

Datasheet

Passive WDM Cables

MUX/DeMUX and OADM, 1 or 2 wavelength

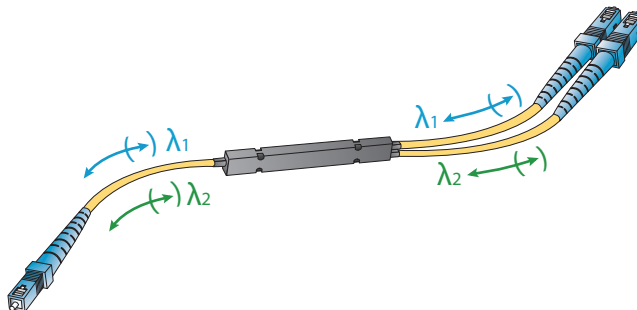


Highlights

- WDM cable separate, combine, add, or drop wavelengths
 - 1310 nm / 1550 nm
 - CWDM: 1270 - 1610
 - DWDM: 1525 - 1565
- Single-mode fiber
- Low return loss and cross-talk
- High isolation
- Low polarization dependency
- Environmentally stable

Overview

A WDM cable combines and separates two optical wavelengths to double the data capacity of an installed fiber. The single-fiber technology is bi-directional using gray (wide), CWDM, or DWDM wavelengths as specified by "/xxyy" in the ordering codes.



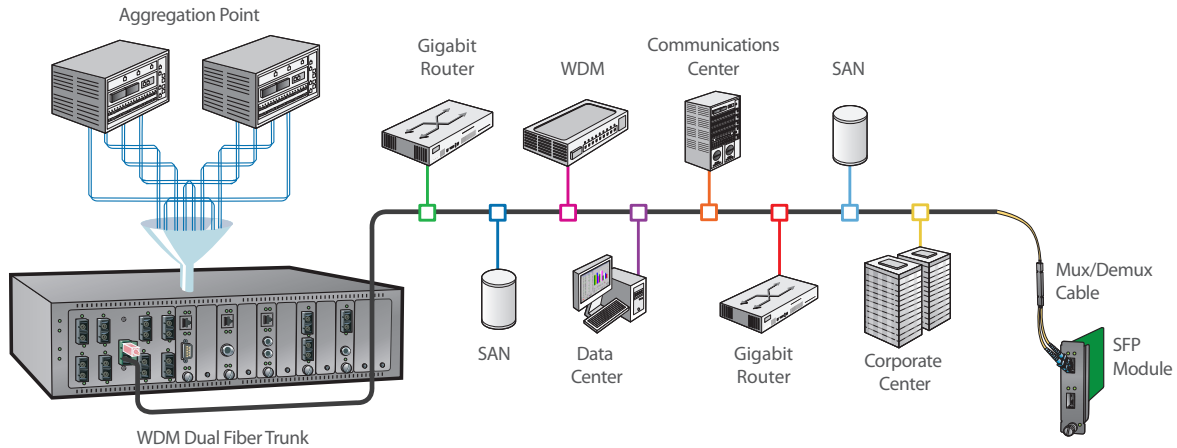
The cable assembly provides two data paths. Each path supports data flow in either direction between the single connector end and one of the double-end connectors. Data can flow in only one direction through each path at any moment.

MUX/DeMUX cables are fully passive, and they operate at specific wavelengths. They are transparent to networks and protocols. A pair of cables, as in the following example, attenuates an optical signal by no more than 1.2 dB on either single-mode or multi-mode fiber.

For additional information including availability and configuration options, contact your MRV Communication sales representative.

