

CWDM Mux/Demux Modules



Overview

Sourcelight CWDM technology provides the flexibility to increase capacity of existing fiber infrastructure by enabling multiple channels/wavelengths over the same fiber cabling.

Each channel carries data independently from each other, allowing network designers to transport different data rates.

It's protocol and rate transparent supporting such applications as 1G/10G Ethernet, SDH/SONET and 8/4/2/1G Fiber Channel across the same fiber link.

Features

- ◆ Low Insertion Loss
- ◆ High Isolation
- ◆ Low PDL
- ◆ Compact Design
- ◆ Good channel-to-channel uniformity
- ◆ Wide Operating Wavelength: From 1260nm to 1620nm
- ◆ Wide Operating Temperature: From -40°C to 85°C
- ◆ High Reliability and Stability
- ◆ Telcordia GR-1209-CORE-2001
- ◆ Telcordia GR-1221-CORE-1999
- ◆ RoHS

Applications

- ◆ For installation in horizontal patch extension
- ◆ High Density Fiber Management
- ◆ Telecommunications networks and Broadband
- ◆ CWDM System
- ◆ PON Networks
- ◆ CATV Links

Technical Specification


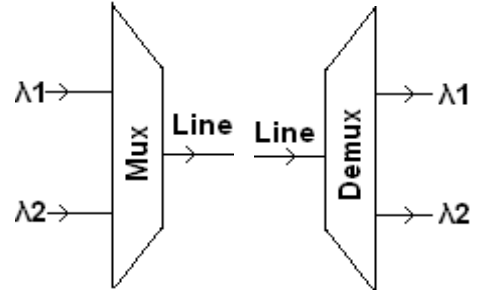
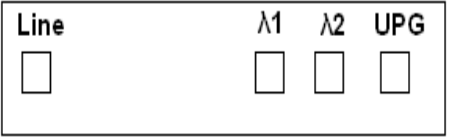
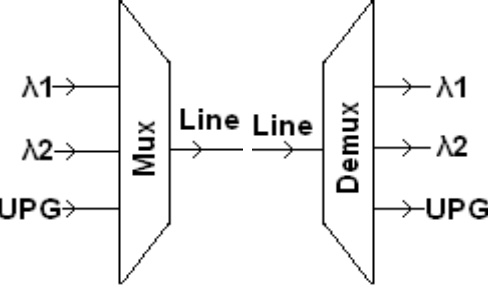
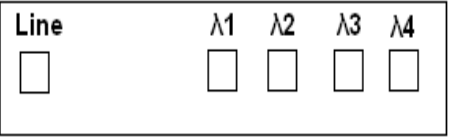
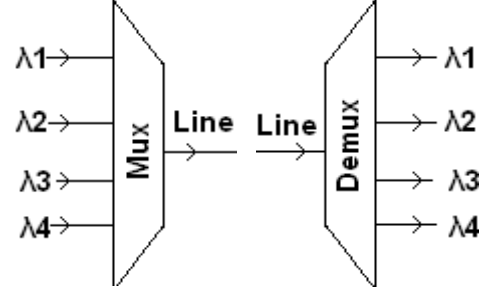
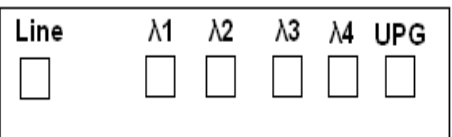
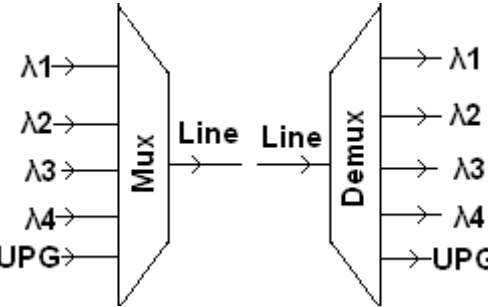
1×N CWDM Mux/Demux Module

Parameters		1x2	1x4	1x8	1x16
Center Wavelength (nm)		ITU, ITU+1			
Passband (nm)		ITU±6.5			
Operating Wavelength (nm)		1460~1620 or 1260~1620			
Channel Space (nm)		20			
Fiber Type		SMF-28e or customer specified			
IL (dB) (P/A Grade)		0.7/1.0	1.4/1.7	2.0/2.5	3.5/4.0
Isolation (dB)	Adjacent Channel	30			
	Non-Adjacent Channel	50			
Ripple (dB)		0.3	0.4	0.5	0.5
PDL (dB)		0.2			
PMD (ps)		0.1			
RL (dB)		45			
Directivity (dB)		50			
Maximum Optical Power (mw)		500			
Operating Temperature (°C)		-40~85			
Storage Temperature (°C)		-40~85			
BOX Package (mm)		100*80*10			140*115*18
LGX Package		1U, 2U			
19" Rack mount Package		1U			

