

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
	xx = channels w = S or D (single or dual Mux package) Dimensions (mm)
	xx = 4, 8 w = S, 1-slot wide 27 W x 163 D x 130 H
	xx = 4, 8 w = D, 1-slot wide 27 W x 163 D x 130 H
	xx = 12, 16 w = S, 1-slot wide 27 W x 163 D x 130 H
	xx = 12, 16 w = D, 2-slots wide 52 W x 163 D x 130 H
	xx = 20 w = S, 2-slots wide 52 W x 163 D x 130 H
	xx = 20 w = D, 3-slots wide 78 W x 163 D x 130 H
	xx = 40 w = S, 2-slots wide 52 W x 163 D x 130 H
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"> xx = # of DWDM ITU channel input ports (See Table 2) i = xx ITU channel group added (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	<ul style="list-style-type: none"> LC/APC LC/UPC
Optical	
Channel Spacing	100 GHz grid (ITU-T G.694.1)
Channel Passband @ 0.5 dBc points	<ul style="list-style-type: none"> COM to xx: Center wavelength +/- 0.125 nm COM to UPG: 1527.22 – 1564.68 nm. ITU channels 16-63 COM to EXP: 1260-1520 nm and 1570-1635 nm
Insertion Loss, max (including connectors)	<ul style="list-style-type: none"> COM to xx: See Table 1 Paired: See Table 1 COM to UPG: See Table 1 COM to EXP: 3 dB COM to TP-Tx: 20.4 COM to TP-Rx: 20.4
Module Uniformity, max	2 dB
Paired Uniformity, max	1 dB
Ripple within passband	0.5 dB
Isolation	Adjacent channels, min (COM to xx): 30 dB Non-adjacent channels, min (COM to xx): 45 dB Non-adjacent channels, min (COM to EXP): 12 dB
Directivity	DWDM port, min: 55 dB EXP port, min: 45 dB
Return loss, min	45 dB
Polarization dependent loss, max	0.25 dB
Polarization mode dispersion, max	0.15 dB
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 LOSS (dB), DP35Mxx

xx	COM to xx	Paired loss ¹	COM to UPG
4	2.5	4.4	2.2
8	3.3	5.2	3.1
12	4.2	6.1	3.9
16	5	6.9	4.7
20	4.7	6.6	4.2
40 ²	4.8	7.4	
40 ³	4.3	8.9	

NOTES:

- Paired insertion loss when combined with compatible ARRIS DP35Dxx-λ mux module (from mux input i to demux output i).
- DP35M40 mux with TP-Tx and TP-Rx test ports.
- DP35M40 mux without TP-Tx and TP-Rx test ports.

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 demultiplexer with EXP and UPG ports and two uni-directional 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)
DP35M08w0iB2S-0LB-yz	8-channel demultiplexer with EXP and UPG ports and two uni-directional 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
DP35M10S0iA1S-0LC-yz	10-channel demultiplexer 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)
DP35M12w0iB2S-0LB-AL	12-channel demultiplexer with EXP and UPG ports and two uni-directional test ports and LC/APC connectors w = Single (S) or dual (D) MUX package i = ITU channel group dropped (1)
DP35M16w0iB2S-0LB-yz	16-channel demultiplexer with EXP and UPG ports and two uni-directional test ports w = Single (S) or dual (D) MUX package i = ITU channel group dropped (1) yz = AL (LC/APC connectors) or UL (LC/UPC connectors)
DP35M20w0iB2S-0LB-yz	20-channel demultiplexer with EXP and UPG ports and two uni-directional 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)
DP35M40S0UB2S-0LB-yz	40-channel demultiplexer with EXP and UPG ports and two uni-directional test ports (See Table 2 for definition of ITU channel group U.) yz = AL (LC/APC connectors) or UL (LC/UPC connectors)
DP35M40S0UZ0S-0Lt-yz	40-channel demultiplexer with no EXP or UPG port and no test port (See Table 2 for definition of ITU channel group U.) t = B (thin-film filter technology) or N (Arrayed Waveguide technology) yz = AL (LC/APC connectors) or UL (LC/UPC connectors)
DP35M40S0UZ2S-0LN-AL	40-channel demultiplexer with no EXP or UPG port and two uni-directional test ports; Arrayed Waveguide technology; with LC/APC connectors (See Table 2 for definition of ITU channel group U.)

RELATED PRODUCTS

DP95D Series OSP DWDM Demultiplexer Modules Industry-standard 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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