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Linear Single Fiber Point-to-Multipoint



Physical Specifications

Model	PADWLCSC/xyyy or PADWSC/xyyy	PAWLCSC/xyyy or PAWSC/xyyy	PADMSYY/xx	PASCSC/3155	PALCSC/3155
Operating Wavelength, nm	xx/yy*	xx/yy*	1310 - 1610	1310/1550	1310/1550
Wavelength Tolerance, nm	± 0.1	± 6.5	± 6.5	± 40	± 40
Insertion Loss, dB	Typical	0.5	0.5	0.5	0.5
	Max	1.2	0.7	0.7	0.7
Passband Ripple, dB	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
Isolation, dB	From (C) to (P2) Channel	≥ 10	≥ 15	≥ 15	≥ 15
	From (C) to (P1) Channel	≥ 20	≥ 40	≥ 40	≥ 40
Optical Return Loss, dB	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
Directivity, dB	≥ 40	≥ 50	≥ 50	≥ 50	≥ 50
Thermal Stability, dB/°C	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005	≤ 0.005
Polarization Dependent Loss, dB	≤ 0.1	≤ 0.1	≤ 0.05	≤ 0.05	≤ 0.05
Polarization Mode Dispersion (PMD), ps	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
Optical Power, mW	≤ 300	≤ 300	≤ 300	≤ 300	≤ 300
Tensile Load, N	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Operating/Storage Temperature, °C	-40 to 85	-40 to 85	-40 to 85	-40 to 85	-40 to 85
Cable Length, m	1	1	0.5	0.5	0.5
Package Size, mm	Ø 5.5 x 34	Ø 5.5 x 34	Ø 5.5 x 34	Ø 5.5 x 34	Ø 5.5 x 34

* yy - All other wavelengths

PASSIVE DWDM CABLES

Ordering Information

Model	Description	Connectors Port/Link	Wavelength* (nm)	Insertion Loss (dB)
PADWSC/xyyy	Passive 2 Wavelength DWDM Cable, Single Fiber SM	SC (x2) / SC	xx/yy ±0.1	1.2
PADWLCSC/xyyy	Passive 2 Wavelength DWDM Cable, Single Fiber SM	LC (x2) / SC	xx/yy ±0.1	1.2

* See DWDM Wavelength Chart below



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DWDM Wavelengths

ITU Channel (xx or yy)	Wavelength (nm)	ITU Channel (xx or yy)	Wavelength (nm)	ITU Channel (xx or yy)	Wavelength (nm)	ITU Channel (xx or yy)	Wavelength (nm)
21	1560.61	31	1552.52	41	1544.53	51	1536.61
22	1559.79	32	1551.72	42	1543.73	52	1535.82
23	1558.98	33	1550.92	43	1542.94	53	1535.04
24	1558.17	34	1550.12	44	1542.14	54	1534.25
25	1557.36	35	1549.32	45	1541.35	55	1533.47
26	1556.56	36	1548.52	46	1540.56	56	1532.68
27	1555.75	37	1547.72	47	1539.77	57	1531.90
28	1554.94	38	1546.92	48	1538.98	58	1531.12
29	1554.13	39	1546.12	49	1538.19	59	1530.33
30	1553.33	40	1545.32	50	1537.40	60	1529.55

PASSIVE CWDM CABLES

Ordering Information

Model	Description	Connectors Port/Link	Wavelength* (nm)	Insertion Loss (dB)
PAWSC/xxyy	Passive 2 Wavelength (xx\yy) Cable, Single Fiber SM	SC (x2) / SC	xx/yy ±6.5	0.7
PAWLSC/xxyy	Passive 2 Wavelength (xx\yy) Cable, Single Fiber SM	LC (x2) / SC	xx/yy ±6.5	0.7
PADMSYY/xx	Cable, Protocol Independent Single Fiber YY Add/Drop	Defined by YY (MU, LC or SC)	xx ±6.5	0.7
PASCSC/3155	Cable, Protocol Independent Single Fiber SC Add/Drop	SC (x2) / SC	1310/1550 ± 40	0.7
PALCSC/3155	Cable, Protocol Independent Single Fiber LC Add/Drop	LC (x2) / SC	1310/1550 ± 40	0.7

* See the CWDM table below for wavelengths

CWDM Wavelengths

xx or yy	Wavelength	xx or yy	Wavelength	xx or yy	Wavelength	xx or yy	Wavelength
31	1310 nm	39	1390 nm	47	1470 nm	55	1550 nm
33	1330 nm	41	1410 nm	49	1490 nm	57	1570 nm
35	1350 nm	43	1430 nm	51	1510 nm	59	1590 nm
37	1370 nm	45	1450 nm	53	1530 nm	61	1610 nm

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