

Optical Node Series (NC)

OP45M8x, OP45D8x
DWDM Mux and Demux Modules
(8 Channels on 100 GHz-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



PRODUCT OVERVIEW

ARRIS' OP45M8x and OP45D8x 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. ARRIS 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 ARRIS'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 OP45M8x and OP45D8x series of 8-channel mux and demux modules.

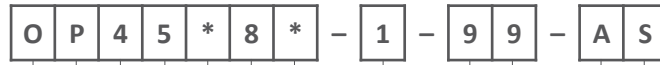
Each OP45M8x multiplexes up to eight DWDM wavelengths. Of the nine input ports, eight accept the inputs of individual narrowcast signals (via a common, industry-standard female MPO style connector), and the remaining port accepts the multiplexed DWDM input from prior modules in a cascade. The DWDM output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

SPECIFICATIONS

Characteristics	Specification
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	-40° to +85°C (-40° to 185°F)
Storage Temperature Range	-40° to +85°C (-40° to 185°F)
Humidity	5% to 95% non-condensing
Optical Interface	
Optical connectors	<ul style="list-style-type: none"> SC/APC for DWDM input, DWDM output, and -20 dB test point MPO (female) for 8 inputs (mux) or outputs (demux)
Ports	<p>OP45M8x:</p> <ul style="list-style-type: none"> Ch. xx INP (8 channels to add, via MPO connector) DWDM INP (from previous OP45M8x, if extant) DWDM OUT (to fiber network or next OP45M8x) -20 dB TP (1% tap of DWDM OUT signal) <p>OP45D8x:</p> <ul style="list-style-type: none"> DWDM INP (from fiber network or previous OP45D8x) Ch. xx OUT (8 dropped channels, via MPO connector) DWDM OUT (pass-through to next OP45D8x of all DWDM wavelengths not dropped) -20 dB 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)	<p>OP45M8x:</p> <ul style="list-style-type: none"> Ch. xx INP to DWDM OUT: 2.9 dB max DWDM INP to DWDM OUT: 2.5 dB max -20 dB TP: 20.5 dB max <p>OP45D8x:</p> <ul style="list-style-type: none"> DWDM INP to Ch. xx OUT: 2.9 dB max DWDM INP to DWDM OUT: 2.5 dB max -20 dB TP: 20.5 dB max
Paired insertion loss (including connectors)	<p>4.0 dB</p> <p>(Paired insertion loss for mux when combined with 8-ch demux module from Ch yy INP to Ch yy OUT, and vice-versa)</p>
Uniformity	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> Adjacent: 32 dB min Non-adjacent: 45 dB min
Directivity (applicable only to mux modules)	<ul style="list-style-type: none"> 55 dB min

ORDERING INFORMATION



Optical Passive Mux/Demux Module	O
* = Module Type (M = Mux, D = Demux)	*
8-channel Module	8
* = DWDM ITU Channel Group	*
(Reserved Field)	
(Reserved Field)	
AS = SC/APC Connector	A S

Note

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

RELATED PRODUCTS

NC2000	Optical Patch Cords
NC4000	Optical Passives
VHub	Installation Services

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

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