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.

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

Characteristics | Specification
--- | ---
Physical | Dimensions 6.5" D x 4.3" H x 1.0" W (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

| Models OP34D5x-0-00-AS (x = V, L or H – Very Low, Low or High channel group) | • 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) | • 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) | • 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) | • 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

<table>
<thead>
<tr>
<th>OP34D5x-0-00-AS</th>
<th>OP34D5x-1-00-AS</th>
<th>OP34D5x-0-99-AS</th>
<th>OP34D5x-1-99-AS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insertion losses, max</strong></td>
<td><strong>(dB)</strong></td>
<td><strong>(dB)</strong></td>
<td><strong>(dB)</strong></td>
</tr>
<tr>
<td>COM to Channel xxxx output</td>
<td>2.0</td>
<td>2.5</td>
<td>2.3</td>
</tr>
<tr>
<td>1310 to COM</td>
<td>N/A</td>
<td>1.1</td>
<td>N/A</td>
</tr>
<tr>
<td>OUT to COM</td>
<td>1.7</td>
<td>2.2</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Paired insertion loss</strong></td>
<td>2.8</td>
<td>3.7</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>COM to -20 dB Tap Ratio, max</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>20.4</td>
</tr>
</tbody>
</table>

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

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ISP-OP34D5x
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

<table>
<thead>
<tr>
<th>CH3000</th>
<th>OP94M5</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP34M5x</td>
<td>Installation Services</td>
</tr>
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</table>

Customer Care

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

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ISP-OP34D5x

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