aurora NETWORKS

OP3524

Features

- Low loss integerated narrowcast demultiplexer with broadcast splitter and broadcast/narrowcast combiner
- Non-service-interrupting local and remote power level monitoring and management (setting narrowcast attentuation levels)
- Simplifies installation and reduces rack space requirements
- Eliminates most fiber jumpers normally associated with BC-NC combining
- Hot plug-in/out
- Occupies one half-depth slot
- 100 and 200 GHz spacing versions available

Light-Plex™ Optical Narrowcast Demux with BC/NC Combiner (with Optical Power Level Management)

The Model OP3524 is a combined narrowcast demultiplexer and broadcast/narrowcast combiner with integrated power level monitoring and management capabilities. The OP3524 features four optical input ports (one carrying the DWDM narrowcast services and the other three for either a single four-way split or dual two-way splits of broadcast services) and five output ports (one narrowcast services pass-through port and four combined broadcast/narrowcast ports). Each OP3524 demultiplexes up to four DWDM wavelengths and is available in various wavelength combinations.

One broadcast optical signal can be equally split four ways or each of two independent broadcast signals can be split two ways, while the narrowcast carriers are separated by a four-channel ITU-grid demultiplexer (with models available for both 100 GHz and 200 GHz spaced ITU grid channels). Each narrowcast optical carrier is then multiplexed with one of the common broadcast optical signals and passed to one of the four output ports. DWDM optical carriers whose wavelengths are not dropped by the demux are passed through to the DWDM output port.

As new video and/or data carriers are added to the system, or as the configuration of the network is changed, the power levels of the optical carriers can change. To ensure optimal network performance, the optical power level management feature of the OP3524 allows power levels to be realigned remotely via SNMP interface to an element management system or locally via the chassis power supply display or local craft port interface. With the OP3524, broadband networks can be easily expanded by adding optical wavelengths without needing to break physical connections or install optical attenuators to realign the optical carrier power levels. By adding optical narrowcast carriers, the OP3524 allows MSOs to offer new, revenue-generating services, such as digital video, video-on-demand, high-speed data and telephony, more easily and cost-effectively than ever before.

OP3524 Product Specifications

Physical:

- Dimensions: 7.3" D x 4.3" H x 1.0" W (3RU) (18.5 cm x 11 cm x 2.5 cm)
- Weight: 1.5 lbs (0.68 kg)

Environmental:

- Operating temperature range: –20º to +65ºC (–4º to 149ºF)
- Storage temperature range: –40º to +85ºC (–40º to 185ºF)
- Humidity: 5% to 95% non-condensing

Optical Interface

- Optical connectors: SC/APC
- Inputs: DWDM INP (narrowcast content), BROADCAST A, B1, B2
- Outputs:
  DWDM OUT (pass-through of all DWDM wavelengths not dropped)
  #1, #2, #3, #4 (combined broadcast and one dropped DWDM NC)

Power Requirements:

- Input voltage: 12 V_{DC} (100 mA)
- Power consumption: 1.2 W

Optical:

- Optical return loss: 45 dB min
- Polarization Dependent Loss (PDL): 0.25 dB max
- Directivity: 55 dB min
- **Broadcast**:

  Insertion loss (including connectors):
  Broadcast Input Port A: 7.1 dB max (<6.7 dB typ)
  Broadcast Input Ports B1, B2: 4.2 dB max (<3.7 dB typ)
  Uniformity (including connectors): 0.6 dB max (<0.4 dB typ)
  Passband: At any given output port, the pass band for the BC signal transverses the entire C-band (or EDFA gain band), excluding the NC wavelength to be dropped at that port.
  Wavelength Pass Through: Only 1424.5 –1617.5 nm input and output

- **DWDM Narrowcast**:

  ITU channels dropped: *See ITU Channel Plans.*
  Passband @ 0.5 dB *(centered on DWDM ITU grid)*:

Models designated with ITU Channel Plan Group on DWDM ITU Grid with	
100 GHz spacing	200 GHz spacing
±0.11 nm	±0.25 nm

  Ripple within passband: 0.5 dB
  Insertion loss (including connectors):
  DWDM IN to #*n* OUT: 3.9 dB max (<2.8 dB typ)
  DWDM IN to DWDM OUT: 1.4 dB max (<0.8 dB typ)
  Paired insertion loss (including connectors): 4.9 dB max
  (Paired insertion loss measured when combined with a single correspondent 4-λ mux module, models OP35M4*x-x-xx*-AS or BP35M4x-0-xx-AS, Ch. *yy* INP to Ch. *yy* OUT)
  Optical channel isolation:
  Adjacent: 55 dB min (>65 dB typ)
  Non-adjacent: 55 dB min (>65 dB typ)
  Uniformity: 0.6 dB max *(difference between max and min output power across the four output ports)*
  Attenuation range: 12 dB min
  Attenuation control step size: 0.1 dB
  Attenuation control accuracy: ±0.25 dB
  Output power stability: 0.15 dB p-v (on 0-12 dB attenuation range)

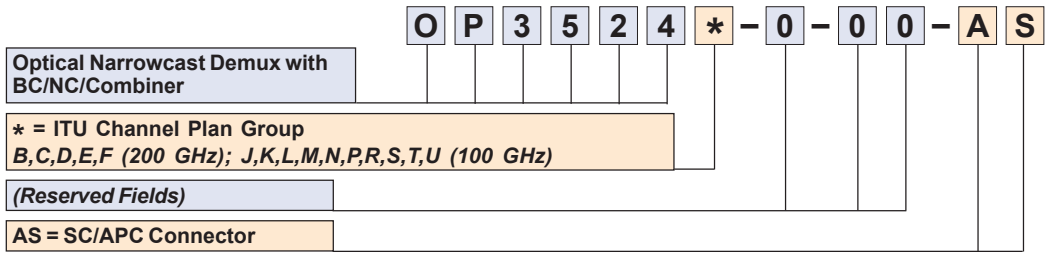
General:

- Hot plug-in/out
- Optical input power range:
  Broadcast (A, B1 and B2): +3 to +22 dBm
  Narrowcast: –6 to +17 dBm/λ
- Optical output power range, max:
  Broadcast (A): –5 to +16 dBm
  Broadcast (B1 and B2): –2 to +19 dBm
  Narrowcast: –11 to +16 dBm/λ

ITU Channel Plans:

Aurora Networks supports DWDM network architectures with a variety of products on the standard DWDM ITU Grid (ITU-T G.694.1). For more complete description of available DWDM ITU Grid channels and Aurora's partitioning into convenient logical channel groups for DWDM mux and demux applications, please refer to the Aurora Networks DWDM ITU Grid Channel Plan data sheet.

Ordering Information



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Corporate Headquarters
5400 Betsy Ross Drive
Santa Clara, CA 95054
Tel 408.235.7000
Fax 408.845.9045

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