ARRIS

Optical Passives (ISP)

NP35M08, NP35D08
CFx DWDM Mux and Demux Modules
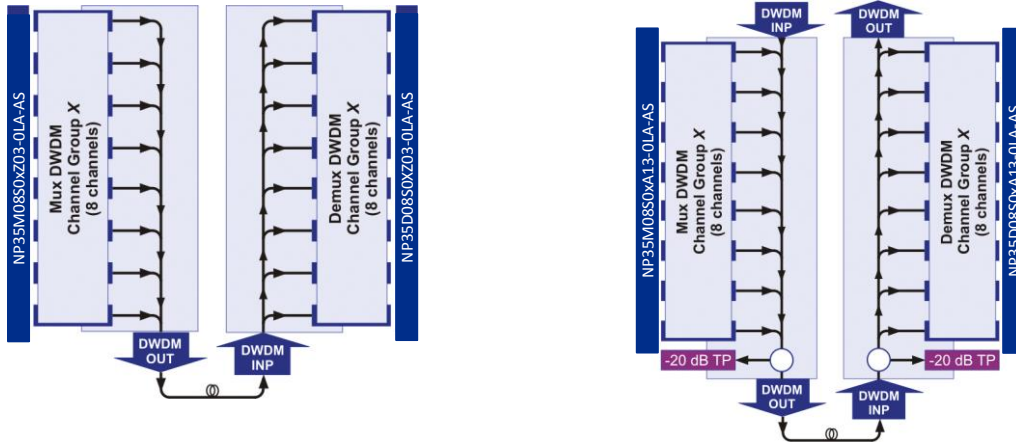## 8 Channels on 100 GHz-spaced ITU Grid

FEATURES

- 8-channel optical mux and demux 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
- LGX chassis-compatible
- Replaces OP35M8-CFx, OP35D8-CFx

PRODUCT OVERVIEW

ARRIS's NP35M08 and NP35D08 series 8-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 8-channel mux and demux products are intended for use with ARRIS's AT3545G Full Spectrum DWDM Transmitters and are available with two different combinations of eight DWDM channels.

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) for NP35M08S0xZ0 and NP35D08S0xZ0 modules with no cascade and test ports 6.5" D x 5.3" H x 2.0" W (3RU) (16.5 cm x 13.5 cm x 5.1 cm) for NP35M08S0xA1 and NP35D08S0xA1 modules with cascade and test ports
Weight	1.2 lbs (0.5 kg) for NP35M08S0xZ0 and NP35D08S0xZ0 modules with no cascade and test ports 2.0 lbs (0.9 kg) for NP35M08S0xA1 and NP35D08S0xA1 modules with cascade and test ports
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 (typ)	0.2 (0.1) dB
Ripple within passband, max	0.5 dB
Channel spacing	100 GHz (ITU grid)
Wavelength passthrough	1420–1610 nm

Insertion losses, max[1] (dB)	Mux Modules		Demux Modules	
	NP35M08S0xZ0 (No cascade; no test port)	NP35M08S0xA1 (with cascade and test ports)	NP35D08S0xZ0 (No cascade; no test port)	NP35D08S0xA1 (with cascade and test ports)
Ch *yy* INP to DWDM OUT	2.3	2.3	N/A	N/A
DWDM INP to Ch *yy* OUT	N/A	N/A	2.3	2.3
Paired insertion loss[2]	3.1	3.1	3.1	3.1
DWDM OUT to -20 dB Tap Ratio, max[1] (dB)	N/A	20.4	N/A	20.4
Uniformity, max[1] (dB)				
Module	1.6	1.6	1.8	1.8
Paired	1.0	1.0	1.0	1.0
Passband @ 0.5 dB (nm)	± 0.12	± 0.12	± 0.12	± 0.12
Directivity, input ports, min (dB)	55	55	N/A	N/A
Directivity, pass-through port, min (dB)	N/A	45	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

Characteristics	Specification
Optical Interface	
Optical connectors	SC/APC
Model NP35M08S0xZ0 (for *x* = 2 or 4)	• Ch *yy* (8 channel add inputs for Custom Channel Group *x*) • DWDM OUT (output to fiber network or next mux)
Model NP35D08S0xZ0 (for *x* = 2 or 4)	• DWDM INP (input from fiber network or previous demux) • Ch *yy* (8 channel drop outputs for Custom Channel Group *x*)
Model NP35M08S0xA1 (for *x* = 2 or 4)	• DWDM INP (input from previous mux) • Ch. *yy* (8 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 NP35D08S0xA1 (for *x* = 2 or 4)	• DWDM INP (input from fiber network or previous demux) • Ch. *yy* (8 channel drop outputs for Custom Channel Group *x*) • DWDM OUT (to next demux) • TP −20 dB (1% tap, test point from DWDM INP)

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

SPECIFICATIONS CONTINUED

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). NP35M08 and NP35D08 8-channel Optical Mux and Demux Modules are identified with the following custom 8-channel group keys for the ITU channels shown for each:
- CF2: ITU Channels 20, 21, 24, 29, 35, 42, 52, and 54
- CF4: ITU Channels 23, 33, 44, 47, 51, 57, 58, and 59

NOTES:
1. Including connectors;
2. Paired insertion loss when combined with 8-ch demux module from Ch. *yy* INP to Ch. *yy* OUT, and vice-versa

ORDERING INFORMATION

| N | P | 3 | 5 | * | 0 | 8 | S | 0 | * | * | * | * | – | 0 | L | A | – | A | * |

* **Device type** = M (multiplexer); = D (de-multiplexer)

* **Channel group number**
  = 2 [CF2 (ITU channels 20, 21, 24, 29, 35, 42, 52, and 54)];
  = 4 [CF4 (ITU channels 23, 33, 44, 47, 51, 57, 58, and 59)]

* = A (cascade ports present); = Z (no cascade port)

* = 0 (no test point); = 1 (single bidirectional test point); = 3 (forward unidirectional test point)

* **Filter grade** = 1 (for fewer than 30 analog channels); = 2 (for fewer than 79 analog channels), or = 3 (for all-QAM RF payload)

* **Optical connector option** = S (SC/APC); = L (LC/APC)

RELATED PRODUCTS

CH3000 Chassis	Optical Patch Cords
Optical Transmitters	Optical Passives
PF3000	

Note: Specifications are subject to change without notice.

Customer Care

Contact Customer Care for product information and sales:
- United States: 866-36-ARRIS
- International: +1-678-473-5656

Ask us about the complete Access Technologies Solutions portfolio: ISP-NP35M08/D08

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