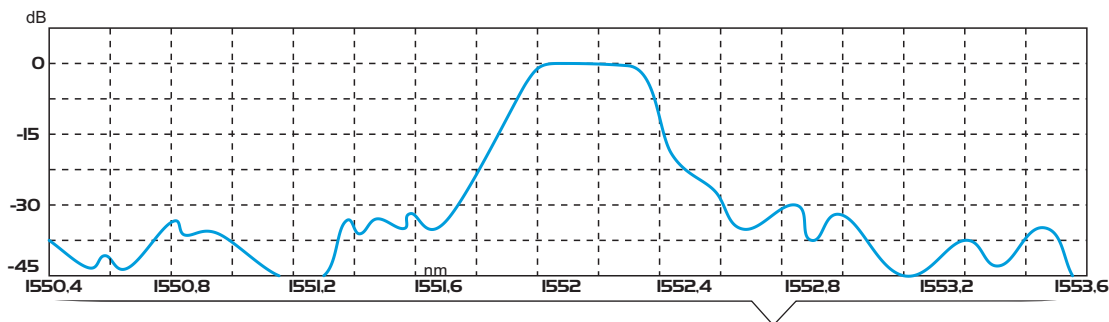


Optical Elements - WDM

DWDM add or drop multiplexers (Dense WDM)

02

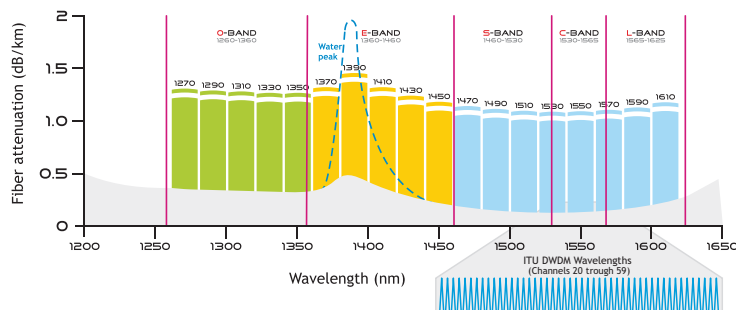


DWDM passive solutions - add/drop filters, multi-and-demultiplexers

Fibrain DWDM series multiplexers are characterized by small sensitivity to external conditions, low insertion loss and high reflection losses. DWDM multiplexing allows transmitting up to 44 channels (on 100 GHz grid) in one fiber. Thanks to the availability of EDFA optical amplifiers, very long reaches are attainable.

Applications:

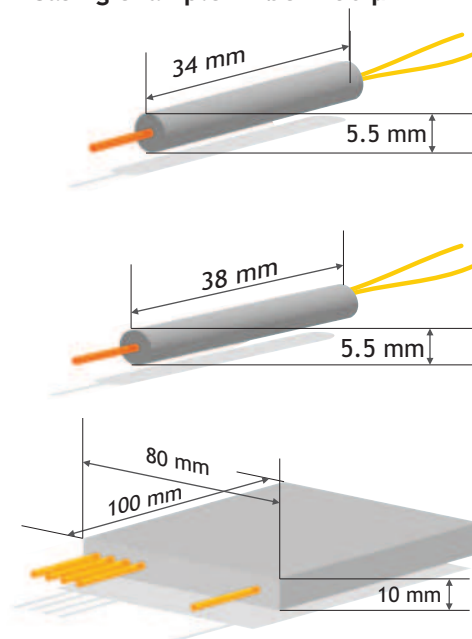
- WDM systems,
- telecommunication networks,
- CATV networks,
- measuring equipment.



Features:

- high thermal stability of parameters,
- low insertion loss and polarization loss,
- high channel isolation.

Casing example - fiber 250 μm



Technical data DWDM add or drop multiplexers:

Type	100 GHz	200 GHz
Central Wavelength (λ_c)	ITU Grid	ITU Grid
Passband	ITU+/-0.11	ITU+/-0.25
Isolation	Adjacent Channel	30 dB
	Non-adjacent Channel	40 dB
Express Channel		>12 dB
Insertion Loss [dB]	<1.0 dB	<0.8 dB
Insertion Loss Express Chann. [dB]		<0.4 dB
Ripple in Passband [dB]	<0.5	<0.3
Directivity	>=45 dB	>=50 dB
PDL [dB]	<0.15	<0.10
PMD [ps]	<0.20	<0.10
Return loss [dB]		>45
Fiber Type		09/125 G.652D
Power Handling		<=500 mW
Operating temperature		0°C to +70°C
Storage temperature		-40°C to +85°C

Casing:

Type	100 GHz	200 GHz
Dimensions	32x5.5 mm 250 μm	34x3.6 mm 250 μm, 39x5.5 mm 900 μm

Technical data DWDM add or drop multiplexers:

