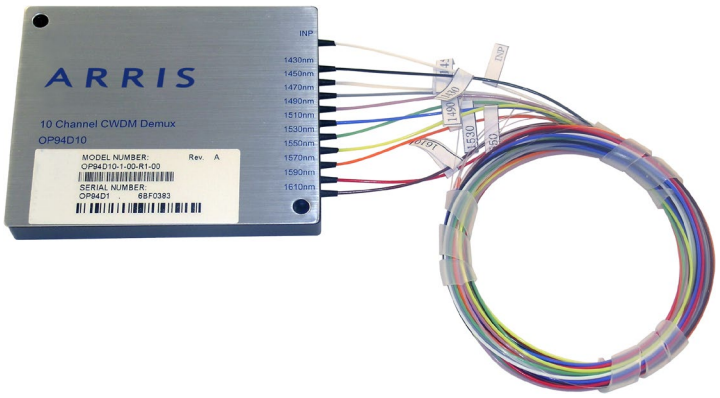
Optical Passives (OSP)

OP94M10, OP94D10

10-channel CWDM Multiplexer and Demultiplexer Field Passives

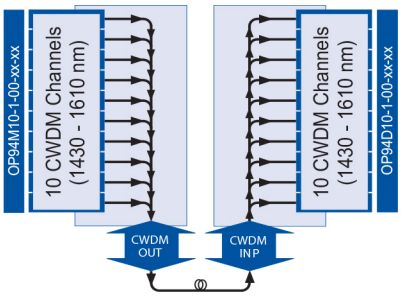
FEATURES

- 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)
- Operating temperature range –40° to +85°C
- Telcordia GR-1209 and GR-1221 qualified, providing excellent environmental and mechanical stability
- Variety of options for fiber and connector types
- Epoxy-free on optical path
- Optional integrated 1310 nm combiner/splitter

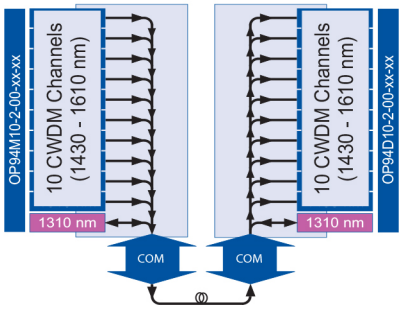


PRODUCT OVERVIEW

ARRIS's OP94M10 and OP94D10 series 10-channel CWDM field passives are designed to multiplex and demultiplex 10 CWDM ITU-grid optical wavelengths, with individual wavelengths ranging from 1430 to 1610 nm (20 nm spacing between channels). OP94M10 modules multiplex 10 channels onto a single fiber output, with corresponding OP94D10 modules demultiplexing a single fiber input to produce 10 individual wavelengths. All of these ruggedized modules have been designed for use in an outdoor environment within a temperature range of –40° to +85°C.



10-channel Mux and Demux Modules (1430 - 1610 nm)



