

Optical Passives (OSP)

OP95F1S

Single-channel DWDM Optical Filter

FEATURES

- Low insertion loss
- Operating temperature range -40°C to $+85^{\circ}\text{C}$
- Selection of supported narrowcast channels on standard 100 GHz DWDM ITU Grid
- High channel isolation to minimize crosstalk
- 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

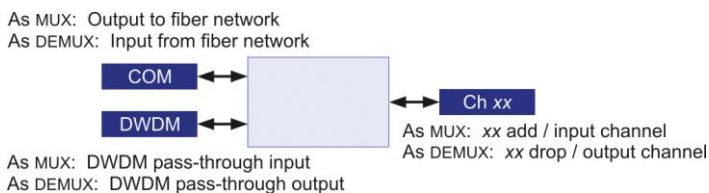
ARRIS's OP95F1S series Single-channel DWDM Optical Filters have been designed with low insertion and polarization dependent losses. These three-port filters are used to add (or drop) a single DWDM narrowcast wavelength to (or from) a set of DWDM optical wavelengths.

The filters are available in two 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 $+85^{\circ}\text{C}$.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	See <i>Ordering Information</i>
Weight, ruggedized packages	0.2 lbs (0.9 kg)
Environmental	
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
Optical Interface	
Mux input/output ports	<ul style="list-style-type: none"> • DWDM • Ch xx I/O • COM

Function as MUX	Function as DEMUX
DWDM pass-through input xx add/input channel output to fiber network	DWDM pass-through output xx drop/output channel input from fiber network



Optical	
Insertion losses (without connectors)	<ul style="list-style-type: none"> • DWDM I/O to COM: typical 0.4 dB, max 0.50 dB • CH. xx I/O to COM: typical 0.6 dB, max 0.8 dB
Passband @ 0.5 dB	± 0.125 nm
Ripple within passband	0.5 dB
Ripple within passband	0.5 dB
Directivity, min	55 dB
Return loss, min	45 dB
Polarization dependent loss, max	0.1 dB (< 0.05 dB typ)
Adjacent channel isolation, min	32 dB
Non-adjacent channel isolation, min	45 dB
Power handling, max (any input port)	21.8 dBm
Channel spacing	100 GHz

ITU Channel Plans

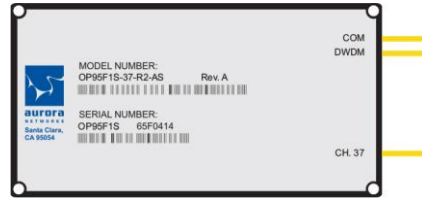
ARRIS supports DWDM network architectures with a variety of products having 100 GHz center frequency spacing on the standard DWDM ITU Grid (ITU-T G.694.1) for 40 channels from Channel 20 (1561.42 nm) to Channel 59 (1530.33 nm).

For more complete description of available DWDM ITU Grid channels and ARRIS's partitioning into convenient logical groups of 4, 8 and 16 channels in products for DWDM mux and demux applications, please refer to the ARRIS DWDM ITU Grid Channel Plan data sheet.

When ordering Single-channel DWDM 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 no channel within ARRIS's ITU Channel Plan Groups N or P (channels 36 through 43) should be used as a narrowcast channel.

PACKAGE OPTIONS

Three examples are shown below (two approximately full scale). For non-ruggedized tubes, the fiber optic leads are color-coded as shown.



**OP95F1S-37-R2-AS Single-channel Filter (for DWDM Channel 37)
in Ruggedized Package with SC/APC Connectors
(image reduced approximately 50%)**

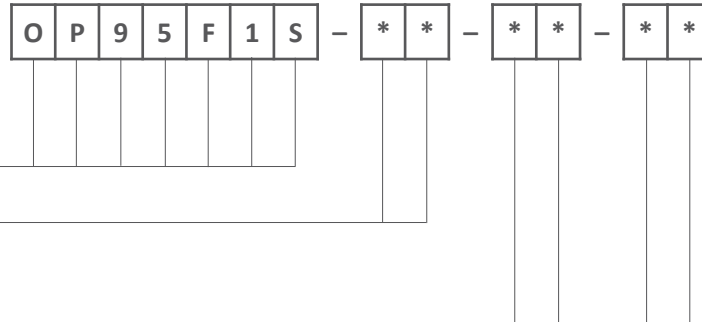


**OP95F1S-37-R2-00 Single-channel Filter (for DWDM Channel 37)
in Ruggedized Package**



**OP95F1S-29-N0-00 Single-channel Filter (for DWDM Channel 29)
in Non-ruggedized Tube**

ORDERING INFORMATION



Single-channel DWDM Filter

** = DWDM ITU Grid Channel Number (20, 21, 22, 23, 25, . . . or 59)
 (Reference ARRIS DWDM ITU Grid Channel Plan Data Sheet)

. = Package, Fiber Jacket Options and Connectorized Options:
 N0-00 = 1 m pigtailed of 250 μm bare fiber in 3x55 mm Non-ruggedized Tube,
 R2-00 = 1 m pigtailed of 2 mm buffered fiber in 8.5x14x98 mm Ruggedized Package,
 R2-AS = 1 m pigtailed 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

Note: Specifications are subject to change without notice.

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