Typ	100 GHz			200 GHz		
	4ch	8ch	16ch	4ch	8ch	16ch
Kanály						
Central Wavelength (λ_c)	1529.55-1560.61 ITU Grid					
Passband	ITU+/-0.11			ITU+/-0.25		
Isolation	Adjacent Channel			Adjacent Channel		
	>28 dB			>28 dB		
	Non-adjacent Channel			Non-adjacent Channel		
	>40 dB			>40 dB		
Insertion Loss [dB]	<2.0	<2.8	<4.0	<5.0	<2.0	<2.8
Ripple in Passband [dB]			<0.5			<0.3
Directivity	>=50 dB					
PDL [dB]	<0.15	<0.15	<0.20	<0.30	<0.15	<0.15
PMD [ps]			<0.20			<0.10
Return loss [dB]	>45					
Fiber Type	09/125 G.652D					
Power Handling	<=500 mW					
Operating temperature	0°C to +70°C					
Storage temperature	-40°C to +85°C					
Casing:						
Dimensions [mm]	120x80x9		120x80x15	150x110x23	120x80x9	
					120x80x15	

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Optical Elements - WDM

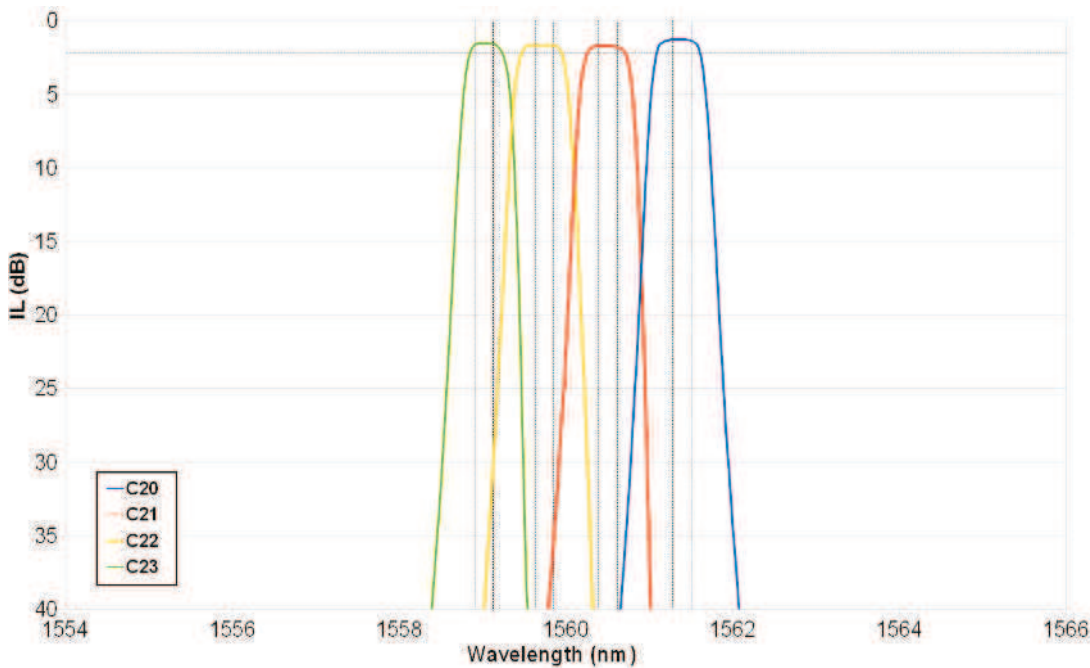
DWDM add or drop multiplexers (Dense WDM)

02



DWDM multiplexers (Dense WDM)

Customized non-standard solutions are available. Examples of non-standard functionalities include hybrid CWDM/DWDM devices, monitor port or integrated circulator. Other DWDM passive optics, like interleavers and dispersion compensators also available.



DWDM technology presents significant challenges in terms of technology and quality. That is why all Fibrain DWDM multiplexers are measured in the full spectral range and delivered with test reports showing the whole loss spectral profile.

Fiber: 1 - G652CD 2 - G657A 3 - G657B	Channel: 0004 - 4 channels 0104 - 4 channels & mon. 1% 0014 - 4 channels & port upg.	Length: 1 - 1 m x - other	Casing: 1 - 5.5x34 mm pipe 2 - 5.5x38 mm pipe 3 - 98x14x9 mm 4 - 100x80x10 mm 5 - 120x80x15 mm 5 - 125x96x16 mm 6 - 140x115x18 mm						
DWDM-G0-1	M10	0004	25	28	1	90	2	SC	SC
Quality: S0/S1 G0/G1 T0/T1 P0/P1	Type: M10 - mux 100 GHz M20 - mux 200 GHz D10 - demux 100 GHz D20 - demux 200 GHz A10 - add 100 GHz A20 - add 200 GHz O10 - OADM 100 GHz O20 - OADM 200 GHz	Start. channel: 21 - 21 channel ... 65 - 65 channel	End channel: 21 - 21 channel ... 65 - 65 channel	Fiber type: 25 - 250 μm 90 - 900 μm 20 - 2.0 mm 30 - 3.0 mm	Conn. type: ST SC SCA FC FCA LC LCA E20 E2A x - other	Conn. type: ST SC SCA FC FCA LC LCA E20 E2A x - other			

DWDM-G0-1-M10-0004-25-28-1-90-4-SC-SC

Example: Fibrain DWDM multiplexer, 100 GHz grid, 4 channels, starting channel 25, end channel 28, 100x80x10 packaging, SC PC connectors.

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Fiber Optical Cables
Optical Elements - WDM