

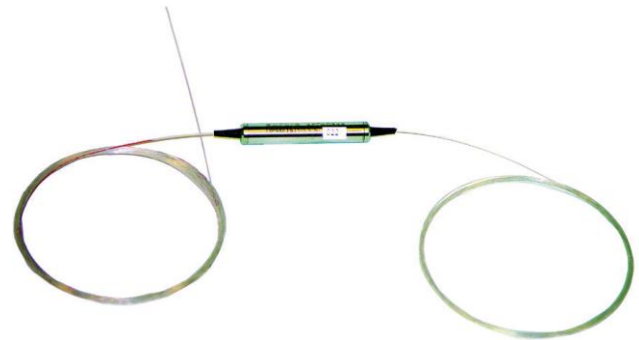
# Optical Passives (OSP)

## OP94F1S

### Single-channel CWDM Optical Filter

## FEATURES

- 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
- Variety of options for module body robustness, fiber buffer, and connector types
- Epoxy-free on optical path



## PRODUCT OVERVIEW

ARRIS's OP94F1S series Single-channel CWDM Optical Filters are three-port filters that are used to add/drop a CWDM wavelength to/from a set of CWDM optical wavelengths, where the wavelengths are 1270, 1290, . . . , 1350, 1430, 1450, . . . , 1610 nm on the CWDM ITU grid (i.e., with 20 nm spacing). The filters are available in three versions of packaging for outdoor use, two versions ruggedized for easy handling and the third version, though not ruggedized, being smaller and easier to fit in a splice enclosure. All versions are designed for use in an outdoor environment within a temperature range of  $-40^{\circ}$  to  $+85^{\circ}\text{C}$ .

**SPECIFICATIONS**

Characteristics	Specification		
<b>Physical</b>			
Dimensions	See Ordering Information		
Weight	0.2 lbs (0.09 kg)		
<b>Environmental</b>			
Operating Temperature Range	-40°C to +85°C (-40°F to +185°F)		
Storage Temperature Range	-40°C to +85°C (-40°F to +185°F)		
Humidity	5% to 95% non-condensing		
<b>Optical Interface</b>			
Optical connectors	See Ordering Information		
Mux input/output ports	<ul style="list-style-type: none"> <li>• COM</li> <li>• CWDM</li> <li>• Ch. xxxx I/O</li> </ul>	Function as MUX output to fiber network CWDM pass-through input xxxx add/input channel	Function as DEMUX input from fiber network CWDM pass-through output xxxx drop/output channel
<b>Optical</b>			
Channel spacing	20 nm		
Channel plan (CWDM wavelengths)	See Ordering Information		
Passband @ 0.5 dB	± 6.5 nm		
Ripple within passband	0.5 dB		
Return loss, min	45 dB		
Polarization dependent loss, max	0.07 dB (< 0.05 dB typ)		
Power handling, max (any input port)	21.8 dBm		
Insertion losses, max	<ul style="list-style-type: none"> <li>• Ch. xxxx I/O to COM</li> <li>• CWDM I/O to COM</li> </ul>	With connector 0.8 dB 0.7 dB	Without connector 0.6 dB 0.5 dB
Adjacent channel isolation, min	35 dB		
Non-adjacent channel isolation, min	45 dB		
Directivity, min	50 dB		

**PACKAGE OPTIONS**

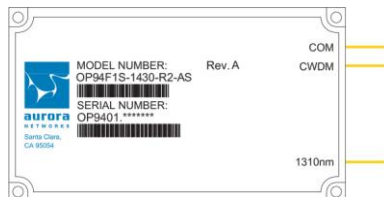
Two examples are shown below approximately full scale, while the “S-case” option (with SC/APC connectors) is shown below at approximately half scale. For non-ruggedized tubes, the fiber optic leads are color-coded as shown.



**OP94F1S-1470-R2-00 Single-channel CWDM Optical Filter in Ruggedized Package (8.5 mm x 14 mm x 98 mm)**

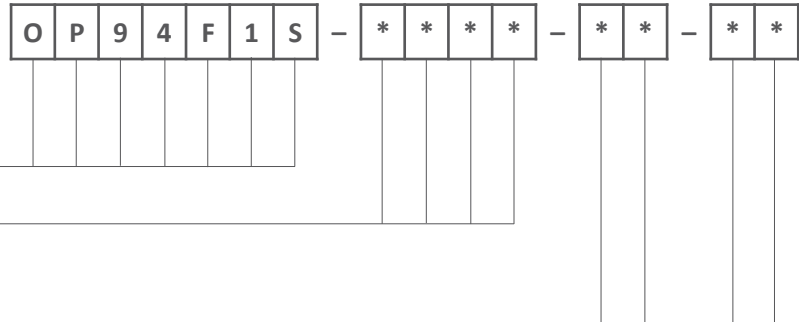


**OP94F1S-1590-N0-00 Single-channel CWDM Optical Filter in Non-ruggedized Tube (34 mm x 5.5 mm)**



**OP94F1S-1430-R2-AS CWDM Optical Filter in “S-case” Ruggedized Package (9.2 mm x 51 mm x 89 mm), (shown above approximately half-scale)**

ORDERING INFORMATION



Single-channel CWDM Filter

\*\*\*\* = CWDM Wavelength (1270, 1290, 1310, 1330, 1350, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610 nm)

\*\*.\*\* = Packaging, Fiber and Connector Type  
 N0-00 = 250 μm bare fiber in 34 x 5.5 mm Non-ruggedized Tube,  
 R2-00 = 2 mm fiber in 8.5 x 14 x 98 mm Ruggedized Package  
 R2-AS = 2 mm fiber with SC/APC Connectors in 9.2 x 51 x 89 mm Ruggedized Package

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

**Note:** Specifications are subject to change without notice.

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