

PM Dense Wavelength Division Multiplexer (DWDM) 1x2



DATASHEET

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The 100/200GHz PM Dense Wavelength Division Multiplexer (DWDM) utilizes thin film coating technology and proprietary design of non-flux metal bonding micro-optics packaging to achieve optical add and drop at the ITU wavelength. It provides ITU channel center wavelength, low insertion loss, high channel isolation, high extinction ratio, wide pass band, low temperature sensitivity and epoxy free optical path. It can be used for wavelength add/drop in telecommunication network system.

Features

- 100/200GHz ITU Channel Spacing
- Low Insertion Loss
- Wide Pass Band
- High Channel Isolation
- High Extinction Ratio
- High Stability and Reliability
- Epoxy Free Optical Path

Applications

- Channel Add / Drop
- DWDM Network
- Wavelength Routing
- Fiber Optical Amplifier
- CATV Fiberoptic System

Specifications

| Parameter | Specifications (Mux/Demux) | | Unit |
|--|--|--|-------|
| Operating Wavelength | 1530.33 - 1560.61 (21~ 59 ITU grid) | | nm |
| Minimum Channel Spacing | 100 | 200 | GHz |
| Center Wavelength Accuracy | ± 0.05 | ± 0.1 | nm |
| Channel Passband (@-0.5dB bandwidth) | ≥ 0.22 | ≥ 0.5 | nm |
| Insertion Loss (Add / Drop Ch.) | ≤ 1.0 | ≤ 0.9 | dB |
| Insertion Loss (Express Ch.) | ≤ 0.60 | ≤ 0.50 | dB |
| Channel Isolation (Demux only) | ≥ 25 (Adjacent) ≥ 35 (Non-adjacent) | ≥ 30 (Adjacent) ≥ 40 (Non-adjacent) | dB |
| Express Channel Isolation | ≥ 12 | ≥ 12 | dB |
| Add / Drop Channel Ripple | ≤ 0.3 | | dB |
| Insertion Loss Temperature Sensitivity | ≤ 0.003 | | dB/°C |
| Wavelength Temperature Shifting | ≤ 0.002 | | nm/°C |
| Polarization Extinction Ratio | ≥ 18 | | dB |
| Fiber Type | Corning PM1550 | | |
| Polarization Mode Dispersion | ≤ 0.1 | | ps |
| Directivity | ≥ 50 | | dB |
| Return Loss | ≥ 45 | | dB |
| Optical Power | ≤ 300 | | mW |
| Operating Temperature | 0 to +70 (Extended temperatures upon request) | | °C |
| Storage Temperature | - 40 to +85 | | °C |
| Package Dimension | A= Standard, Ø5.5xL34 (250um bare fiber) Ø5.5xL38 (900um jacket fiber) M=Compact, Ø4.8xL30 (250um bare fiber) N=Mini, Ø4.2xL28 (250um bare fiber) C=98x14x8.5 (2&3 mm fiber jacket) S=89x51x8.0 (2&3 mm fiber jacket) | | mm |

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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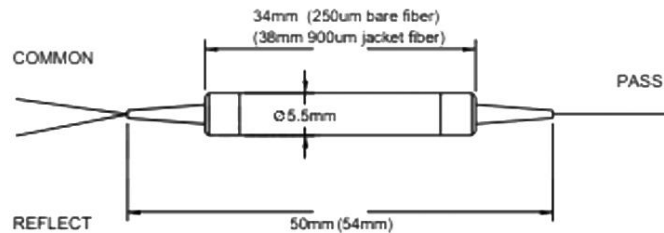
PM Dense Wavelength Division Multiplexer (DWDM) 1x2



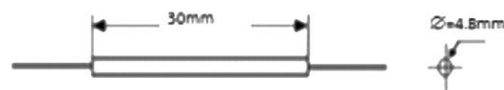
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Mechanical Dimensions (mm)

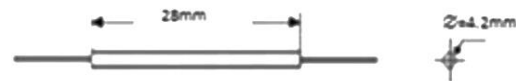
A package:



M package:



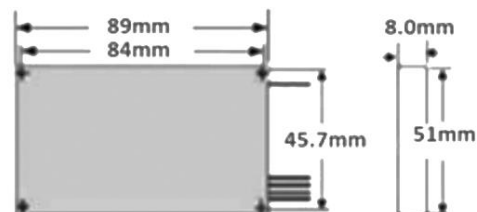
N package:



C package:



S package:



