

Optical Passives (OSP)

DP95Dxx

4, 8, 12, 16, 20 and 40-channel OSP DWDM Demuxes

FEATURES

- 4, 8, 12, 16, 20 and 40 channel optical demux cassettes
- OSP demux companions to ARRIS DP35M-Series ISP LGX DWDM mux modules
- Temperature hardened (-40°C to +85°C) compact field enclosures for OSP outside plant mounting in existing splice trays
- 100 GHz DWDM ITU channel spacing (ITU-T G694.1)
- EXP express port¹
- UPG upgrade port¹
- Separate -20 dB TP test ports (SC/APC) for Tx and Rx signal paths
- LC/APC, LC/UPC, SC/APC or NO connectors options for all other optical ports



PRODUCT OVERVIEW

ARRIS's DP95D-Series DWDM optical demultiplexer cassettes are intended for applications in non-controlled outdoor environments. They are typically mated with compatible headend/hub-based DP35M-Series ISP LGX DWDM multiplexer modules.

The DP95D-Series is designed to demultiplex 4, 8, 12, 16, 20 or 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 cascading of other DWDM wavelengths), and separate -20 dB TP line monitoring taps (for Tx and Rx signal paths).¹

These compact, ruggedized, anodized aluminum cassettes have been designed for use in an OSP outside plant environment, for mounting into existing splice trays like the Tyco FOSC-series. All pigtail fibers are color-coded and individually labeled to ensure proper installation and wavelength management.

SPECIFICATIONS

Characteristics	Specification																		
Physical																			
Dimensions	<table border="1"> <thead> <tr> <th>xx = channels</th> <th>s = Cassette case</th> <th>Dimensions (cm)</th> </tr> </thead> <tbody> <tr> <td>xx = 4, 8</td> <td>s = M-case</td> <td>8.9 L x 4.1 W x 0.9 H</td> </tr> <tr> <td>xx = 4</td> <td>s = S-case</td> <td>8.9 L x 5.1 W x 0.9 H</td> </tr> <tr> <td>xx = 8, 12</td> <td>s = F-case</td> <td>9.6 L x 7.8 W x 0.8 H</td> </tr> <tr> <td>xx = 16, 20</td> <td>s = G-case</td> <td>9.6 L x 7.8 W x 1.3 H</td> </tr> <tr> <td>xx = 40</td> <td>s = H-case</td> <td>9.6 L x 7.8 W x 1.6 H</td> </tr> </tbody> </table>	xx = channels	s = Cassette case	Dimensions (cm)	xx = 4, 8	s = M-case	8.9 L x 4.1 W x 0.9 H	xx = 4	s = S-case	8.9 L x 5.1 W x 0.9 H	xx = 8, 12	s = F-case	9.6 L x 7.8 W x 0.8 H	xx = 16, 20	s = G-case	9.6 L x 7.8 W x 1.3 H	xx = 40	s = H-case	9.6 L x 7.8 W x 1.6 H
xx = channels	s = Cassette case	Dimensions (cm)																	
xx = 4, 8	s = M-case	8.9 L x 4.1 W x 0.9 H																	
xx = 4	s = S-case	8.9 L x 5.1 W x 0.9 H																	
xx = 8, 12	s = F-case	9.6 L x 7.8 W x 0.8 H																	
xx = 16, 20	s = G-case	9.6 L x 7.8 W x 1.3 H																	
xx = 40	s = H-case	9.6 L x 7.8 W x 1.6 H																	
Weight	0.8 lbs (0.36 kg)																		
Environmental																			
Operating Temperature Range (outdoor)	-40°C to +85°C (-40°F to +185°F)																		
Storage Temperature Range	-40°C to +85°C (-40°F to +185°F)																		
Humidity	5% to 95% non-condensing																		
Optical Interface																			
Optical ports	xx = # of DWDM ITU channel output ports (<i>See Table 2</i>) i = xx ITU channel group dropped (<i>See Table 2</i>) COM: Input from fiber network EXP: Express port to cascade wavelengths outside DWDM ITU 19-63 ¹ UPG: Upgrade port to cascade DWDM channels from another DWDM demux ¹ TP-Tx: Unidirectional -20 dB tap off COM from xx channels (SC/APC) ¹ TP-Rx: Unidirectional -20 dB tap off COM from fiber network (SC/APC) ¹																		
Optical Connectors	TP-Tx and TP-Rx: SC/APC (with 0.75 m 900 micron fiber pigtails)																		
All other ports connector options	AL: LC/APC (with 0.75 m 900 micron fiber pigtails) UL: LC/UPC (with 0.75 m 900 micron fiber pigtails) AS: SC/APC (with 0.75 m 900 micron fiber pigtails) 00: NO connectors (with 1.5 m 900 micron fiber pigtails)																		
Fiber pigtail labels	COM fiber: RED labels All other fibers: YELLOW labels																		
Fiber pigtail colors	xx = 4, 8, 20, 40 ITU channels (<i>see Table 4</i>) xx = 12, 16 ITU channels (<i>see Table 3</i>)																		

