

Optical Passives (OSP)

OP93D4x

LcWDM™ 4-channel Demultiplexers for Wavelengths KK, LL, MM and NN or RR, SS, TT, and UU

FEATURES

- 4-channel optical demux modules
- Channels defined by LcWDM wavelengths (KK, LL, MM, and NN or RR, SS, TT, and UU)
- Cascade port on all models
- Optional downstream port and dual local ports for 1424–1617 nm return
- Flat-top passband
- High optical isolation
- Supports both forward and return path transmission of analog and digital signals
- RoHS compliant



PRODUCT OVERVIEW

ARRIS's OP93D4x 4-channel LcWDM demultiplexers facilitate LcWDM™ architectures. All models are ideal for common node splitting/segmentation applications and can be mounted in the FT4005 fiber management tray of an NC4000 series optical node or nearby splice enclosure. LcWDM technology can dramatically increase network capacity without requiring additional fiber be deployed for super-trunking or narrowcasting applications.

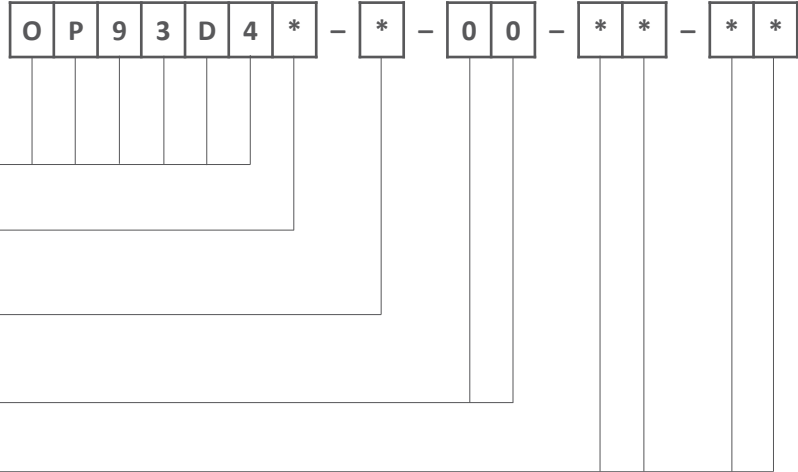
The OP93D4x demultiplexes up to four LcWDM wavelengths transmitted from the headend, with a cascade port passing through any additional wavelengths.

On some models, additional ports exist to carry non-LcWDM upstream wavelengths on the same single fiber for return to the headend. Two “local return” ports may be connected to the output of DT4000 series digital transceivers (installed in the same optical node as the OP93D4x), and a third return port accepts the digitized traffic from a further downstream node, with the signals from all three return ports combined and transmitted upstream to the headend.

