Optoplex™ CORPORATION

3374 Gateway Boulevard
Fremont, CA 94538, USA
Tel: (510) 490–9930
Fax: (510) 490–9330
URL: http://www.optoplex.com/
Email: sales@optoplex.com

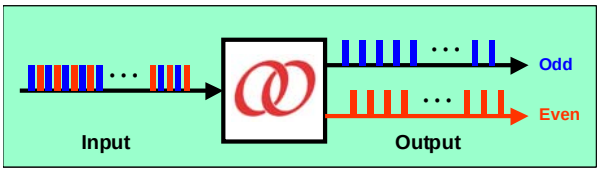
Optical Interleaver

Optoplex's **Optical Interleaver** products are based on our patented *Step-Phase Interferometer* design. Used as a DeMux (or Mux) device, an optical interleaver separates (or combines) the odd and even channel signals (see the schematic diagram below). Each optical interleaver device is optimized to cover either C- or L-band wavelengths, with the option of covering C+L band. The current optical interleaver product family supports 100-200, 50-100, 25-50 GHz channel spacing, as well as other custom spacings in that range. Dual-stage optical interleavers and asymmetric optical interleavers are also available.

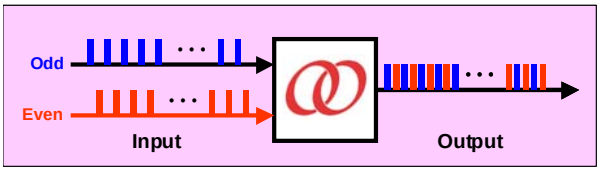
Key Features and Benefits

- Wide and flat passband
- Minimal PDL
- High channel isolation
- Minimal thermal drift
- Low and customizable dispersion
- Low insertion loss & IL uniformity
- Dual C- and L-band coverage
- Demux/Mux copackaged solution available
- Asymmetric/uneven optical interleaver available
- Telcordia GR-1221/63 qualified

Optical De-Interleaver

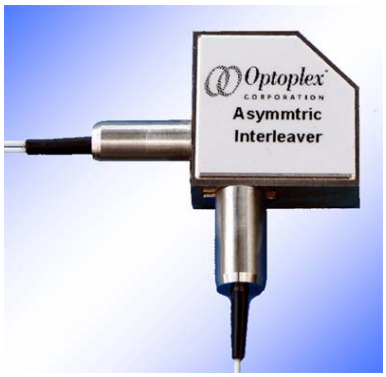


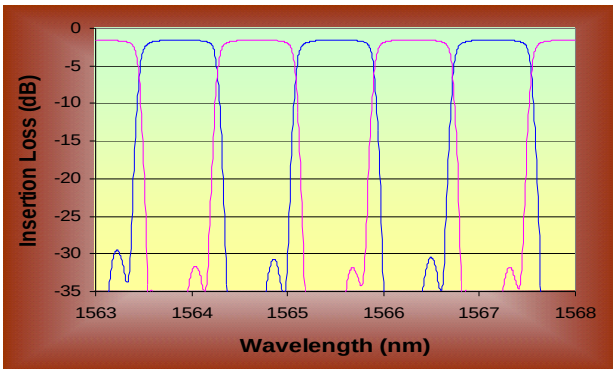
Optical Interleaver



Applications

- Extend existing network capacity
- Bridge existing & new DWDM platforms
- System upgrade
- Bi-directional networks
- Total signal power detection for Raman amplifier
- Multi-wavelength transponder
- Flat-top comb filter





Optical Interleaver Standard Product Datasheet[1]

Parameter		Unit	100-200 GHz	50-100 GHz	25-50 GHz[5]	12.5-25 GHz[5]
Wavelength Range[2]	C-Band	nm	1525 ~ 1566			
	L-Band	nm	1566 ~ 1607			
Frequency Range[2]	C-Band	THz	191.400 ~ 196.600			
	L-Band	THz	186.500 ~ 191.400			
Number of Channels (C- or L-band)		-	> 45	> 90	> 180	> 360
Insertion Loss[3] (without connector)		dB	< 1.5	< 2.2	< 3.5	
Insertion Loss Uniformity[3] (over all channels)		dB	< 0.3		< 0.4	< 0.5
Passband Width[3] @ 0.5 dB		GHz	> ITU±30	> ITU±15	> ITU±7	> ITU±3.5
Channel Isolation[3] (over ITU ± 20%FSR)		dB	> 24		> 22	> 20
Passband Ripple[3] (not including edges)		dB	< 0.2		< 0.3	
PDL[3] (within passband ITU ± 30%FSR)		dB	< 0.2		< 0.3	
Chromatic Dispersion[3] (within passband ITU ± 20%FSR)		ps/nm	<±25 (Std) <±10 (LD)	< ±30	Customer to Specify	
PMD[3] (within passband ITU ± 30%FSR)		ps	< 0.1		< 0.2	
Return Loss		dB	> 45			
Directivity		dB	> 55			
Maximum Input Optical Power		mW	300			
Operating Temperature		°C	0 ~ 65			
Storage Temperature		°C	–40 ~ 85			
Dimensions (L×W×H)[4]		mm	120×90×14			
Pigtail Type and Length, Connector Type		-	TBD			

Notes:

1. Certain parameter specs can be tightened based on customer needs.
2. Option of a single device covering both C- and L-band is available with slight tradeoffs in spectral performance.
3. Over the stated spectral and operating temperature ranges and all polarization states.
4. Outer casing dimension. Other sizes or compact devices are also available depending on the specification.
5. Wider passband also available.

Optoplex Corporation, located in Fremont, California, is an ISO9001:2000 certified supplier of cutting-edge photonic components and modules for dynamic wavelength management and signal conditioning. The company designs, develops, manufactures, and markets innovative fiber-optic products to communications networks, and provides customized solutions to instrument, defense, spectroscopy and sensing industries. By combining its proprietary optical design and packaging technology with its state-of-the-art optical coating expertise and facility, Optoplex supplies DPSK demodulators, DQPSK demodulators, 90° optical hybrids, 2-port tunable optical filters, 3-port reconfigurable optical add/drop multiplexers (ROADMs), optical interleavers, flat-top comb filters, optical performance monitors (OPMs), and portable spectrometers.