

# Optical Passives (ISP)

## OP33Mxx-2

### LcWDM™ Multiplexers with CWDM Filter

## FEATURES

- Multiple models
  - 4- and 6-channel optical mux modules with cascade ports
  - 8-channel optical mux modules
- Integrated “red/blue” filters for CWDM returns
- Wide  $-20^{\circ}$  to  $+65^{\circ}\text{C}$  operating temperature range
- Excellent passband flatness ( $\pm 0.15$  dB typical)
- High forward path directivity (50 dB typical)
- Reliable, easy to maintain SC/APC connectors
- Optional bi-directional 20 dB test port monitors forward and return paths
- Half-depth slot in CH3000 chassis
- LGX chassis-compatible
- RoHS compliant

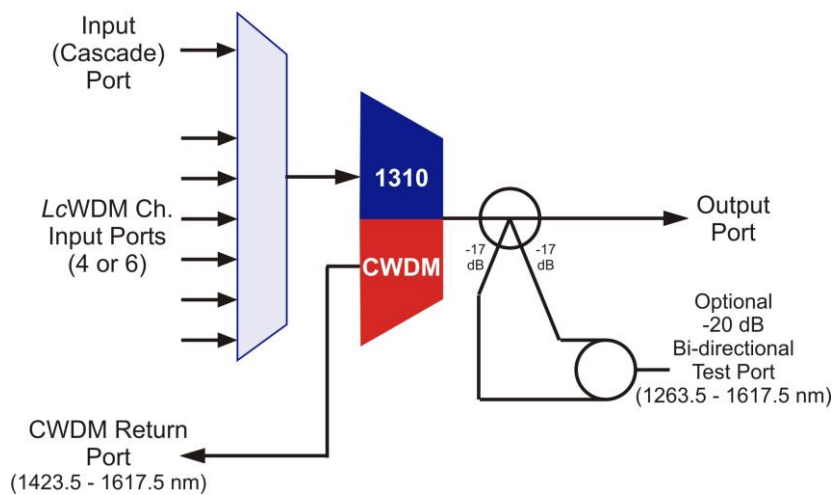


## PRODUCT OVERVIEW

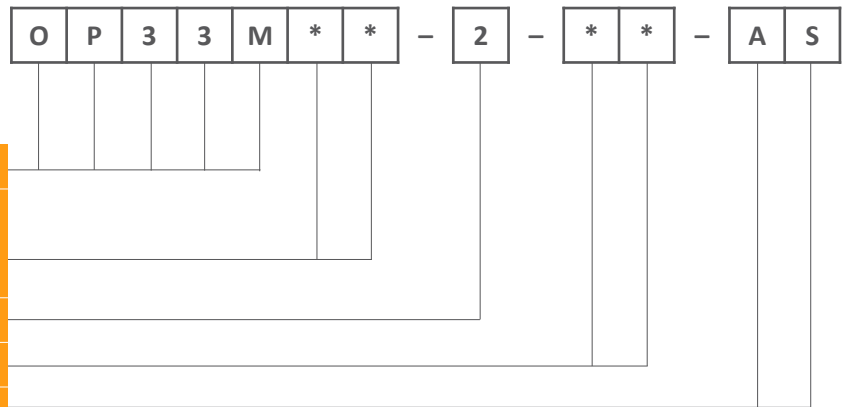
ARRIS OP33Mxx-1 series 4-, 6-, and 8-channel LcWDM multiplexers facilitate LcWDM architectures. LcWDM technology can dramatically increase network capacity without requiring additional fiber be deployed for super-trunking or narrowcasting applications.

**SPECIFICATIONS**

Characteristics	Specification																								
<b>Physical</b>																									
Dimensions	6.5" D x 5.3" H x 1.0" W (3RU) (16.5 cm x 13.5 cm x 2.5 cm) Note: Models OP33M6S-2-99-AS, OP33M8U-2-00-AS, and OP338MU-2-99-AS are double-width modules with width of 2 inches (5.1 cm)																								
Weight	0.8 lbs (0.4 kg)																								
<b>Environmental</b>																									
Operating temperature range (indoor)	-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</b>																									
Return loss, min	45 dB																								
Polarization dependent loss, max	0.2 dB (< 0.1 dB typ)																								
LcWDM channels	<ul style="list-style-type: none"> <li>OP33M4N: KK, LL, MM, NN,</li> <li>OP33M4U: RR, SS, TT, and UU</li> <li>OP33M6S: KK, LL, MM, NN, RR, and SS</li> <li>OP33M8U: KK, LL, MM, NN, RR, SS, TT, and UU</li> </ul>																								
Insertion losses, including connectors	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">4-channel</th> <th colspan="2">6-channel</th> </tr> <tr> <th>typical</th> <th>max</th> <th>typical</th> <th>max</th> </tr> </thead> <tbody> <tr> <td>CH. xx to OUT</td> <td>2.5 dB</td> <td>3.4 dB</td> <td>3.1 dB</td> <td>4.0 dB</td> </tr> <tr> <td>INP to OUT</td> <td>2.3 dB</td> <td>3.2 dB</td> <td>2.9 dB</td> <td>3.8 dB</td> </tr> <tr> <td>OUT to CWDM</td> <td>0.6 dB</td> <td>0.8 dB</td> <td>0.6 dB</td> <td>0.8 dB</td> </tr> </tbody> </table> <p>Note: Add 0.2 dB for models with -20dB TPs (OP33Mxx-2-99-AS) OUT to TP, including connectors, max: 20.5 ± 0.5 dB</p>		4-channel		6-channel		typical	max	typical	max	CH. xx to OUT	2.5 dB	3.4 dB	3.1 dB	4.0 dB	INP to OUT	2.3 dB	3.2 dB	2.9 dB	3.8 dB	OUT to CWDM	0.6 dB	0.8 dB	0.6 dB	0.8 dB
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Directivity, min (dB)	50																								
Wavelengths	<ul style="list-style-type: none"> <li>Input to Output: 1263.5–1357.5 nm</li> <li>Output to CWDM: 1423.5–1617.5 nm</li> <li>Output to Test Port: 1263.5–1617.5 nm (OP33Mxx-2-99-AS models only)</li> </ul>																								
Cascade pass-through	1263.5–1357.5 nm and 1423.5–1617.5 nm																								
Power handling, max (any input port)	21.8 dBm																								
<b>Optical Interface</b>																									
Optical connectors	SC/APC																								
Optical ports	<ul style="list-style-type: none"> <li>INP (cascade wavelengths from previous mux, not present on 8-channel module)</li> <li>OUT (cascade plus LcWDM wavelengths output to fiber network or next mux)</li> <li>CWDM (1423.5 – 1617.5 nm return wavelengths)</li> <li>Ch. xx (channel add inputs for LcWDM wavelength xx)</li> <li>TP -20 dB (bi-directional 1% test point)</li> </ul>																								



ORDERING INFORMATION



<b>LcWDM Optical Mux Module</b>
<b>** = LcWDM Channel Selection:</b> 4N includes channels KK, LL, MM, and NN 4U includes channels RR, SS, TT, and UU 6S includes channels KK, LL, MM, NN, RR, and SS
<b>2 = Cascade Port and CWDM Return Port (See Note 1.)</b>
<b>** = -20 dB Test Port (00 = not present, 99 = present)</b>
<b>AS = SC/APC Connectors</b>

**Note:**  
<sup>1</sup> Cascade ports are not present on 8-channel (OP33M8U-2-xx-AS) models.

RELATED PRODUCTS

CH3000 chassis

LGX chassis

## 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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