SPECIFICATIONS CONTINUED

Characteristics	Specification
Optical	
Channel Spacing	100 GHz grid (ITU-T G.694.1)
Channel Passband @ 0.5 dBc points	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)	COM to xx: <i>See Table 1</i> Paired: <i>See Table 1</i> COM to UPG: <i>See Table 1</i> 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

Notes:

1. DP95D40 demux does not have EXP or UPG ports.
2. Paired insertion loss when combined with compatible ARRIS DP35Mxx-λ mux module (from mux input i to demux output i).
3. DP95D40 demux with TP-Tx and TP-Rx test ports.
4. DP95D40 demux without TP-Tx and TP-Rx test ports.

TABLE 1: INSERTION LOSS (DB), DP95DXX

xx	COM to xx	Paired loss ²	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 ³	4.8	10.4	
40 ⁴	4.3	8.9	

TABLE 2: ITU G.694 WAVELENGTH TABLE AND CORRESPONDING DP95DXX MODELS

ITU Channel Plan							ARRIS Channel #	Channel frequency and wavelength per ITU G.694.1, 02/2012	
<i>j</i> for xx = 4	<i>j</i> for xx = 8	<i>j</i> for xx = 10	<i>j</i> for xx = 12	<i>j</i> for xx = 16	<i>j</i> for xx = 20	<i>j</i> for xx = 40			
H							16	191.6 THz	1564.679nm
							17	191.7 THz	1563.863nm
							18	191.8 THz	1563.047nm
							19	191.9 THz	1562.233nm
J	K	2					20	192.0 THz	1561.419nm
K							21	192.1 THz	1560.606nm
							22	192.2 THz	1559.794nm
23							192.3 THz	1558.983nm	
L	M			A		N	24	192.4 THz	1558.173nm
M							25	192.5 THz	1557.363nm
							26	192.6 THz	1556.555nm
27							192.7 THz	1555.747nm	
N	P	3				U	28	192.8 THz	1554.940nm
P							29	192.9 THz	1554.134nm
							30	193.0 THz	1553.329nm
31							193.1 THz	1552.524nm	
R	S	4				U	32	193.2 THz	1551.721nm
S							33	193.3 THz	1550.918nm
							34	193.4 THz	1550.116nm
35							193.5 THz	1549.315nm	
S	U	5	A			U	36	193.6 THz	1548.515nm
T							37	193.7 THz	1547.715nm
							38	193.8 THz	1546.917nm
39							193.9 THz	1546.119nm	
U							40	194.0 THz	1545.322nm
V							41	194.1 THz	1544.526nm
							42	194.2 THz	1543.730nm
43							194.3 THz	1542.936nm	
							44	194.4 THz	1542.142nm
							45	194.5 THz	1541.349nm
							46	194.6 THz	1540.557nm
							47	194.7 THz	1539.766nm
							48	194.8 THz	1538.976nm
							49	194.9 THz	1538.186nm
							50	195.0 THz	1537.397nm
							51	195.1 THz	1536.609nm
							52	195.2 THz	1535.822nm
							53	195.3 THz	1535.036nm
							54	195.4 THz	1534.250nm
							55	195.5 THz	1533.465nm
							56	195.6 THz	1532.681nm
							57	195.7 THz	1531.898nm
							58	195.8 THz	1531.116nm
							59	195.9 THz	1530.334nm
							60	196.0 THz	1529.553nm
							61	196.1 THz	1528.773nm
							62	196.2 THz	1527.994nm
							63	196.3 THz	1527.216nm

