

Optical Passives (ISP)

OP34D5x

5-channel CWDM Demultiplexer

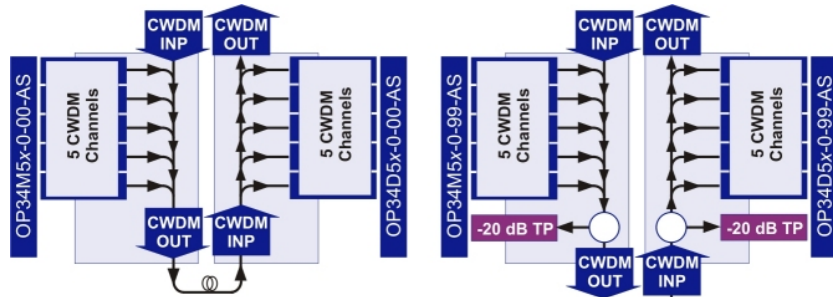
FEATURES

- 15 CWDM wavelengths in 3 groups of 5 each
- Designed for use with uncooled lasers based on 20 nm channel spacing
- Flat and wide operating passband on CWDM ITU grid (20 nm spacing)
- High channel isolation to minimize crosstalk
- Low polarization dependent loss (PDL)
- Telcordia GR-1209 and GR-1221 qualified, providing excellent environmental and mechanical stability
- Optional integrated 1310 nm combiner/splitter
- Optional line monitoring tap
- Occupies two half-depth slots
- 1310 nm port as cascade port for very low channels



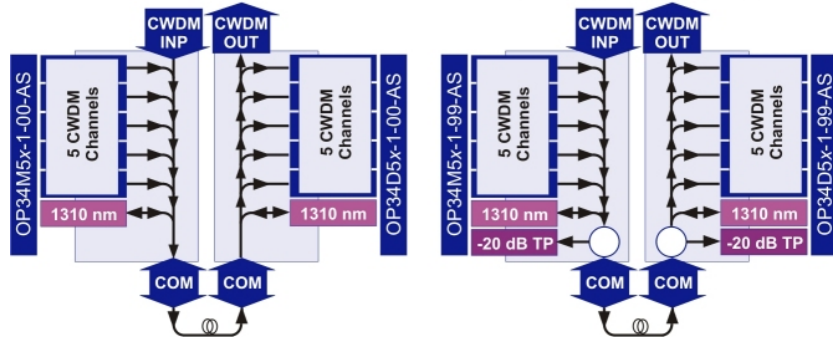
PRODUCT OVERVIEW

ARRIS OP34D5x series 5-channel CWDM demultiplexers are designed to demultiplex five CWDM ITU-grid optical wavelengths from one fiber input, producing five individual wavelengths ranging from 1270 to 1350 nm (“very low channels” group), 1430 to 1510 nm (“low channels” group), or from 1530 to 1610 nm (“high channels” group), with 20 nm spacing between channels. Functional block diagrams of several available model options are shown on the following page.



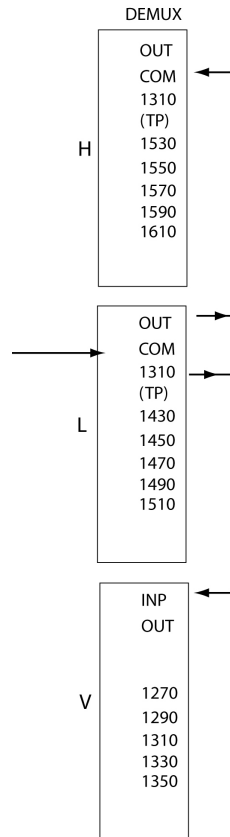
5-channel Mux and Demux Modules, with 5 "Very Low" channels (1270 - 1350nm), 5 "Low" channels (1430 - 1510nm) or 5 "High" channels (1530 - 1610nm)

Same as models at left, with optional additional -20 dB line monitoring tap



Same as above, with optional integrated 1310nm combiner/splitter (only available on models for "Low" and "High" channels)

