

Optical Passives (ISP)

DP35Mxx

4, 8, 12, 16, 20, and 40-channel ISP DWDM Muxes

FEATURES

- 4, 8, 12, 16, 20, and 40 channel optical multiplexer modules
- ISP Mux companions to ARRIS DP95D-Series OSP DWDM demux cassettes
- LGX chassis-compatible for ISP inside plant controlled indoor environments
- 100 GHz DWDM ITU channel spacing (ITU-T G694.1)
- EXP express port¹
- UPG upgrade port¹
- Separate -20 dB TP test ports for Tx and Rx signal paths
- LC/APC or LC/UPC connectors options



PRODUCT OVERVIEW

ARRIS DP35M-Series DWDM optical mux cassettes are intended for applications in controlled indoor environments. They are typically mated with compatible field-based DP95D-Series OSP DWDM demultiplexer modules.

The DP35M-Series is designed to multiplex 4, 8, 12, 16, 20, and 40 DWDM wavelengths with 100 GHz frequency spacing on the DWDM ITU Grid (ITU-T G.694.1). Units also have an EXP express port (for insertion of other wavelengths outside the C-band), a UPG upgrade port (for daisy-chain cascading of other DWDM wavelengths), and separate -20 dB TP line monitoring taps (for Tx and Rx signal paths).¹

These ISP headend modules are compatible with industry-standard LGX chassis.

SPECIFICATIONS

Characteristics	Specification																											
Physical																												
Dimensions	LGX module																											
	<table border="1"> <thead> <tr> <th>xx = channels</th> <th>w = S or D (single or dual Mux package)</th> <th>Dimensions (mm)</th> </tr> </thead> <tbody> <tr> <td>xx = 4, 8</td> <td>w = S, 1-slot wide</td> <td>25.4 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 4, 8</td> <td>w = D, 1-slot wide</td> <td>25.4 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 12, 16</td> <td>w = S, 1-slot wide</td> <td>25.4 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 12, 16</td> <td>w = D, 2-slots wide</td> <td>50.8 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 20 (DP35M20S0iZ2R-0LB-UL)</td> <td>1-slot wide</td> <td>25.4 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 20 (DP35M20S0iB2S-0LB-yz)</td> <td>2-slots wide</td> <td>50.8 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 20 (DP35M20D0iB2S-0LB-yz)</td> <td>3-slots wide</td> <td>76.2 W x 163 D x 130 H</td> </tr> <tr> <td>xx = 40</td> <td>w = S, 2-slots wide</td> <td>50.8 W x 163 D x 130 H</td> </tr> </tbody> </table>	xx = channels	w = S or D (single or dual Mux package)	Dimensions (mm)	xx = 4, 8	w = S, 1-slot wide	25.4 W x 163 D x 130 H	xx = 4, 8	w = D, 1-slot wide	25.4 W x 163 D x 130 H	xx = 12, 16	w = S, 1-slot wide	25.4 W x 163 D x 130 H	xx = 12, 16	w = D, 2-slots wide	50.8 W x 163 D x 130 H	xx = 20 (DP35M20S0iZ2R-0LB-UL)	1-slot wide	25.4 W x 163 D x 130 H	xx = 20 (DP35M20S0iB2S-0LB-yz)	2-slots wide	50.8 W x 163 D x 130 H	xx = 20 (DP35M20D0iB2S-0LB-yz)	3-slots wide	76.2 W x 163 D x 130 H	xx = 40	w = S, 2-slots wide	50.8 W x 163 D x 130 H
