

FINISAR®

Key Features

- ▶ Dual WSS – two WSS integrated in a module
- ▶ Low and Standard profile mechanical designs
- ▶ 2x1xN WSS configuration
- ▶ Colorless/Directionless 2xNxM WSS configurations
- ▶ Alternative loopback common port
- ▶ Flexgrid® Dynamic Channel Width Control (fully ITU flexible grid (G.694.1) compliant)
 - 6.25 – 4800 GHz Range
 - 6.25 GHz Width Resolution
 - No constraints on the spectrum allocated to a super-channel
 - Hitless channel widening, narrowing and migration with 6.25 GHz resolution
- ▶ Flexgrid® Dynamic Attenuation Control
 - 6.25 GHz Resolution
 - 0 – 20dB Range
 - Hitless channel and intra-channel power equalization
- ▶ LCoS Switching Technology
- ▶ 4.8 THz Frequency Range

Applications

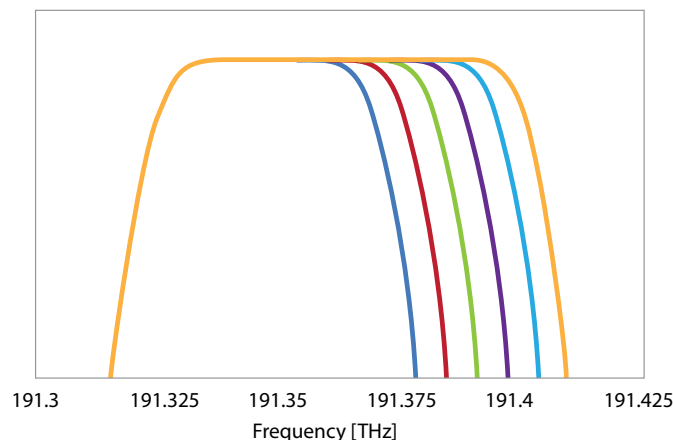
- ▶ Route & Select ROADM Architectures
- ▶ Colorless Directionless Add/Drop
- ▶ 10 - 400+ Gb/s Transport
- ▶ Dynamic Gain Equalization
- ▶ Multi-carrier Superchannels
- ▶ Alien Wavelength Routing
- ▶ Flexgrid and Fixed grid ITU 50GHz and 100GHz

Dual Wavelength Selective Switch (WSS)

The application of Reconfigurable Optical Add/Drop Multiplexers (ROADM) in DWDM optical networks has expanded in recent years to support increasingly more directions as well as increased flexibility in the add/drop structure. Flexgrid® technology is now essential in the efficient use of optical bandwidth for extremely high data rates and advanced modulation formats employed by next generation DWDM transmitters/receivers, including 400Gb/s and 1 Tbit/s signals of the future. These higher data rates require that channel spacing is flexible and can be increased real-time to allow the network to adapt to new transmission formats. Deployment of colorless, directionless (CD) ROADMs and colorless, directionless, contentionless (CDC) is facilitated by the introduction of route & select (R&S) ROADM architectures which, unlike broadcast & select (B&S) ROADMs that require only one WSS per direction, require two WSS per direction.

By integrating two WSS, each featuring superior optical performance, in a single module the dual WSS modules by Finisar are optimized for this new generation of R&S ROADMs. Dual WSS modules can also be used as CD 2xNxM Add/Drop modules. Enabled by Finisar LCoS technology, Finisar dual WSS products support Flexgrid® technology, which provides dynamic control of the channel width. Furthermore, once deployed, channel plans are configurable 'on-the-fly', meaning that channel bandwidths can be adjusted to most efficiently carry future demand as it arises. Furthermore, Flexgrid® offers full backwards compatibility with both the standard 100 GHz and 50 GHz ITU grids. Flexgrid® also enables the equalization of the power within a single channel, especially important for multicarrier optical signals.

Finisar dual modules are available in two mechanical versions: Standard Profile and Low Profile. Low Profile is specifically designed for applications where available space is limited; single slot linecards, for example, require dualHD Low Profile modules. Standard Profile modules can be used in all other applications.



flexgrid®

Figure 1. Example of Flexgrid channel reconfiguration

Dual Wavelength Selective Switch (WSS)



Figure 2. dualHD Standard Profile



Figure 3. dualHD Low Profile

About Us

Finisar is a global technology leader in optical communications. Our world-class products enable high-speed voice, video and data communications for networking, storage, wireless, and cable TV applications. For more than 25 years, we have created critical breakthroughs in optics technology and supplied system manufacturers with the production volumes needed to meet the exploding demand for network bandwidth. Finisar's industry-leading products include optical transceivers, optical engines, active optical cables, optical components, optical instrumentation, ROADM & wavelength management, optical amplifiers, and RF-over-Fiber.



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