Same as models at left, with optional additional -20 dB line monitoring tap



SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	6.5" D x 4.3" H x 1.0" W (3RU) (16.5 cm x 11 cm x 2.5 cm)
Weight	1.5 lbs (0.7 kg)
Environmental	
Operating temperature range	-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 (all models)	
Return loss, min	45 dB
Passband for CWDM channels @ 0.15 dBc	13 nm
Passband for 1310 nm @ 0.15 dBc	1263.5–1357.5 nm
Adjacent channel isolation, min	35 dB
Non-adjacent channel isolation, min	45 dB
1310-COM isolation, min	60 dB
CWDM directivity, min	55 dB
1310 directivity, min	65 dB
Polarization dependent loss, max	0.15 dB (< 0.1 dB typ)
Ripple within passband	0.5 dB
Channel spacing	20 nm
Power handling, max (any input port)	21.8 dBm
Wavelength Passbands Between COM and OUT Ports	
OP34D5V	1263–1357 nm (with five 13-nm-wide notches at 1270, 1290, 1310, 1330, and 1350 nm)
OP34D5L	1423–1617 nm (with five 13-nm-wide notches at 1430, 1450, 1470, 1490, and 1510 nm)
OP34D5H	1423–1617 nm (with five 13-nm-wide notches at 1530, 1550, 1570, 1590, and 1610 nm)
Optical Interface	
Optical connectors	SC/APC
Models OP34D5x-0-00-AS (x = V, L or H – Very Low, Low or High channel group)	<ul style="list-style-type: none"> COM (input from fiber network) Wavelength xxxx (5 channel drops for xxxx = 1270–1350, or 1430–1510, or 1530–1610 nm)
Models OP34D5x-1-00-AS (x = L or H – Low or High channel group)	<ul style="list-style-type: none"> COM (input from fiber network; I/O to/from fiber network for 1310 nm) 1310 nm (input/output to/from fiber network for 1310 nm) Wavelength xxxx (5 channel drops for xxxx = 1430–1510, or 1530–1610 nm)
Models OP34D5x-0-99-AS (x = V, L or H – Very Low, Low or High channel group)	<ul style="list-style-type: none"> COM (input from fiber network) Wavelength xxxx (5 channel drops for xxxx = 1270–1350, or 1430–1510, or 1530–1610 nm) TP -20 dB (1% tap, test point from COM)
Models OP34D5x-1-99-AS (x = L or H – Low or High channel group)	<ul style="list-style-type: none"> COM (input from fiber network; I/O to/from fiber network for 1310 nm) 1310 nm (input/output to/from fiber network for 1310 nm) Wavelength xxxx (5 channel drops for xxxx = 1430–1510, or 1530–1610 nm) TP -20 dB (1% tap, test point from COM)
Only L and H models include a CWDM OUT port which serves as a cascade port for transmitting the remaining multiplexed 5-channel signal from "High channel group" to "Low channel group" modules, or vice-versa. See diagram on the previous page.	

TABLE 1: INSERTION LOSS

	OP34D5x-0-00-AS	OP34D5x-1-00-AS	OP34D5x-0-99-AS	OP34D5x-1-99-AS
Insertion losses, max ¹ (dB)				
COM to Channel xxxx output	2.0	2.5	2.3	2.7
1310 to COM	N/A	1.1	N/A	1.3
OUT to COM	1.7	2.2	2.0	2.4
Paired insertion loss ²	2.8	3.7	3.3	4.3
COM to -20 dB Tap Ratio, max ¹ (dB)	N/A	N/A	20.4	20.4

NOTES:

- Including connectors
- Paired insertion loss when combined with 5-wavelength mux module from Ch xxxx INP to Ch xxxx OUT

ORDERING INFORMATION



- * = Channel Group (V = "Very Low," 5 channels from 1270 to 1350 nm;
L = "Low," 5 channels from 1430 to 1510 nm;
H = "High," 5 channels from 1530 to 1610 nm)
- * = 1310 nm I/O Port [0 = not present, 1 = present (available only in OP34D5L and OP34D5H)]
- ** = -20 dB Test Port (00 = not present, 99 = present)

RELATED PRODUCTS

CH3000	OP94M5
OP34M5x	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.

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