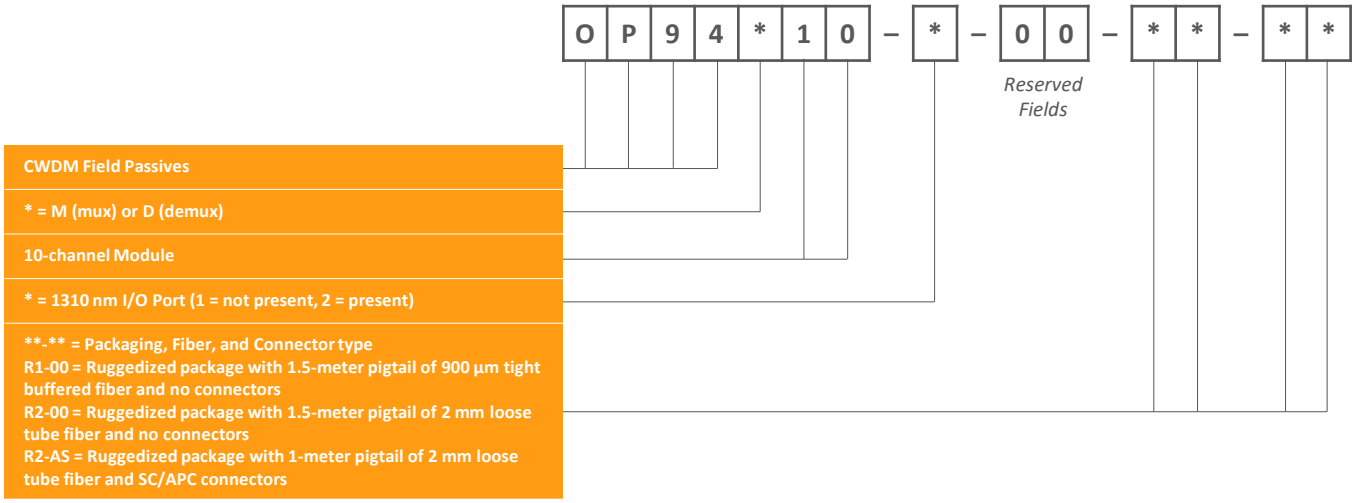
10-channel Mux and Demux Modules (1430 - 1610 nm) with integrated 1310 nm combiner/splitter

SPECIFICATIONS

Characteristics	Specification	
Physical		
Dimensions	3.8" L x 3.0" W x 0.4" H (9.7 cm x 7.6 cm x 1.1 cm)	
Weight	1.0 lb (0.5 kg)	
Environmental		
Operating Temperature Range	–40° to +85°C (–40° to +185°F)	
Storage Temperature Range	–40° to +85°C (–40° to +185°F)	
Humidity	5% to 95% non-condensing	
Optical		
Channel spacing	20 nm	
Return loss, min	45 dB	
Passband @ 0.5 dB	± 6.5 nm	
Ripple within passband	0.5 dB	
Polarization dependent loss, max	0.15 dB (< 0.1 dB typ)	
Power handling, max (any input port)	21.8 dBm	
Insertion losses[1], max (dB)	**OP94M10 (10-channel Mux)**	**OP94D10 (10-channel Demux)**
Ch *xxxx* INP to COM	3.1 (3.3)	N/A
COM to Ch *xxxx* OUT	N/A	3.1 (3.3)
1310 to COM	1.1 (1.3)	1.1 (1.3)
Paired insertion loss[2]	4.0 (4.4)	4.0 (4.4)
Directivity, min (dB)	55	55
Channel isolation, min (dB)		
Adjacent channels	N/A	35
Non-adjacent channels	N/A	45
Passband for 1310 nm @ 0.5 dB (nm)	1263.5–1357.5	1263.5–1357.5
1310 Directivity, min (dB)	65	65
1310-COM isolation, min (dB)	60	60
Optical Interface		
Optical connectors	SC/APC or none (See Ordering Information)	
Model OP94M10-1-00-yy-zz (10-channel mux module)	• CWDM OUT (output to fiber network) • Ch *xxxx* INP (10 channel adds)	
Model OP94M10-2-00-yy-zz (10-channel mux module with 1310 combiner)	• COM (output to fiber network, I/O to/from network for 1310) • Ch *xxxx* INP (10 channel adds) • 1310 (input/output to/from fiber network for 1310 nm)	
Model OP94D10-1-00-yy-zz (10-channel demux module)	• CWDM INP (input from fiber network) • Ch *xxxx* OUT (10 channel drops)	
Model OP94D10-2-00-yy-zz (10-channel demux module with 1310 splitter)	• COM (input from fiber network, I/O to/from network for 1310) • Ch *xxxx* OUT (10 channel drops) • 1310 (input/output to/from fiber network for 1310 nm)	

NOTES:
1. Insertion losses shown without (and with) connectors, and assuming optional 1310 nm I/O Port is present.
2. Paired insertion loss when combined with corresponding applicable 10-wavelength demux module (from Ch *xxxx* INP to Ch *xxxx* OUT)

ORDERING INFORMATION



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

87-10355-RevE_OP94M10-D10_CWDM_Mux-Demux_Field 10/2018 EA-29028