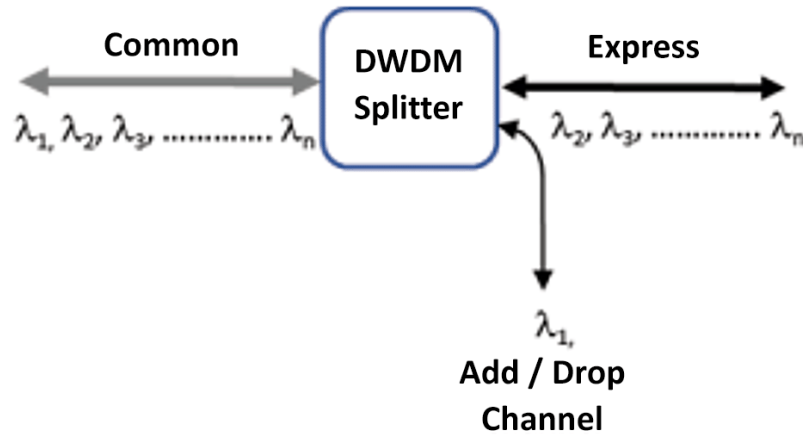
*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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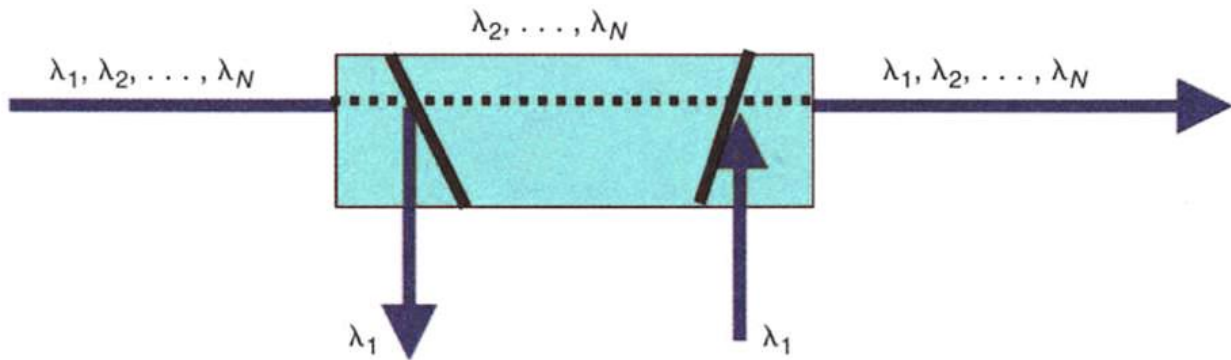
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Channel Configurations



Optical Function Path Illustration

Wavelength multiplexing and Demultiplexing can be illustrated below in a single-channel optical add-drop case.



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Ordering Information

| Prefix | Channel Spacing | ITU Channel [1] | Configuration | Package | Fiber Type | Fiber Cover | Fiber Length | In Connector | Out Connector | Working Axis |
|--------|----------------------|--|---------------|---|------------|---|--------------------|--|--|---|
| DWDM- | 100GHz=1 200GHz=2 | 1560.61nm=C21 1559.79nm=C22 ... 1530.33nm=C59 | 1x2 = 102 | A Package = A M Package = M N Package = N C Package = C S Package = S | PM1550 = N | Bare fiber=1 900 μm tube=2 3mm jacket=3 2mm jacket=4 1.6mm jacket=5 | 0.7m=07 1.0m=10 | None=0 FC/APC=1 FC/PC=2 SC/APC=3 SC/PC=4 ST=5 LC/UPC=6 LC/APC=7 | None=0 FC/APC=1 FC/PC=2 SC/APC=3 SC/PC=4 ST=5 LC/UPC=6 LC/APC=7 | Slow axis working = S Flat axis working = F Both axis working = B |

[1] O and L band wavelengths are also available upon request.

