DWDM Mux and Demux Modules
(8 Channels on 100GHz-spaced ITU Grid)

Features

- 8-channel optical mux and demux modules
- Channels spaced on standard 100 GHz DWDM ITU grid
- Flat-top passband
- High optical isolation
- Mux and demux pair optimized for minimum combined insertion loss across all channels
- Cascade ports permit mux/demux of up to 40 DWDM wavelengths across multiple modules
- –20 dB test point on all modules

Aurora Networks' OP45M8*x* and OP45D8*x* series 8-channel DWDM multiplexers and demultiplexers facilitate DWDM architectures. DWDM technology can dramatically increase network capacity without requiring additional fiber be deployed for super-trunking or narrowcasting applications. Aurora Networks supports DWDM architectures with a variety of products having 100 GHz center frequency spacing on the standard DWDM ITU Grid (ITU-T G.694.1) for 40 channels from Channel 20 to Channel 59. In many of Aurora's products, these channels are logically partitioned into groups of 4, 8, or 16 channels (with letters used to designate channel groups). This concept is employed in the OP45M8*x* and OP45D8*x* series of 8-channel mux and demux modules.

Each OP45M8x multiplexes up to eight DWDM wavelengths. Of the nine input ports, eight accept the inputs of individual narrowcast signals (via a common, industry-standard female MPO style connector), and the remaining port accepts the multiplexed DWDM input from prior modules in a cascade. The DWDM output port carries the combined, multiplexed signal of all narrowcast channels, and a -20dB (1%) tap of the DWDM output signal provides a convenient test point.

The OP45D8x demultiplexer operates in comparable fashion, but in this case with the MPO connector serving to output the individual (up to eight) DWDM signals from a single DWDM input port, and any remaining narrowcast signals passed through a DWDM out cascade port. In this case the -20dB test point is used to monitor the signal on the input port of the module.

OP45M8*x* / OP45D8*x*

Product Specifications

Physical:

- Dimensions: 4.0" D x 4.5" H x 2.0" W (10.2 cm x 11.4 cm x 5.1 cm)
- Weight: 1.5 lbs (0.68 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:

  SC/APC for DWDM input, DWDM output, and -20dB test point

  MPO (female) for 8 inputs (mux) or outputs (demux)
- Ports:

  OP45M8*x*:

  Ch. *xx* INP (8 channels to add, via MPO connector)

  DWDM INP (from previous OP45M8*x*, if extant)

  DWDM OUT (to fiber network or next OP45M8*x*)

  –20dB TP (1% tap of DWDM OUT signal)

  OP45D8*x*:

  DWDM INP (from fiber network or previous OP45D8x)

  Ch. *xx* OUT (8 dropped channels, via MPO connector)

  DWDM OUT (pass-through to next OP45D8*x* of all DWDM wavelengths not dropped)

  –20dB TP (1% tap of DWDM INP signal)

Optical:

- Optical channel spacing: 100 GHz on DWDM ITU Grid
- Return loss: 45 dB min
- Polarization Dependent Loss (PDL): 0.15 dB max (< 0.1 typ)
- Passband @ 0.5 dB: ±0.125 nm
- Ripple within passband: 0.5 dB
- Insertion loss (including connectors):

  OP45M8*x*:

  Ch. *xx* INP to DWDM OUT: 2.9 dB max

  DWDM INP to DWDM OUT: 2.5 dB max

  –20dB TP: 20.5 dB max

  OP45D8*x*:

  DWDM INP to Ch. *xx* OUT: 2.9 dB max

  DWDM INP to DWDM OUT: 2.5 dB max

  –20dB TP: 20.5 dB max
- Paired insertion loss (including connectors): 4.0 dB
  (Paired insertion loss for mux when combined with 8-ch demux module from Ch yy INP to Ch yy OUT, and vice-versa)
- Uniformity:

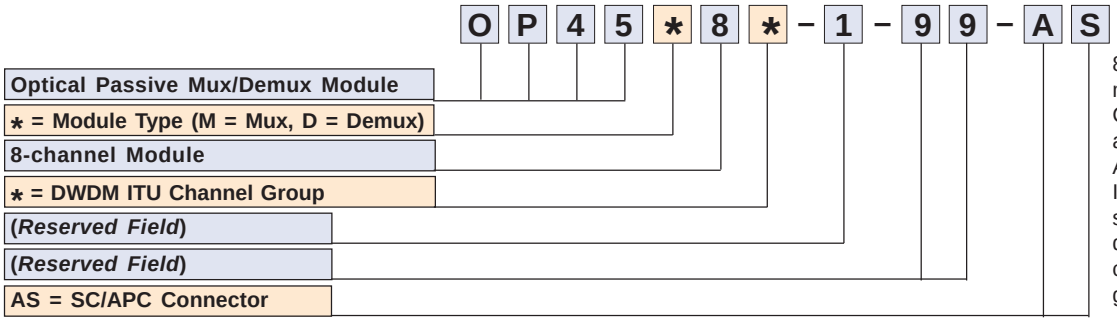
  Module uniformity: 1.5 dB max

  Paired uniformity: 1.0 dB max
- Power handling, any input port: 24.8 dBm
- Optical channel isolation (applicable only to demux modules):

  Adjacent: 32 dB min

  Non-adjacent: 45 dB min
- Directivity (applicable only to mux modules): 55 dB min

Ordering Information



Note

8-channel mux and demux modules are available for Channel Groups K, M, P, S, and U. Please refer to the Aurora Networks DWDM ITU Grid Channel Plan data sheet for a complete description of the channels included in these groups.

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