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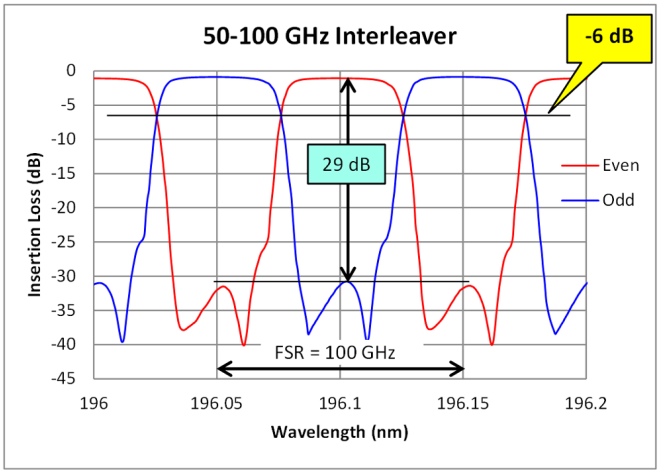
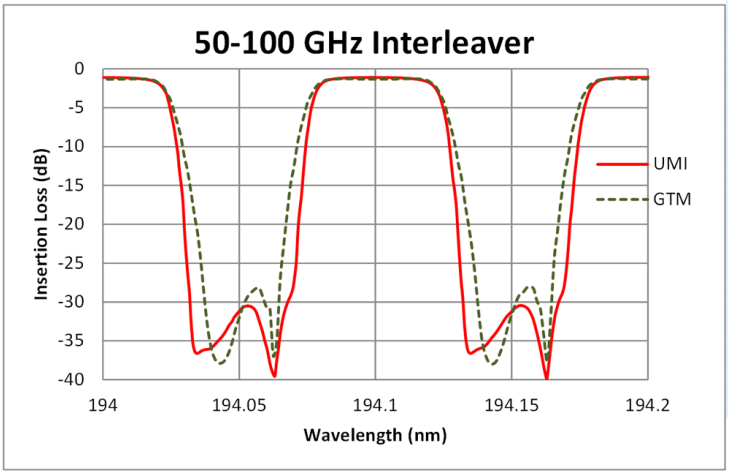
Optical Interleavers

GouMax's UMI optical interleaver is a 3-port passive fiber-optic device that is used to separate Dense Wavelength-Division Multiplexing (DWDM) channels into two groups of signal streams (odd and even channels) in an interleaving way. GouMax's UMI optical interleaver uses an innovative design that features wide stopband and higher channel isolation. It provides the best solution to expand wavelength channel counts in DWDM system.

Traditional optical interleaver in the market has the limitation of 3-dB bandwidth (FWHM) being equal to half of channel spacing (FSR) at each output port when used as DeMux. Some high-performance applications require a wider stopband to enhance the adjacent cross-talk performance. GouMax's UMI technology can significantly move the cross point of odd and even channels down at –5 dB or even –10 dB, achieving the much wider isolation band. Furthermore, UMI optical interleaver has the sharp transaction filter shape. These distinguished features are critical for high data-rate optical communication network.





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UMI Optical Interleaver

Key Features

- Wide stopband width: 30% of FSR
- Wide passband width: 40% of FSR
- 50-100 GHz, 25-50 GHz, 33.3-66.6 GHz
- 0.37-0.74 nm O-band & E-band
- Customized FSR and wavelength band

Key Applications

- Upgrade DWDM networks
- Expand DWDM channel counts
- Mux/DeMux
- Reshaping of high data-rate signals
- Flat-top comb filter

C-band ITL-100 Specifications and Key Parameters

Parameters	Units	Specifications			Note
		Min	Typ	Max	
Wavelength Range	nm	1529.16 ~ 1567.13			96 Channels
Wavelength Accuracy	pm	-20		20	Center wavelength at -3 dB
Clear Passband	GHz	-10		10	
Insertion Loss	dB			2.0	
Passband Width @-0.5dB	GHz	±20			From ITU wavelength of passband
Passband Width @-3.0dB	GHz	±22			From ITU wavelength of passband
Passband Width @-20.0dB	GHz			±35	From ITU wavelength of passband
Stopband Width	GHz		±15		From ITU wavelength of stopband
Ripple	dB			0.1	Do not include edges
IL Uniformity	dB			0.5	
PDL	dB			0.3	
Adjacent Isolation	dB	26			
CD	ps/nm	-75		75	±10 GHz From ITU Grid
PMD	ps			0.5	
Return Loss	dB	40			

More information:

1) Specification is given as an example of 50-100 GHz C-band interleaver.
2) Channel spacing can be 50-100 GHz, 25-50 GHz, 33.3-66.6 GHz, or customized.
3) Multi-stage interleaver is available. Example: 50-200 GHz.
4) Compact 6-port two-in-one (Mux + DeMux) interleaver is available.
5) Interleavers with PM fibers are available.