Optical Passives (ISP)

OP35M4-CFx, OP35D4-CFx
DWDM Mux and Demux Modules
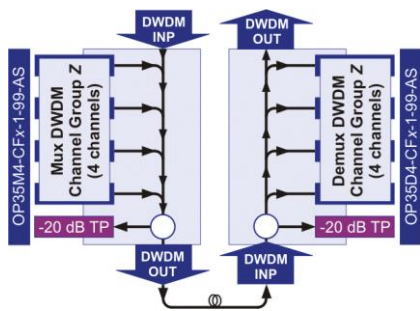4 Channels on 100 GHz-spaced ITU Grid

FEATURES

- 4-channel optical mux and demux modules with cascade ports for daisy-chaining of multiple modules
- Groups of channels specifically selected for use with AT3545G series Full Spectrum DWDM Transmitters
- Flat-top passband
- High optical isolation
- 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
- Line monitoring tap (–20 dB from mux output or demux input)
- Industry's highest packaging density (up to 32 modules per chassis)
- Occupies one half-depth slot
- LGX chassis-compatible

PRODUCT OVERVIEW

ARRIS's OP35M4-CFx and OP35D4-CFx series 4-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. This particular group of 4-channel mux and demux products are intended for use with ARRIS's AT3545G Full Spectrum DWDM Transmitters and are available with four different combinations of four DWDM channels.
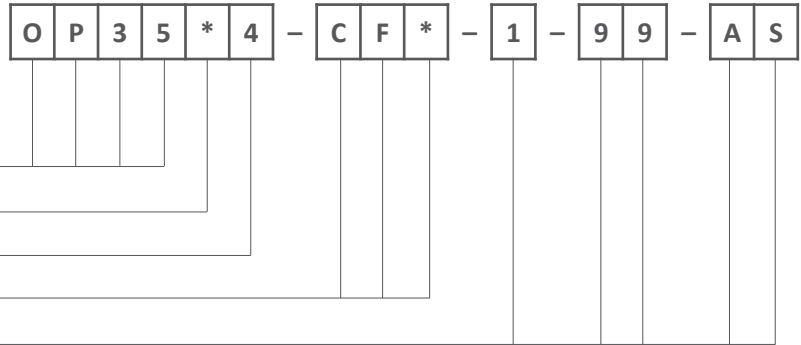
ARRIS

SPECIFICATIONS

Characteristics	Specification	
Physical		
Dimensions	6.5" D x 5.3" H x 1.0" W (3RU) (16.5 cm x 13.5 cm x 2.5 cm)	
Weight	0.8 lbs (0.4 kg)	
Environmental		
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	
Optical (all models)		
Return loss, min	45 dB	
Polarization dependent loss, max	0.2 dB (< 0.1 dB typ)	
Ripple within passband	0.5 dB	
Channel spacing	100 GHz (ITU grid)	
Power handling, max (any input port)	24.8 dBm	
Wavelength passthrough	1420–1610 nm	
Insertion losses, max[1] (dB)	**Mux Module**	**Demux Module**
	OP35M4-CFx-1-99-AS *(with −20 dB T.P.)*	OP35D4-CFx-1-99-AS *(with −20 dB T.P.)*
Ch *yy* INP to DWDM OUT	1.8	*N/A*
DWDM INP to Ch *yy* OUT	*N/A*	1.8
Paired insertion loss[2]	2.9	2.9
DWDM INP to DWDM OUT	1.4	1.4
DWDM OUT to -20 dB Tap Ratio, max[1] (dB)	20.4	20.4
Uniformity, max[1] (dB)		
Module	0.8	0.8
Paired	0.6	0.6
Passband @ 0.5 dB (nm)	± 0.12	± 0.12
Directivity, input ports, min (dB)	55	*N/A*
Directivity, pass-through port, min (dB)	45	*N/A*
Isolation, adjacent channel, min (dB)	*N/A*	30
Isolation, non-adjacent channel, min (dB)	*N/A*	45
Optical Interface		
Optical connectors	SC/APC	
Model OP35M4-CF*x*-1-99-AS (for *x* = 1, 2, 3 or 4)	• DWDM INP (input from previous mux) • Ch *yy* (4 channel add inputs for Custom Channel Group *x*) • DWDM OUT (output to fiber network or next mux) • TP −20 dB (1% tap, test point from DWDM OUT)	
Model OP35D4-CF*x*-1-99-AS (for *x* = 1, 2, 3 or 4):	• DWDM INP (input from fiber network or previous demux) • Ch *yy* (4 channel drop outputs for Custom Channel Group *x*) • DWDM OUT (to next demux) • TP −20 dB (1% tap, test point from DWDM INP)	
ITU Channel Plans		
	ARRIS supports DWDM network architectures with a variety of products having 100 GHz center frequency spacing on the standard DWDM ITU Grid (ITU-T G.694.1). OP35M4-CFx-1-99-AS and OP35D4-CFx-1-99-AS 4-channel Optical Mux and Demux Modules (for which outputs can be cascaded from one back plate to another) are available for the following custom channel groups: • CF1 Chs 20, 21, 24, and 29 • CF2 Chs 35, 42, 52, and 54 • CF3 Chs 23, 33, 44, and 47 • CF4 Chs 51, 57, 58, and 59	

NOTES:
1. Including connectors;
2. Paired insertion loss when combined with 4-ch demux module from Ch *yy* INP to Ch *yy* OUT, and vice-versa

Fiber-Deep   **DOCSIS® 3.1**   **Node Segmentation**   **HPON™/RFoG**   **FTTx**

ORDERING INFORMATION

| O | P | 3 | 5 | * | 4 | – | C | F | * | – | 1 | – | 9 | 9 | – | A | S |

Optical Passive DWDM Mux/Demux Module

* = Module Type (M = Mux, D = Demux)

4-channel Module

CF* = Custom DWDM ITU Channel Group (* = 1, 2, 3 or 4)

Cascade (Pass-through) Port and -20 dB Test Port present, and
SC/APC Connectors

RELATED PRODUCTS

CH3000 Chassis	Optical Patch Cords
Optical Transmitters	Optical Passives
HPON™	Installation Services

Note: Specifications are subject to change without notice.

Customer Care

Contact Customer Care for product information and sales:
- United States: 866-36-ARRIS
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