SPECIFICATIONS

| Characteristics | Specification | | | | | | | | | | | | | | | |
|---|--|---------------------|--------------------|--------------------|-----------------|---------------------|---------------------|----------------|---------------------|---------------------|------------------------------|-----|---------------------|-------------------|-----|---------------------|
| Physical | | | | | | | | | | | | | | | | |
| Dimensions | 3.8" L x 3.1" W x 0.3" H (9.6 cm x 7.8 cm x 0.8 cm) | | | | | | | | | | | | | | | |
| Weight | 0.8 lbs (0.3 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 | | | | | | | | | | | | | | | | |
| Optical connectors | <i>See Ordering Information</i> | | | | | | | | | | | | | | | |
| Optical ports | <ul style="list-style-type: none"> • COM (input from fiber network) • LcWDM (output; NC or cascade to next demux) • Ch xx (4 channel drop outputs for LcWDM wavelength xx) • LOCAL RETURN 1/2 (interface ports to local DT4000 series transceivers installed in node for digital return; not available on all models—<i>see Ordering Information</i>) • RETURN 3 (input from the digital return of a downstream node, combined with inputs from the LOCAL RETURN ports for upstream transmission of 1424-1617 nm return; not available on all models—<i>see Ordering Information</i>) | | | | | | | | | | | | | | | |
| Optical | | | | | | | | | | | | | | | | |
| LcWDM channels | KK and LL, MM, and NN, or RR, SS, TT, and UU | | | | | | | | | | | | | | | |
| Passband @ 0.5 dB, min | <ul style="list-style-type: none"> • COM (input) to Ch. xx port: > ± 0.125 nm • COM to LcWDM (cascade out) port: passes 1263.5 – 1357.5 nm with a notch at the channel add/drop band | | | | | | | | | | | | | | | |
| Insertion losses, including connectors, max | <table border="1"> <thead> <tr> <th></th> <th>OP93D4x-1-00-R2-AS</th> <th>OP93D4N-4-00-R2-AS</th> </tr> </thead> <tbody> <tr> <td>• COM to Ch. xx</td> <td>2.3 dB (1.6 dB typ)</td> <td>3.1 dB (2.2 dB typ)</td> </tr> <tr> <td>• COM to LcWDM</td> <td>2.1 dB (1.4 dB typ)</td> <td>2.9 dB (2.0 dB typ)</td> </tr> <tr> <td>• COM to LOCAL RETURN 1 or 2</td> <td>N/A</td> <td>8.9 dB (8.3 dB typ)</td> </tr> <tr> <td>• COM to RETURN 3</td> <td>N/A</td> <td>4.6 dB (4.0 dB typ)</td> </tr> </tbody> </table> | | OP93D4x-1-00-R2-AS | OP93D4N-4-00-R2-AS | • COM to Ch. xx | 2.3 dB (1.6 dB typ) | 3.1 dB (2.2 dB typ) | • COM to LcWDM | 2.1 dB (1.4 dB typ) | 2.9 dB (2.0 dB typ) | • COM to LOCAL RETURN 1 or 2 | N/A | 8.9 dB (8.3 dB typ) | • COM to RETURN 3 | N/A | 4.6 dB (4.0 dB typ) |
| | OP93D4x-1-00-R2-AS | OP93D4N-4-00-R2-AS | | | | | | | | | | | | | | |
| • COM to Ch. xx | 2.3 dB (1.6 dB typ) | 3.1 dB (2.2 dB typ) | | | | | | | | | | | | | | |
| • COM to LcWDM | 2.1 dB (1.4 dB typ) | 2.9 dB (2.0 dB typ) | | | | | | | | | | | | | | |
| • COM to LOCAL RETURN 1 or 2 | N/A | 8.9 dB (8.3 dB typ) | | | | | | | | | | | | | | |
| • COM to RETURN 3 | N/A | 4.6 dB (4.0 dB typ) | | | | | | | | | | | | | | |
| | <i>Note: Subtract 0.2 dB for modules with no connectors (OP93D4x-x-00-R2-00)</i> | | | | | | | | | | | | | | | |
| Transmission port isolation | <ul style="list-style-type: none"> • Adjacent channel, min: 30 dB • Non-adjacent channel, min: 45 dB | | | | | | | | | | | | | | | |
| Reflect port isolation, min | 15 dB | | | | | | | | | | | | | | | |
| Directivity, min | 50 dB | | | | | | | | | | | | | | | |
| Return loss, min | 45 dB | | | | | | | | | | | | | | | |
| Polarization dependent loss, max | 0.1 dB (< 0.05 dB typ) | | | | | | | | | | | | | | | |
| Power handling, max (any input port) | 21.8 dBm | | | | | | | | | | | | | | | |

ORDERING INFORMATION



- LcWDM 4-channel Optical Demux Module**
- * = LcWDM Channel Selection:
N includes channels KK, LL, MM, and NN
U includes channels RR, SS, TT, and UU
- * = Configuration:
1 = Cascade port only
4 = Cascade port, one downstream port, and two local ports for 1424-1617 nm return
- 00 = Reserved fields
- ** - ** = Packaging, Fiber and Connector Type¹
R2-00 = 2 mm fiber in 96 x 78 x 8 mm Ruggedized Package
R2-AS = 2 mm fiber with SC/APC Connectors in 96 x 78 x 8 mm Ruggedized Package²

Notes:

- ¹ Minimum fiber length for all models is 1 (± 0.15) meter.
- ² LC/UPC connectors on LOCAL RETURN ports.

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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