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Weight	1.5 lbs (0.68 kg)																											
Environmental																												
Operating temperature range (indoor)	-20° to +65°C (-4° to +149°F)																											
Storage temperature range	-40° to +85°C (-40° to +185°F)																											
Humidity	5% to 95% non-condensing																											
Optical Interface																												
Optical ports	<ul style="list-style-type: none"> DWDM ITU channel input ports (See Table 2.) COM: Output to fiber network EXP: Express port to cascade wavelengths outside DWDM ITU 19-63 UPG: Upgrade port to cascade DWDM channels from another DWDM mux TP-Tx: Unidirectional -20 dB tap off COM from xx channels¹ TP-Rx: Unidirectional -20 dB tap off COM from fiber network¹ 																											
Optical connector options	See the Ordering Information section.																											
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Channel Spacing	100 GHz grid (ITU-T G.694.1)																											
Channel Passband @ -0.5 dBc points (nm/GHz around center wavelength), min	± 0.125/± 15.6																											
Channel Passband @ -3 dBc points (nm/GHz around the center wavelength), min	<table border="1"> <thead> <tr> <th>DP35MxxS0iyyS</th> <th>DP35MxxS0iyyR</th> </tr> </thead> <tbody> <tr> <td>± 0.22/± 27.5</td> <td>± 0.28/± 35</td> </tr> </tbody> </table>	DP35MxxS0iyyS	DP35MxxS0iyyR	± 0.22/± 27.5	± 0.28/± 35																							
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COM-to-UPG passband	1527.22–1564.68 nm (ITU channels 16-63)																											
COM-to-EXP passband	1260–1520 and 1570–1635 nm																											
Insertion Loss (including connectors), max	<ul style="list-style-type: none"> COM-to-CHANNEL: See Table 1 Paired: See Table 1 COM-to-UPG: See Table 1 COM-to-EXP: 1.2 dB COM-to-TP-Tx: 20.4 dB COM-to-TP-Rx: 20.4 dB 																											
Module Uniformity, max	2 dB																											
Paired Uniformity, max	1 dB																											
Ripple within passband, max	0.5 dB																											
Isolation, min	Adjacent channels (COM-to-CHANNEL): 30 dB Non-adjacent channels (COM-to-CHANNEL): 45 dB																											
Directivity, min	Between any two CHANNEL ports: 55 dB Between any CHANNEL port and the EXP port: 45 dB																											
Return loss, min	45 dB																											
Polarization dependent loss, max	0.25 dB																											
Polarization mode dispersion, max	0.15 ps																											
Thermal wavelength shift, max	0.002 nm/°C																											
Thermal stability, min	0.01 dB/°C																											
Power handling, max (any port)	21.8 dBm																											