ITU Table

| Channel | f (GHz) | λ (nm) | Channel | f (GHz) | λ (nm) | Channel | f (GHz) | λ (nm) | Channel | f (GHz) | λ (nm) |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| L48 | 184800 | 1622.25 | Q76 | 187650 | 1597.62 | C05 | 190500 | 1573.71 | H33 | 193350 | 1550.52 |
| Q48 | 184850 | 1621.81 | L77 | 187700 | 1597.19 | H05 | 190550 | 1573.30 | C34 | 193400 | 1550.12 |
| L49 | 184900 | 1621.38 | Q77 | 187750 | 1596.76 | C06 | 190600 | 1572.89 | H34 | 193450 | 1549.72 |
| Q49 | 184950 | 1620.94 | L78 | 187800 | 1596.34 | H06 | 190650 | 1572.48 | C35 | 193500 | 1549.32 |
| L50 | 185000 | 1620.50 | Q78 | 187850 | 1595.91 | C07 | 190700 | 1572.06 | H35 | 193550 | 1548.91 |
| Q50 | 185050 | 1620.06 | L79 | 187900 | 1595.49 | H07 | 190750 | 1571.65 | C36 | 193600 | 1548.51 |
| L51 | 185100 | 1619.62 | Q79 | 187950 | 1595.06 | C08 | 190800 | 1571.24 | H36 | 193650 | 1548.11 |
| Q51 | 185150 | 1619.19 | L80 | 188000 | 1594.64 | H08 | 190850 | 1570.83 | C37 | 193700 | 1547.72 |
| L52 | 185200 | 1618.75 | Q80 | 188050 | 1594.22 | C09 | 190900 | 1570.42 | H37 | 193750 | 1547.32 |
| Q52 | 185250 | 1618.31 | L81 | 188100 | 1593.79 | H09 | 190950 | 1570.01 | C38 | 193800 | 1546.92 |
| L53 | 185300 | 1617.88 | Q81 | 188150 | 1593.37 | C10 | 191000 | 1569.59 | H38 | 193850 | 1546.52 |
| Q53 | 185350 | 1617.44 | L82 | 188200 | 1592.95 | H10 | 191050 | 1569.18 | C39 | 193900 | 1546.12 |
| L54 | 185400 | 1617.00 | Q82 | 188250 | 1592.52 | C11 | 191100 | 1568.77 | H39 | 193950 | 1545.72 |
| Q54 | 185450 | 1616.57 | L83 | 188300 | 1592.10 | H11 | 191150 | 1568.36 | C40 | 194000 | 1545.32 |
| L55 | 185500 | 1616.13 | Q83 | 188350 | 1591.68 | C12 | 191200 | 1567.95 | H40 | 194050 | 1544.92 |
| Q55 | 185550 | 1615.70 | L84 | 188400 | 1591.26 | H12 | 191250 | 1567.54 | C41 | 194100 | 1544.53 |
| L56 | 185600 | 1615.26 | Q84 | 188450 | 1590.83 | C13 | 191300 | 1567.13 | H41 | 194150 | 1544.13 |
| Q56 | 185650 | 1614.83 | L85 | 188500 | 1590.41 | H13 | 191350 | 1566.72 | C42 | 194200 | 1543.73 |
| L57 | 185700 | 1614.39 | Q85 | 188550 | 1589.99 | C14 | 191400 | 1566.31 | H42 | 194250 | 1543.33 |
| Q57 | 185750 | 1613.96 | L86 | 188600 | 1589.57 | H14 | 191450 | 1565.90 | C43 | 194300 | 1542.94 |
| L58 | 185800 | 1613.52 | Q86 | 188650 | 1589.15 | C15 | 191500 | 1565.49 | H43 | 194350 | 1542.54 |
| Q58 | 185850 | 1613.09 | L87 | 188700 | 1588.73 | H15 | 191550 | 1565.09 | C44 | 194400 | 1542.14 |
| L59 | 185900 | 1612.65 | Q87 | 188750 | 1588.30 | C16 | 191600 | 1564.68 | H44 | 194450 | 1541.75 |
| Q59 | 185950 | 1612.22 | L88 | 188800 | 1587.88 | H16 | 191650 | 1564.27 | C45 | 194500 | 1541.35 |
| L60 | 186000 | 1611.79 | Q88 | 188850 | 1587.46 | C17 | 191700 | 1563.86 | H45 | 194550 | 1540.95 |
| Q60 | 186050 | 1611.35 | L89 | 188900 | 1587.04 | H17 | 191750 | 1563.45 | C46 | 194600 | 1540.56 |
| L61 | 186100 | 1610.92 | Q89 | 188950 | 1586.62 | C18 | 191800 | 1563.05 | H46 | 194650 | 1540.16 |
| Q61 | 186150 | 1610.49 | L90 | 189000 | 1586.20 | H18 | 191850 | 1562.64 | C47 | 194700 | 1539.77 |
