

# Optical Passives (ISP)

## NP34M05

### 5-channel CWDM Multiplexer

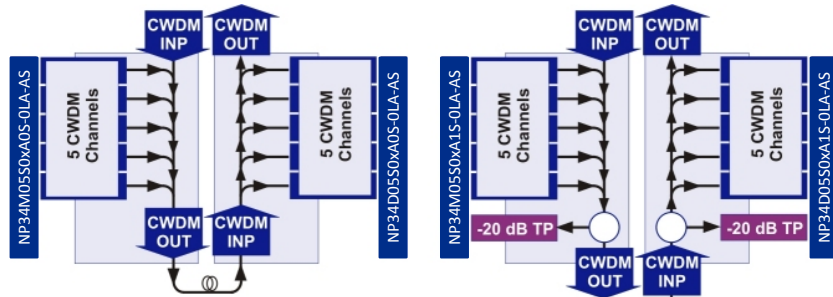
## FEATURES

- 15 CWDM wavelengths in 3 groups of 5
- 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
- Ability to cascade and combine all 3 groups
- Optional integrated 1310 nm combiner/splitter
- Optional line monitoring tap
- Occupies one half-depth slot
- Replaces OP34M5



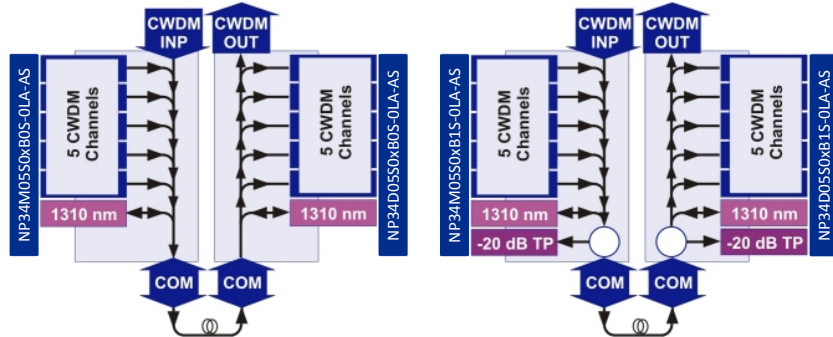
## PRODUCT OVERVIEW

ARRIS's NP34M05 Series 5-channel CWDM multiplexers are designed to multiplex five CWDM ITU-grid optical wavelengths onto one fiber output from individual wavelengths of 1270, 1290, ..., 1350, ("very low channels" group), 1430, 1450, ..., 1510 nm ("low channels" group), and 1530, 1550, . . . , 1610 nm ("high channels" group). Functional block diagrams of several available model options are shown on the following page.



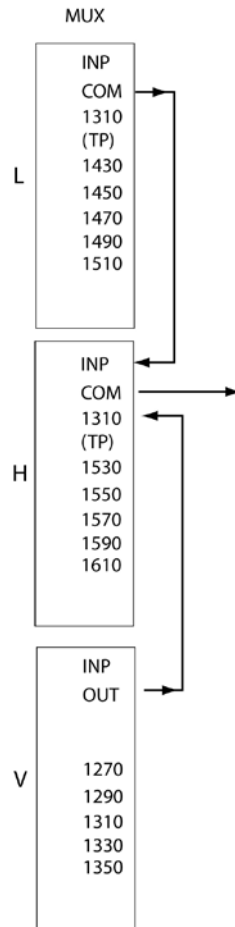
5-channel Mux and Demux Modules, with 5 "Very Low" channels (1270 - 1350nm), 5 "Low" channels (1430 - 1510nm) or 5 "High" channels (1530 - 1610nm)

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
<b>Physical</b>	
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)
<b>Environmental</b>	
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
<b>Optical (all models)</b>	
Return loss, min	45 dB
Polarization dependent loss, max (typ)	0.15 (0.1) dB
Ripple within passband, max	0.5 dB
Channel spacing	20 nm
Power handling, max (any input port)	21.8 dBm
<b>Wavelength Passthrough</b>	
V models	only allows wavelengths 1270 to 1350 nm to pass
H and L models	only allows wavelengths 1430 to 1610 nm to pass
<b>Optical Interface</b>	
Optical connectors	SC/APC
Models NP34M05S0xA05-0LA-AS (x = V, L or H – Very Low, Low, or High channel group)	<ul style="list-style-type: none"> <li>• COM (output to fiber network)</li> <li>• Wavelengths xxxx (5 channels added)</li> </ul>
Models NP34M05S0xB05-0LA-AS (x = L or H – Low or High channel group)	<ul style="list-style-type: none"> <li>• COM (output to fiber network)</li> <li>• I/O to/from fiber network for 1310</li> <li>• 1310 (input/output to/from fiber network for 1310 nm)</li> <li>• Wavelengths xxxx (5 channels added)</li> </ul>
Models NP34M05S0xA15-0LA-AS (x = L or H – Low or High channel group)	<ul style="list-style-type: none"> <li>• COM (output to fiber network)</li> <li>• Wavelength xxxx (5 channels added)</li> <li>• TP -20 dB (1% tap, test point from COM)</li> </ul>
Models NP34M05S0xB15-0LA-AS (x = L or H – Low or High channel group)	<ul style="list-style-type: none"> <li>• COM (output to fiber network; I/O to/from fiber network for 1310)</li> <li>• 1310 (input/output to/from fiber network for 1310 nm)</li> <li>• Wavelengths xxxx (5 channels added)</li> <li>• TP -20 dB (1% tap, test point from COM)</li> </ul>
A 1310 nm I/O Port is provided on "L" and "H" models only. For cases in which a cascade of CWDM wavelengths that includes the 5 Very Low ("V") wavelengths is required, this port may be used to add those 5 wavelengths from the OUT port of a "V" model mux; see diagram on the previous page.	

TABLE 1: INSERTION LOSS

	Model Number			
	NP34M05S0xA05-0LA-AS	NP34M05S0xB05-0LA-AS	NP34M05S0xA15-0LA-AS	NP34M05S0xB15-0LA-AS
Insertion losses, max <sup>1</sup> (dB)				
Channel xxxx INP to COM	2.0	2.5	2.3	2.7
1310 to COM	N/A	1.1	N/A	1.3
CWDM IN to COM	1.7	2.2	2.0	2.4
Paired insertion loss <sup>2</sup>	2.8	3.7	3.3	4.3
COM to -20 dB Tap Ratio, max <sup>1</sup> (dB)	N/A	N/A	20.4	20.4
Passband for CWDM @ 0.5 dB (nm)	13	13	13	13
Passband for 1310 nm @ 0.5 dB (nm)	N/A	1270–1350	N/A	1270–1350
CWDM directivity, min (dB)	55	55	55	55
1310 directivity, min (dB)	N/A	65	N/A	65
1310-COM isolation, min (dB)	N/A	60	N/A	60

## NOTES:

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

ORDERING INFORMATION

N	P	3	4	M	0	5	S	0	*	*	*	S	-	0	L	A	-	A	S
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\* = Channel Group (V = "Very Low," 5 channels 1270–1350 nm; L = "Low," 5 channels 1430–1510 nm; H = "High," 5 channels 1530–1610 nm)

\* = 1310 nm I/O Port [A = not present, B = present (See Note 1.)]

\* = -20 dB Test Port (0 = not present, 1 = present)

NOTE:

1. Available on "L" and "H" models only.

RELATED PRODUCTS

CH3000

PF3000

NP34D05

## Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

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