ARRIS’s OP95F4S series 4-channel DWDM Optical Filters have been designed with low insertion. These three-port filters are used to add (or drop) a group of four DWDM narrowcast wavelengths to (or from) a set of DWDM optical wavelengths. Two models are available, with channel group N used to add or drop channels 36 through 39, and channel group U used to add or drop channels 56 through 59.

The filters are available in three versions of packaging for outdoor use, one version ruggedized for easy handling and the second version, though not ruggedized, being smaller and easier to fit in a splice enclosure. Both versions are designed for use in an outdoor environment within a temperature range of –40° to +85°C.

FEATURES

• Add or drop a group of four wavelengths on the 100 GHz DWDM ITU Grid
• Low insertion loss
• Operating temperature range –40°C to +85°C
• 4-skip-0 filter
• Telcordia GR-1209 and GR-1221 qualified, providing excellent environmental and mechanical stability
• Variety of options for module package size, fiber jacket and connector types
• Epoxy-free on optical path

PRODUCT OVERVIEW

ARRIS’s OP95F4S series 4-channel DWDM Optical Filters have been designed with low insertion. These three-port filters are used to add (or drop) a group of four DWDM narrowcast wavelengths to (or from) a set of DWDM optical wavelengths. Two models are available, with channel group N used to add or drop channels 36 through 39, and channel group U used to add or drop channels 56 through 59.

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**SPECIFICATIONS**

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<td>Weight, ruggedized packages</td>
<td>0.2 lbs (0.9 kg)</td>
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<td><strong>Environmental</strong></td>
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<tr>
<td>Operating Temperature Range</td>
<td>–40°C to +85°C (–40°F to +185°F)</td>
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<tr>
<td>Storage Temperature Range</td>
<td>–40°C to +85°C (–40°F to +185°F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>5% to 95% non-condensing</td>
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<tr>
<td><strong>Optical Interface</strong></td>
<td></td>
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</tbody>
</table>
| Mux input/output ports | Function as MUX  
  DWDM  
  x I/O  
  COM  
  Function as DEMUX  
  DWDM pass-through input  
  x add/input channel group  
  output to fiber network  
  DWDM pass-through output  
  x drop/output channel group  
  input from fiber network |

**Optical**

| Insertion losses (without connectors) | typical | max |
| DWDM I/O to COM | 0.3 dB | 0.4 dB |
| Group x I/O to COM | 0.5 dB | 0.7 dB |

| Passband @ 0.15 dB  
  x to COM  
  DWDM to COM | 2.6 nm; Passes Channel Group N (36-39) or U (56-59)  
  Passes 1423.5 nm through 1617.5 nm with a notch at the Channel Group add/drop band. |
| Directivity, min | 50 dB |
| Return loss, min | 45 dB |
| Polarization dependent loss, max | 0.1 dB (< 0.05 dB typ) |
| Adjacent channel isolation, min | 25 dB |
| Non-adjacent channel isolation, min | 45 dB |
| Power handling, max (any input port) | 21.8 dBm |

| Channel groups |  
  • N (DWDM ITU channels 36-39)  
  • U (DWDM ITU channels 56-59) |

**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) for 40 channels from Channel 20 (1561.42 nm) to Channel 59 (1530.33 nm). For more complete description of available DWDM ITU Grid channels and ARRIS’s partitioning into convenient logical groups, please refer to the ARRIS DWDM ITU Grid Channel Plan data sheet. When ordering optical filters, please note, for network planning purposes, that AT3550 "BC" series broadcast transmitters operate at 1545.3 nm ± 0.9 nm, occupying the approximate region of DWDM ITU Grid channels 39 through 41; as a result, a Channel Group N filter should not be used in that case.
Three examples are shown below (two approximately full scale). For non-ruggedized tubes, the fiber optic leads are color-coded as shown.

OP95F4S-U-R2-AS 4-channel Filter for DWDM Channel Group U in Ruggedized Package with SC/APC Connectors (image reduced approximately 50%)

OP95F4S-U-R2-00 4-channel Filter for DWDM Channel Group U in Ruggedized Package

COM – Blue
DWDM – Black
CH. xx – Clear

OP95F4S-U-N0-00 4-channel Filter for DWDM Channel Group U in Non-ruggedized Tube
ORDERING INFORMATION

4-channel DWDM Filter

* = DWDM ITU Grid Channel Group (N or U)
(Reference ARRIS DWDM ITU Grid Channel Plan Data Sheet)

** = Package, Fiber Jacket Options and Connectorized Options:
N0-00 = 1.5 m pigtails of 250 μm bare fiber in 3x55 mm Non-ruggedized Tube,
R2-00 = 1.5 m pigtails of 2 mm buffered fiber in 8.5x14x98 mm Ruggedized Package,
R2-AS = 1 m pigtails of 2 mm fiber in 9.2x51x89 mm Ruggedized Package with SC/APC connectors

RELATED PRODUCTS

Optical Transmitters       Optical Passives
Digital Return             Optical Patch Cords
Optical Nodes              Installation Services

Customer Care

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

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