Optical Passives (OSP)
OP95D4-CFx
DWDM Demux Field Passives
(4 Channels on 100 GHz-speed ITU Grid)

FEATURES

• 4-channel optical demux modules in field hardened enclosures
• Includes cascade port for daisy-chaining of multiple modules
• Groups of channels specifically selected for use with AT3545G and HT354x series Full Spectrum DWDM Transmitters
• Options available for various RF Channel Loading plans (All QAM, 30A and 79A)
• Flat-top pass band
• High optical isolation
• Mux and demux pairs optimized for minimum combined insertion loss across all channels
• Options available for fiber and connector types
• Epoxy-free on optical path

PRODUCT OVERVIEW

ARRIS OP95D4-CFx series 4-channel DWDM demultiplexers facilitate DWDM architectures. DWDM technology can dramatically increase network capacity without requiring additional fiber be deployed for super-trunking or narrowcasting applications.

ARRIS supports DWDM architectures with a variety of products having center frequency spacing on the standard DWDM ITU Grid (ITU-T G.694.1) for 40 channels from Channel 20 to Channel 59. This particular group of 4-channel demux products are intended for use with ARRIS’s AT3545G and HT354x Full Spectrum DWDM Transmitters and are available with four different combinations of four DWDM channels each.
These ruggedized modules have been designed for use in an outdoor environment with a temperature range of $-40^\circ$ to $+85^\circ$C.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical</strong></td>
<td></td>
</tr>
<tr>
<td>Dimensions (without connectors)</td>
<td>3.78&quot; L x 3.07&quot; W x 0.31&quot; H (9.6 cm x 7.8 cm x 0.8 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.0 lbs (0.45 kg)</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>$-40^\circ$ to $+85^\circ$ ($-40^\circ$F to $+185^\circ$F)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>$-40^\circ$ to $+85^\circ$ ($-40^\circ$F to $+185^\circ$F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>5% to 95% non-condensing</td>
</tr>
<tr>
<td><strong>Optical (all models)</strong></td>
<td></td>
</tr>
<tr>
<td>Return loss</td>
<td>45 dB</td>
</tr>
<tr>
<td>Polarization dependent loss, max</td>
<td>0.2 dB ($&lt;0.1$ dB typ)</td>
</tr>
<tr>
<td>Ripple within passband</td>
<td>0.5 dB</td>
</tr>
<tr>
<td>Channel spacing</td>
<td>100 GHz</td>
</tr>
<tr>
<td>Insertion losses, max$^1$</td>
<td></td>
</tr>
<tr>
<td>DWDM INP to DWDM OUT:</td>
<td>1.4 dB</td>
</tr>
<tr>
<td>DWDM INP to Ch ** OUT:</td>
<td>1.8 dB</td>
</tr>
<tr>
<td>Paired insertion loss$^2$</td>
<td>2.9 dB</td>
</tr>
<tr>
<td>Uniformity, max$^1$</td>
<td></td>
</tr>
<tr>
<td>Module:</td>
<td>0.8 dB</td>
</tr>
<tr>
<td>Paired:</td>
<td>0.6 dB</td>
</tr>
<tr>
<td>Passband @ 0.5 dB</td>
<td></td>
</tr>
<tr>
<td>Ch ** INP to DWDM OUT:</td>
<td>±0.12 nm</td>
</tr>
<tr>
<td>DWDM INP to DWDM OUT:</td>
<td>See Note $^3$</td>
</tr>
<tr>
<td>Isolation, adjacent channel, min</td>
<td>30 dB</td>
</tr>
<tr>
<td>Isolation, non-adjacent channel, min</td>
<td>45 dB</td>
</tr>
<tr>
<td>Power handling, any input port, max</td>
<td>24.8 dBm</td>
</tr>
</tbody>
</table>

**Optical Interface**

**Optical connectors**

- Model OP95D4-CFx-10y-zz-zz (for $x = 1, 2, 3$ or $4$)
  - Ch ** (4 channel drop outputs for Custom Channel Group $x$)
  - DWDM INP (input from fiber network or previous demux)
  - DWDM OUT (output to next demux in a cascade)

**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).

**OP95D4-CFx 4-channel Optical Demux Modules are available for the following custom channel groups**

- $x = 1 = CF1 =$ Chs 20, 21, 24, and 29
- $x = 2 = CF2 =$ Chs 35, 42, 52, and 54
- $x = 3 = CF3 =$ Chs 23, 33, 44, and 47
- $x = 4 = CF4 =$ Chs 51, 57, 58, and 59

**RF Channel Loading**

- $y = 0 =$ DWDM Type 1, 30 A + QAM Loading
- $y = 2 =$ DWDM Type 2, 79 A + QAM Loading
- $y = 3 =$ DWDM Type 3, All QAM Loading

**NOTES:**

- $^1$ Including connectors;
- $^2$ Paired insertion loss when combined with 4-ch mux module from Ch ** INP to Ch ** OUT;
- $^3$ Passes 1420-1620 nm with a notch at the channel add/drop band and WDL within ±0.15 dB.
Note: Specifications are subject to change without notice.

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Customer Care
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• International: +1-678-473-5656

ORDERING INFORMATION

**OP95D4-CFx**

**DWDM Optical Field Passive**
- **D** = Demux
- 4-channel Module
- **CFx** = Custom DWDM ITU Channel Group Key (x = 1, 2, 3 or 4)
- **10y** = RF Channel Loading Key (y = 0, 2 or 3)
- **zz-zz** = Packaging, Fiber, and Connector Type
  
  *(All ports are identically connectorized.)*
  - **R1-00** = Ruggedized package with 1 meter pigtail of 900 mm tight buffered fiber and no connector
  - **R2-AS** = Ruggedized package with 1 meter pigtail of 2 mm loose tube fiber and SC/APC connectors

RELATIONED PRODUCTS

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