TABLE 1: INSERTION LOSS¹ (dB), DP35Mxx

Model Type (See the Ordering Information section for details.)	Channel Count	Channel Input to COM	Paired Loss ²	COM to UPG
DP35M04w0iB2S-0LB-yz	4	2.5	4.4 ³	2.2
DP35M08w0iB2S-0LB-yz	8	3.3	5.2 ⁴	3.1
DP35M10S0iA1S-0LC-yz	10	3.8	5.7 ⁵	3.5
DP35M12w01B2S-0LB-AL	12	4.2	6.1 ⁶	3.9
DP35M16w01B2S-0LB-yz	16	5.0	6.9 ⁷	4.7
DP35M20w0iB2S-0LB-yz	20	4.7	6.2 ⁸	4.2
DP35M20S0iZ2R-0LB-UL	20	4.1	5.5 ¹²	N/A
DP35M40S0UB2S-0LB-yz	40	5.5	7.4 ⁹	5.0
DP35M40S0UZ0S-0LB-yz	40	4.4	5.3 ¹⁰	N/A
DP35M40S0UZ0S-0LN-yz	40	4.3	8.9 ¹¹	N/A
DP35M40S0UZ2R-0LB-UL	40	4.9	6.3 ¹³	N/A

NOTES:

1. These specifications include optical connector losses.
2. Insertion loss between multiplexer channel input and the corresponding de-multiplexer channel output for the specified pairings in the footnotes below
3. DP35M04w0iB2S mux/DP35D04w0iB2S demux pair
4. DP35M08w0iB2S mux/DP35D08w0iB2S demux pair
5. DP35M10S0iA1S mux/DP95D10S0iA0S demux pair (Subtract 0.1 dB per connector for outdoor devices with no connector.)
6. DP35M12w01B2S-0LB mux/DP95D12S0AB2S-0LB demux pair
7. DP35M16w0iB2S-0LB mux/DP95D16S0AB2S-0LB demux pair
8. DP35M20w0iB2S-0LB-0LB mux/DP35D20S0iB2S-0LB or DP95D20S0iB2S-1GB demux pair
9. DP35M40S0UB2S-0LB mux/DP35D40S0UB2S-0LB demux pair
10. DP35M40S0UZ0S-0LB mux/DP35D40S0UZ0S-0LN demux pair
11. DP35M40S0UZ0S-0LN mux/DP35D40S0UZ0S-0LN or DP95D40S0UZ0S-1HN demux pair (Subtract 0.1 dB per connector for outdoor devices with no connector.)
12. DP35M20S0iZ2R-0LB demux/DP35D20S0iZ2R-0LB or DP95D20S0iA2R-1GB-00 mux pair (Subtract 0.1 dB per connector for outdoor devices with no connector.)
13. DP35M40S0UZ2R demux/DP35D40S0UZ2R or DP95D40S0UA2R-1HB-00 mux pair (Subtract 0.1 dB per connector for outdoor devices with no connector.)

TABLE 2: ITU G.694 WAVELENGTH TABLE AND CORRESPONDING DP35Mxx MODELS

ITU Channel Plan								Channel #	Optical frequency (THz)	Wavelength (nm)
4-channel <i>i</i> =	8-channel <i>i</i> =	8-channel <i>i</i> =	10-channel <i>i</i> =	12-channel <i>i</i> =	16-channel <i>i</i> =	20-channel <i>i</i> =	40-channel <i>i</i> =			
H	J	K	V (Channels 22,25,26,27,28,30,31,32)	2	1	N	U	16	191.6	1564.679
								17	191.7	1563.863
								18	191.8	1563.047
								19	191.9	1562.233
J	K	V (Channels 22,25,26,27,28,30,31,32)	2	1	N	U	20	192.0	1561.419	
							21	192.1	1560.606	
K	K	V (Channels 22,25,26,27,28,30,31,32)	2	1	N	U	22	192.2	1559.794	
							23	192.3	1558.983	
L	M	V (Channels 22,25,26,27,28,30,31,32)	3	1	N	U	24	192.4	1558.173	
							25	192.5	1557.363	
M	M	V (Channels 22,25,26,27,28,30,31,32)	3	1	N	U	26	192.6	1556.555	
							27	192.7	1555.747	
N	P	W (Channels 34,36,37,38,39,40,41,43)	4	1	N	U	28	192.8	1554.940	
							29	192.9	1554.134	
P	P	W (Channels 34,36,37,38,39,40,41,43)	4	1	N	U	30	193.0	1553.329	
							31	193.1	1552.524	
R	S	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	32	193.2	1551.721	
							33	193.3	1550.918	
S	S	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	34	193.4	1550.116	
							35	193.5	1549.315	
T	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	36	193.6	1548.515	
							37	193.7	1547.715	
U	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	38	193.8	1546.917	
							39	193.9	1546.119	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	40	194.0	1545.322	
							41	194.1	1544.526	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	42	194.2	1543.730	
							43	194.3	1542.936	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	44	194.4	1542.142	
							45	194.5	1541.349	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	46	194.6	1540.557	
							47	194.7	1539.766	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	48	194.8	1538.976	
							49	194.9	1538.186	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	50	195.0	1537.397	
							51	195.1	1536.609	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	52	195.2	1535.822	
							53	195.3	1535.036	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	54	195.4	1534.250	
							55	195.5	1533.465	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	56	195.6	1532.681	
							57	195.7	1531.898	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	58	195.8	1531.116	
							59	195.9	1530.334	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	60	196.0	1529.553	
							61	196.1	1528.773	
V	U	X (Channels 45,46,48,49,50,53,55,56)	5	1	U	U	62	196.2	1527.994	
							63	196.3	1527.216	

