10G and 40G. This confers a high degree of flexibility and security in the development of optical network campus, metropolitan and regional.

The TELNET DWDM multiplexer solution is completely modular, allowing its use for the entire family of MiniSAE and MetroSAE TELNET chassis. Likewise, all marketed by TELNET optical adapters are compatible with the use of DWDM optical parts in GBIC, SFP and XFP format. This flexibility ensures scalability of DWDM environments from CWDM installations.

Migrating from CWDM

The TELNET solution allows hybrid CWDM-DWDM configurations. These solutions a DWDM and CWDM multiplexer work together in the same optical node. The DWDM multiplexers operate in reserved spectrum for the C and L bands, placing 8 DWDM channel per CWDM channels. These settings allow the migration to hybrid DWDM. This development protects part of the initial investment as it keeps the chassis, power supply system, management and all the service modules. Only requires the replacement of the multiplexer and the CWDM optics based on GBIC, SFP and XFP standard.

1+1 Optical Protection

If necessary, the output of TELNET DWDM Multiplexer can benefit from an optical system protection that guarantees service availability via two routes of fiber optics.

Features

Low insertion loss.

3.5 dB. Do not appreciably increase the total attenuation of the optical span.

High isolation between channels.

30 dB of isolation between adjacent optical channels minimizes the interference between channels.

Bidirectional.

Optical multiplexer and demultiplexer compact solution integrated in A1U module.

Technical Specifications

Optical parameters	Min	Typ.	Max.
Central Wavelength λ_c		1528—1565nm	
Passband width	$\lambda_c \pm 0,25$ nm		
Insertion loss of pass channel		3,5 dB	4,5 dB
Adjacent Channel Isolation	25 dB	30 dB	
Nonadjacent channel isolation	40 dB	45 dB	
Optical Return Loss	45 dB	50 dB	
Directivity	50 dB	22 dB	22 dB
PDL			0,1 dB
PMD			0,1 ps
Maximum optical power		300 mW	

Mechanical
Connectorization LC
Dimensions 440x190x 44,1, mm
Weight 1,5 Kg.
Operating Temperature - 5° C ~ 65° C



DWDM 200GHz channels		
#	λ (nm)	Frequency (THz)
47	1539,77	194,7
49	1538,19	194,9
51	1536,61	195,1
53	1535,04	195,3
55	1533,47	195,5
57	1531,90	195,7
59	1530,33	195,9
37	1547,72	193,7
35	1549,32	193,5
33	1550,92	193,3
31	1552,52	193,1
29	1554,13	192,9

DWDM 200GHz channels		
#	λ (nm)	Frequency (THz)
45	1541,35	194,5
47	1539,77	194,7
49	1538,19	194,9
51	1536,61	195,1
53	1535,04	195,3
55	1533,47	195,5
57	1531,90	195,7
59	1530,33	195,9
37	1547,72	193,7
35	1549,32	193,5
33	1550,92	193,3
31	1552,52	193,1
29	1554,13	192,9

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