

# Optical Passives (ISP)

## OP35M16x, OP35D16x DWDM Mux and Demux Modules (16 Channels on 100 GHz-spaced ITU Grid)

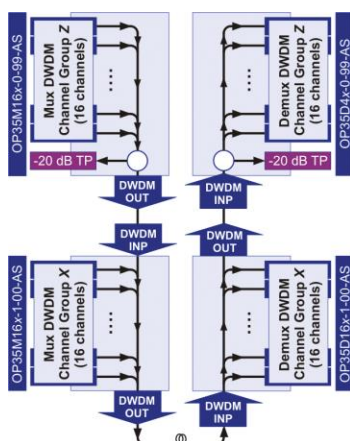
### FEATURES

- 16-channel optical mux and demux modules
- Channels spaced on standard 100 GHz DWDM ITU grid
- Flat-top passband
- High optical isolation
- Supports both forward and return path transmission of analog and digital signals
- Mux and demux pairs optimized for minimum combined insertion loss across all channels
- SC/APC connectors ensure performance repeatability, compatibility, and easy installation and maintenance
- Available with cascade (pass-through) port or line monitoring tap (−20 dB from mux output or demux input)
- Industry's highest packaging density (up to 16 modules per chassis)
- Occupies two half-depth slots
- LGX chassis-compatible



### PRODUCT OVERVIEW

The ARRIS OP35M16x and OP35D16x series 16-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). That concept is employed in the OP35M16x and OP35D16x series of 16-channel mux and demux modules.



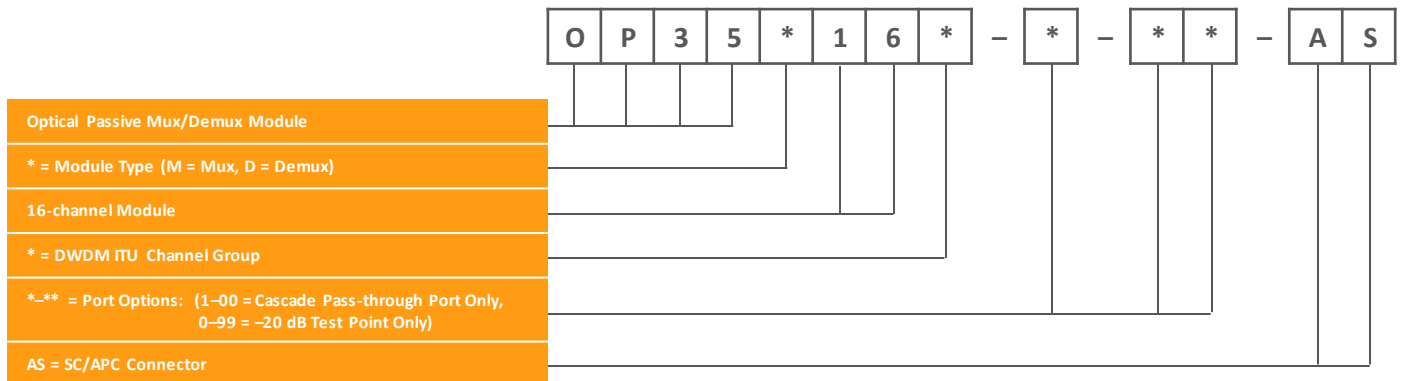
## SPECIFICATIONS

Characteristics	Specification			
<b>Physical</b>				
Dimensions	6.5" D x 5.3" H x 2.0" W (3RU) (16.5 cm x 13.5 cm x 5.1 cm)			
Weight	2.0 lbs (0.9 kg)			
<b>Environmental</b>				
Operating Temperature Range	-20°C to +65°C (-4°F to +149°F)			
Storage Temperature Range	-40°C to +85°C (-40°F to +185°F)			
Humidity	5% to 95% non-condensing			
<b>Optical (all models)</b>				
Return loss, min	45 dB			
Polarization dependent loss, max	0.2 dB (<0.1 dB typ)			
Ripple within passband, max	0.5 dB			
Channel spacing	100 GHz (ITU grid)			
Wavelength passthrough	1420-1610 nm			
Insertion losses, max <sup>1</sup> (dB)	<b>Mux Modules</b>		<b>Demux Modules</b>	
	OP35M16x-1-00-AS (with cascade port)	OP35M16x-0-99-AS (with -20 dB T.P.)	OP35D16x-1-00-AS (with cascade port)	OP35D16x-0-99-AS (with -20 dB T.P.)
Ch yy INP to DWDM OUT	4.2	4.4	N/A	N/A
DWDM INP to Ch yy OUT	N/A	N/A	4.2	4.4
Paired insertion loss <sup>2</sup>	5.0	5.4	5.0	5.4
DWDM INP to DWDM OUT	3.9	N/A	3.9	N/A
DWDM OUT to -20 dB Tap Ratio, max <sup>1</sup> (dB)	N/A	20.4	N/A	20.4
Uniformity, max <sup>1</sup> (dB)				
Module	3.0	3.0	3.0	3.0
Paired	1.6	1.6	1.6	1.6
Passband @ 0.5 dB (nm)	± 0.12	± 0.12	± 0.12	± 0.12
Directivity, min (dB)	55	55	N/A	N/A
Isolation, adjacent channel, min (dB)	N/A	N/A	30	30
Isolation, non-adjacent channel, min (dB)	N/A	N/A	45	45
Power handling, any input port, max (dBm)	21.8	21.8	24.8	24.8
<b>Optical Interface</b>				
Optical connectors	SC/APC			
Model OP35M16x-1-00-AS	<ul style="list-style-type: none"> <li>DWDM INP (input from previous mux)</li> <li>Ch yy INP (16 channel add inputs for Channel Group x)</li> <li>DWDM OUT (output to fiber network or next mux)</li> </ul>			
Model OP35M16x-0-99-AS	<ul style="list-style-type: none"> <li>Ch yy INP (16 channel add inputs for Channel Group x)</li> <li>DWDM OUT (output to fiber network or next mux)</li> <li>TP -20 dB (1% tap, test point from DWDM OUT)</li> </ul>			
Model OP35D16x-1-00-AS	<ul style="list-style-type: none"> <li>DWDM INP (input from fiber network or previous demux)</li> <li>Ch yy OUT (16 channel drop outputs for Channel Group x)</li> <li>DWDM OUT (to next demux)</li> </ul>			
Model OP35D16x-0-99-AS	<ul style="list-style-type: none"> <li>DWDM INP (input from fiber network or previous demux)</li> <li>Ch yy OUT (16 channel drop outputs for Channel Group x)</li> <li>TP -20 dB (1% tap, test point from DWDM INP)</li> </ul>			

**NOTES:**

- Including connectors;
- Paired insertion loss when combined with 16-ch demux module from Ch yy INP to Ch yy OUT, and vice-versa

ORDERING INFORMATION



**Note:**

16-channel mux and demux modules are available for Channel Groups 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

CH3000 Chassis	Optical Patch Cords
Optical Transmitters	Optical Passives
HPON™	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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