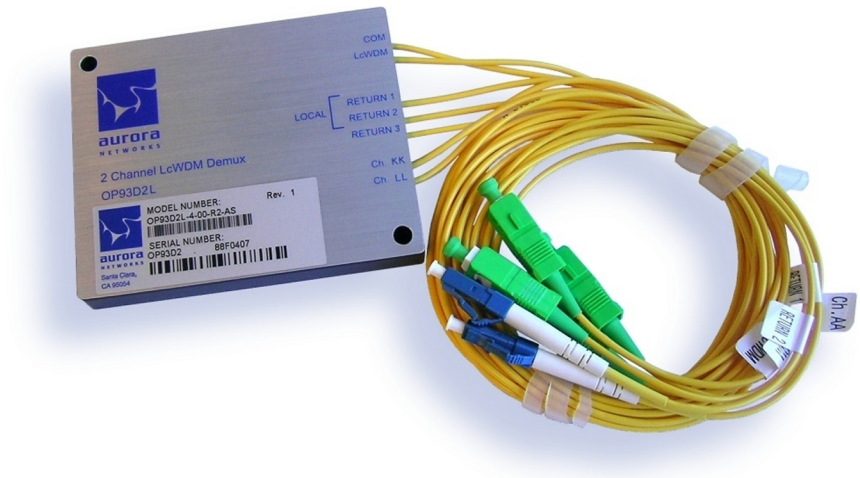
aurora NETWORKS

OP93D2L

Features

- 2-channel optical demux modules
- Channels defined by *Lc*WDM wavelengths (KK and LL)
- Cascade port on all models
- Optional downstream port and dual local ports for 1424–1617 nm return
- Flat-top passband
- High optical isolation
- Supports both forward and return path transmission of analog and digital signals
- RoHS compliant

*Lc*WDM®
2-channel Demultiplexers for Wavelengths KK and LL



Pictured above: Model OP93D2L-4-00-R2-AS

Aurora Networks' OP93D2L 2-channel *Lc*WDM demultiplexers facilitate *Lc*WDM® architectures. All models are ideal for common node splitting / segmentation applications and can be mounted in the FT4005 fiber management tray of an NC4000 series optical node or nearby splice enclosure. *Lc*WDM technology can dramatically increase network capacity without requiring additional fiber be deployed for super-trunking or narrowcasting applications.

The OP93D2L demultiplexes two *Lc*WDM wavelengths transmitted from the headend, with a cascade port passing through any additional wavelengths.

On some models, additional ports exist to carry non-*Lc*WDM upstream wavelengths on the same single fiber for return to the headend. Two "local return" ports may be connected to the output of DT4000 series digital transceivers (installed in the same optical node as the OP93D2L), and a third return port accepts the digitized traffic from a further downstream node, with the signals from all threee return ports combined and transmitted upstream to the headend.

OP93D2L Product Specifications

Physical:

- Dimensions: 3.8" L x 3.1" H x 0.3" D
  (9.6 cm x 7.8 cm x 0.8 cm)
- Weight: 0.8 lbs (0.3 kg)

Environmental:

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

Optical Interface:

- Optical connectors: *See Ordering Information*
- Optical ports:

  COM (input from fiber network)

  LcWDM (output; NC or cascade to next demux)

  Ch *xx* (2 channel drop outputs for *Lc*WDM wavelength *xx*)

  LOCAL RETURN 1 / 2 (interface ports to local DT4000 series transceivers installed in node for 1424-1617 nm digital return; not available on all models – *see Ordering Information*)

  RETURN 3 (input from the digital return of a downstream node, combined with inputs from the LOCAL RETURN ports for upstream transmission of 1424-1617 nm return; not available on all models - see *Ordering Information*)

Optical:

- *Lc*WDM channels: KK and LL
- Passband @ 0.5 dB, min:

  COM (input) to Ch. KK or LL port: > ±0.125 nm

  COM to LcWDM (cascade out) port: passes 1263.5 – 1357.5 nm with a notch at the channel add/drop band (KK or LL)

- Insertion losses, including connectors, max:

	OP93D2L-1-00-R2-AS	OP93D2L-4-00-R2-AS
COM to Ch. *xx*	1.4 dB (1.0 dB typ)	2.2 dB (1.7 dB typ)
COM to LcWDM	1.2 dB (0.8 dB typ)	2.0 dB (1.4 dB typ)
COM to LOCAL RETURN 1 or 2	*N/A*	8.9 dB (8.3 dB typ)
COM to RETURN 3	*N/A*	4.6 dB (4.0 dB typ)

Note: Subtract 0.2 dB for modules with no connectors (OP93D2L-*x*-00-R2-00).

- Transmission port isolation:

  Adjacent channel, min: 30 dB

  Non-adjacent channel, min: 45 dB

- Reflect port isolation, min: 15 dB
- Directivity, min (dB): 50
- Return loss, min: 45 dB
- Polarization dependent loss, max: 0.1 dB (<0.05 dB typ)
- Power handling, max (any input port): 21.8 dBm

Ordering Information

O P 9 3 D 2 L – * – 0 0 – * * – * *

- ***Lc*WDM 2-channel Optical Mux Module for wavelengths KK and LL** (OP93D2L)
- *** = Configuration:**
  - **1 = Cascade port only**
  - **4 = Cascade port and two local ports for 1424-1617 nm return**
- **00 = *Reserved fields***
- ****-** = Packaging, Fiber and Connector Type*Note 1***
  - **R2-00 = 2 mm fiber in 96 x 78 x 8 mm Ruggedized Package**
  - **R2-AS = 2 mm fiber with SC/APC Connectors in 96 x 78 x 8 mm Ruggedized Package*Note 2***

Note 1: Minimum fiber lengths for all models is 1 (±0.15) meter. *Note 2*: LC/UPC connectors on LOCAL RETURN ports.

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