CWDM DWDM Wavelength Division Multiplexer

Product Overview

Wavelength-division multiplexing (WDM) technology combines multiple signals onto a single optical fiber by using different wavelengths (colors). This technique enables better fiber utilization,, building effective optical networks.

In WDM technology, each channel is transparent to the speed and type of data. Any mix of LAN, SAN, OTN, SONET/SDH and native video services can be transmitted simultaneously over a single fiber or fiber pair. There are two types of WDM architectures: CWDM - coarse wavelength division multiplexing, and DWDM - dense wavelength division multiplexing. Each solution has characteristics that suite different environments, networks and user requirements.

Features

- Low insert loss
- Low polarization loss
- High-channel isolation
- High reliability

Performance Index

DWDM Mux Demux

Parameters	Unit	Specifications			
Wavelength Range		ITU channels 186.6 to196.1 THz			
Channel Center Wavelength	nm	ITU channels			
Channel Spacing	Ghz	100		200	
Channel Pass band (@-0.5dB)	nm	0.22		0.5	
Channel No.	λ	2	4	8	16
Insertion Loss	dB	⩽ 1.0	⩽ 2.0	⩽ 2.8	⩽5.2
Adjacent Channel Isolation	dB	⩾ 30			
Non-adjacent Channel Isolation	dB	⩾ 45			
Wavelength thermal stability	nm/℃	⩽ 0.003			
Insertion loss thermal stability	dB/℃	⩽ 0.005			
PDL	dB	⩽ 0.1	⩽ 0.15	⩽ 0.15	⩽ 0.20
Polarization mode dispersion	ps	⩽ 0.1			
Directivity	dB	⩾ 50			
Return loss	dB	⩾ 45			
Optical Power	mW	⩽ 500			

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CWDM Mux Demux

Parameters	Unit	Specifications				
Wavelength Range	nm	1260~1620				
Channel Center Wavelength	nm	1270 / 1290 / ⋯ / 1610 or 1271 / 1291 / ⋯ / 1611				
Channel Spacing	Ghz	20				
Channel Pass band (@-0.5dB)	nm	λc ± 7.5				
Channel No.	λ	2	4	8	16	18
Insertion Loss	dB	≤0.8	≤ 1.5	≤ 2.5	≤5.2	≤6.4
Adjacent Channel Isolation	dB	≥ 30				
Non-adjacent Channel Isolation	dB	≥ 40				
Wavelength thermal stability	nm/℃	≤ 0.003				
Insertion loss thermal stability	dB/℃	≤ 0.005				
PDL	dB	≤ 0.1	≤ 0.15	≤ 0.15	≤ 0.20	≤ 0.25
Polarization mode dispersion	ps	≤ 0.1		≤ 0.15		
Directivity	dB	≥ 50				
Return loss	dB	≥ 45				
Optical Power	mW	≤ 500				

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