| L62 | 186200 | 1610.06 | Q90 | 189050 | 1585.78 | C19 | 191900 | 1562.23 | H47 | 194750 | 1539.37 |
| Q62 | 186250 | 1609.62 | L91 | 189100 | 1585.36 | H19 | 191950 | 1561.83 | C48 | 194800 | 1538.98 |
| L63 | 186300 | 1609.19 | Q91 | 189150 | 1584.95 | C20 | 192000 | 1561.42 | H48 | 194850 | 1538.58 |
| Q63 | 186350 | 1608.76 | L92 | 189200 | 1584.53 | H20 | 192050 | 1561.01 | C49 | 194900 | 1538.19 |
| L64 | 186400 | 1608.33 | Q92 | 189250 | 1584.11 | C21 | 192100 | 1560.61 | H49 | 194950 | 1537.79 |
| Q64 | 186450 | 1607.90 | L93 | 189300 | 1583.69 | H21 | 192150 | 1560.20 | C50 | 195000 | 1537.40 |
| L65 | 186500 | 1607.47 | Q93 | 189350 | 1583.27 | C22 | 192200 | 1559.79 | H50 | 195050 | 1537.00 |
| Q65 | 186550 | 1607.04 | L94 | 189400 | 1582.85 | H22 | 192250 | 1559.39 | C51 | 195100 | 1536.61 |
| L66 | 186600 | 1606.60 | Q94 | 189450 | 1582.44 | C23 | 192300 | 1558.98 | H51 | 195150 | 1536.22 |
| Q66 | 186650 | 1606.17 | L95 | 189500 | 1582.02 | H23 | 192350 | 1558.58 | C52 | 195200 | 1535.82 |
| L67 | 186700 | 1605.74 | Q95 | 189550 | 1581.60 | C24 | 192400 | 1558.17 | H52 | 195250 | 1535.43 |
| Q67 | 186750 | 1605.31 | L96 | 189600 | 1581.18 | H24 | 192450 | 1557.77 | C53 | 195300 | 1535.04 |
| L68 | 186800 | 1604.88 | Q96 | 189650 | 1580.77 | C25 | 192500 | 1557.36 | H53 | 195350 | 1534.64 |
| Q68 | 186850 | 1604.46 | L97 | 189700 | 1580.35 | H25 | 192550 | 1556.96 | C54 | 195400 | 1534.25 |
| L69 | 186900 | 1604.03 | Q97 | 189750 | 1579.93 | C26 | 192600 | 1556.55 | H54 | 195450 | 1533.86 |
| Q69 | 186950 | 1603.60 | L98 | 189800 | 1579.52 | H26 | 192650 | 1556.15 | C55 | 195500 | 1533.47 |
| L70 | 187000 | 1603.17 | Q98 | 189850 | 1579.10 | C27 | 192700 | 1555.75 | H55 | 195550 | 1533.07 |
| Q70 | 187050 | 1602.74 | L99 | 189900 | 1578.69 | H27 | 192750 | 1555.34 | C56 | 195600 | 1532.68 |
| L71 | 187100 | 1602.31 | Q99 | 189950 | 1578.27 | C28 | 192800 | 1554.94 | H56 | 195650 | 1532.29 |
| Q71 | 187150 | 1601.88 | L00 | 190000 | 1577.86 | H28 | 192850 | 1554.54 | C57 | 195700 | 1531.90 |
| L72 | 187200 | 1601.46 | Q00 | 190050 | 1577.44 | C29 | 192900 | 1554.13 | H57 | 195750 | 1531.51 |
| Q72 | 187250 | 1601.03 | C01 | 190100 | 1577.03 | H29 | 192950 | 1553.73 | C58 | 195800 | 1531.12 |
| L73 | 187300 | 1600.60 | H01 | 190150 | 1576.61 | C30 | 193000 | 1553.33 | H58 | 195850 | 1530.72 |
| Q73 | 187350 | 1600.17 | C02 | 190200 | 1576.20 | H30 | 193050 | 1552.93 | C59 | 195900 | 1530.33 |
| L74 | 187400 | 1599.75 | H02 | 190250 | 1575.78 | C31 | 193100 | 1552.52 | H59 | 195950 | 1529.94 |
| Q74 | 187450 | 1599.32 | C03 | 190300 | 1575.37 | H31 | 193150 | 1552.12 | C60 | 196000 | 1529.55 |
| L75 | 187500 | 1598.90 | H03 | 190350 | 1574.95 | C32 | 193200 | 1551.72 | H60 | 196050 | 1529.16 |
| Q75 | 187550 | 1598.47 | C04 | 190400 | 1574.54 | H32 | 193250 | 1551.32 | C61 | 196100 | 1528.77 |
| L76 | 187600 | 1598.04 | H04 | 190450 | 1574.13 | C33 | 193300 | 1550.92 | H61 | 196150 | 1528.38 |