ORDERING INFORMATION

Part Number	Description
DP35M04w0iB2S-0LB-yz	4-channel multiplexer with EXP and UPG ports and two unidirectional test ports w = Single (S) or dual (D) MUX package i = ITU channel group dropped (H, J, K, L, M, N, P, R, S, T, U, or V) yz = AL (LC/APC connectors) or UL (LC/UPC connectors) Thin-film filter technology
DP35M08w0iB2S-0LB-yz	8-channel multiplexer with EXP and UPG ports and two unidirectional test ports w = Single (S) for all Channel Groups or dual (D) for Channel Groups J, K, M, P, S, or U only i = J, K, M, P, S, U, V, W, or X (See Table 2 for definitions of ITU channel groups.) yz = UL (LC/UPC connectors) for channel groups V, W, or X; yz = UL (LC/UPC connectors) or AL (LC/APC connectors) for all other channel groups Thin-film filter technology
DP35M10S0iA1S-0LC-yz	10-channel multiplexer with UPG port and one bi-directional test port i = 2, 3, 4, or 5 (See Table 2 for definitions of ITU channel groups.) yz = AL (LC/APC connectors) or UL (LC/UPC connectors) Thin-film filter technology
DP35M12w0iB2S-0LB-AL	12-channel multiplexer with EXP and UPG ports and two unidirectional test ports and LC/APC connectors w = Single (S) or dual (D) MUX package ITU Channel Group 1 (See Table 2 for definitions of ITU channel groups.) LC/APC connectors Thin-film filter technology
DP35M16w0iB2S-0LB-yz	16-channel multiplexer with EXP and UPG ports and two unidirectional test ports w = Single (S) or dual (D) MUX package ITU Channel Group 1 (See Table 2 for definitions of ITU channel groups.) yz = AL (LC/APC connectors) or UL (LC/UPC connectors) Thin-film filter technology
DP35M20w0iB2S-0LB-yz	20-channel multiplexer with EXP and UPG ports and two unidirectional test ports w = Single (S) or dual (D) MUX package i = N or U (See Table 2 for definitions of ITU channel groups.) yz = AL (LC/APC connectors) or UL (LC/UPC connectors) Thin-film filter technology
DP35M40S0UB2S-0LB-yz	40-channel multiplexer with EXP and UPG ports and two unidirectional test ports (See Table 2 for definition of ITU channel group U.) yz = AL (LC/APC connectors) or UL (LC/UPC connectors) Thin-film filter technology
DP35M40S0UZ0S-0Lt-yz	40-channel demultiplexer with no EXP or UPG port and no test port ITU Channel Group U (See Table 2 for definition of ITU channel groups.) t = B (thin-film filter technology) or N (Array Waveguide technology) yz = AL (LC/APC connectors) or UL (LC/UPC connectors)
DP35M20S0iZ2R-0LB-UL	20-channel multiplexer with two unidirectional test ports and no EXP or UPG port i = N or U (See Table 2 for definitions of ITU channel groups.) LC/UPC connectors Thin-film filter technology Wider -3 dBc bandwidth (See the Specifications section for details.)
DP35M40S0iZ2R-0LB-UL	40-channel multiplexer with two unidirectional test ports and no EXP or UPG port ITU Channel Group U (See Table 2 for definition of ITU channel groups.) LC/UPC connectors Thin-film filter technology Wider -3 dBc bandwidth (See the Specifications section for details.)

RELATED PRODUCTS

DP95D Series OSP DWDM Industry-standard
Demultiplexer Modules LGX Chassis

Customer Care

Contact Customer Care for product information and sales:

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

Note: Specifications are subject to change without notice.

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