TABLE 3: FIBER PIGTAIL COLORS (DP95D12 AND DP95D16)






































xx = 12	xx = 16	Color Codes	
COM	COM		White
EXP	EXP		Black
UPG	UPG		Orange
TP Rx	TP Rx		Aqua
TP Tx	TP Tx		Rose
50	25		Black + white strip
51	26		White + black strip
52	27		Red + black strip
53	28		Blue + black strip
54	29		Green + black strip
55	30		Yellow + black strip
56	31		Orange + black strip
57	32		Brown + black strip
58	33		Rose + black strip
59	34		Slate + black strip
60	35		Violet + black strip
61	36		Aqua + black strip
	37		Red
	38		Blue
	39		Green
	40		Yellow

TABLE 4: FIBER PIGTAIL COLORS (DP95D04, DP95D08, DP95D20 AND DP95D40)

	xx=04	xx=08	xx=20	xx=40	Color Codes	
COM						White
EXP						Black
UPG						Orange
TP Rx						Aqua
TP Tx						Rose
16						Red
17						Black
18						Yellow
19						Violet
20						Blue
21						Orange
22						Green
23						Brown
24						Slate
25						White
26						Red
27						Black
28						Yellow
29						Violet
30						Blue
31						Orange
32						Green
33						Brown
34						Slate
35						White
36						Red
37						Black
38						Yellow
39						Violet
40						Blue
41						Orange
42						Green
43						Brown
44						Slate
45						White
46						Red
47						Black
48						Yellow
49						Violet
50						Blue
51						Orange
52						Green
53						Brown
54						Slate
55						White
56						Red
57						Black
58						Yellow
59						Violet
60						Blue
61						Orange
62						Green
63						Brown

ORDERING INFORMATION

Part Number	
DP95DxxS0iB2S-1sB-yz (04, 08, 12, 16 and 20) DP95DxxS0iZkS-1sN-yz (40: no UPG, EXP; optional TP-Tx and TP-Rx)	xx = # of ITU channel output ports (04, 08, 12, 16, 20, 40) i = ITU channel group dropped (See Table 2) k = No (0) or (2) test ports (TP-Tx and TP-Rx) s = Cassette case type (M, S, F, G, H) yz = Optical connector type (00 = NO connectors, AL = LC/APC, AS = SC/APC, UL = LC/UPC)
DP95D04S0iB2S-1sB-yz	04 = # of ITU channel output ports i = ITU channel group dropped (H, J, K, L, M, N, P, R, S, T, U or V) s = Cassette case type (M = M-case; S = S-case) yz = Optical connector type (00, AL, AS or UL)
DP95D08S0iB2S-1sB-yz	08 = # of ITU channel output ports i = ITU channel group dropped (K, M, P, S or U) s = Cassette case type (M = M-case; F = F-case) yz = Optical connector type (00, AL, AS or UL)
DP95D12S0iB2S-1FB-yz	12 = # of ITU channel output ports i = ITU channel group dropped (A) yz = Optical connector type (00, AL, AS or UL)
DP95D16S0iB2S-1GB-yz	16 = # of ITU channel output ports i = ITU channel group dropped (A) yz = Optical connector type (00, AL, AS or UL)
DP95D20S0iB2S-1GB-yz	20 = # of ITU channel output ports i = ITU channel group dropped (N or U) yz = Optical connector type (00, AL, AS or UL)
DP95D40S0iZkS-1HN-yz	40 = # of ITU channel output ports i = ITU channel group dropped (U) k = No (0) or (2) test ports (TP-Tx and TP-Rx) yz = Optical connector type (00, AL, AS or UL)

RELATED PRODUCTS

Optical Transmitters	Optical Passives
Digital Return	Optical Patch Cords
Optical Nodes	Installation Services

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.

Copyright Statement: ©ARRIS Enterprises, LLC, 2016. All rights reserved. No part of this publication may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from ARRIS Enterprises, LLC (“ARRIS”). ARRIS reserves the right to revise this publication and to make changes in content from time to time without obligation on the part of ARRIS to provide notification of such revision or change. ARRIS and the ARRIS logo are registered trademarks of ARRIS Enterprises, LLC. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks or the names of their products. ARRIS disclaims proprietary interest in the marks and names of others. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.