Notes:

1. Specified without connectors.
2. Add an additional 0.2dB loss per connector.

CWDM Mux/Demux Modules

<p>2CH CWDM Mux/Demux</p> 		<p>λ1, λ2 IL Link(dB): ≤1.2 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620 or 1460~1620</p>
<p>2CH+Upgrade CWDM Mux/Demux</p> 		<p>λ1, λ2, Upgrade IL Link(dB): ≤1.5 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Upgrade Channel: ≥12 Return Loss (dB): ≥45 Operating Wavelength(nm): 1460~1620 or 1260~1620</p>
<p>4CH CWDM Mux/Demux</p> 		<p>λ1, λ2, λ3, λ4 IL Link(dB): ≤1.9 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1460~1620 or 1260~1620</p>
<p>4CH+Upgrade CWDM Mux/Demux</p> 		<p>λ1, λ2, λ3, λ4, Upgrade IL Link(dB): ≤2.0 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Upgrade Channel: ≥12 Return Loss (dB): ≥45 Operating Wavelength(nm): 1460~1620 or 1260~1620</p>

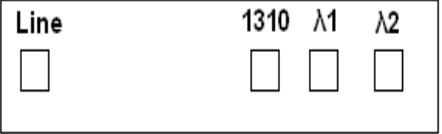
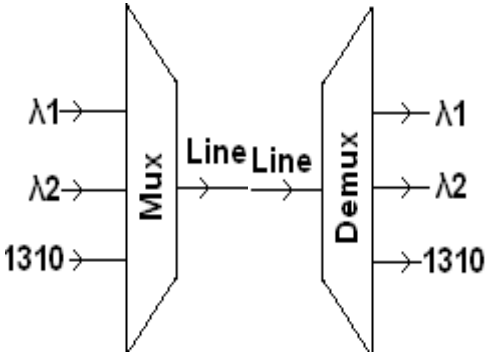
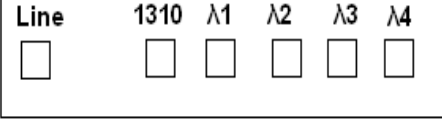
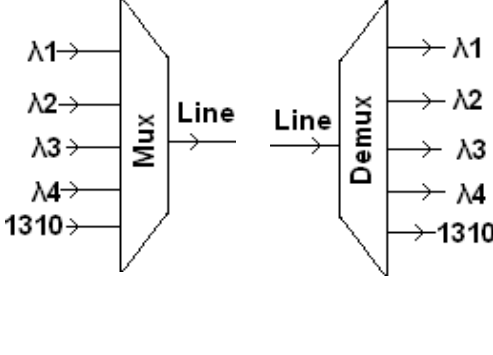
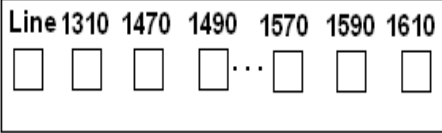
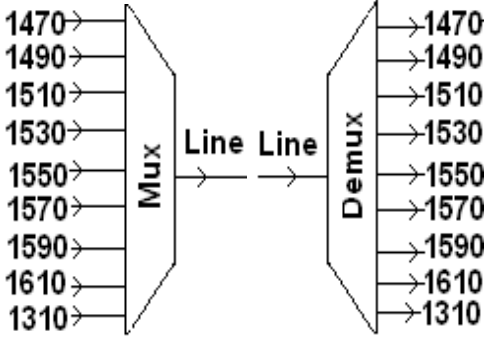
Datasheet

<p>8CH CWDM Mux/Demux</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Line $\lambda 1$ $\lambda 2$ $\lambda 3$ $\lambda 4$ $\lambda 5$ $\lambda 6$ $\lambda 7$ $\lambda 8$</p> <p>□ □ □ □ □ □ □ □</p> </div>		<p>$\lambda 1, \lambda 2, \lambda 3, \lambda 4, \lambda 5, \lambda 6, \lambda 7, \lambda 8$ IL Link(dB): ≤ 2.7 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1460~1620 or 1260~1620</p>
<p>8CH+Upgrade CWDM Mux/Demux</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Line $\lambda 1$ $\lambda 2$ $\lambda 3$ $\lambda 4$ $\lambda 5$ $\lambda 6$ $\lambda 7$ $\lambda 8$ UPG</p> <p>□ □ □ □ □ □ □ □ □</p> </div>		<p>$\lambda 1, \lambda 2, \lambda 3, \lambda 4, \lambda 5, \lambda 6, \lambda 7, \lambda 8,$ Upgrade IL Link(dB): ≤ 3.0 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Upgrade Channel: ≥ 12 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620</p>
<p>16CH CWDM Mux/Demux</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Line $\lambda 1$ $\lambda 2$ $\lambda 3$. . . $\lambda 14$ $\lambda 15$ $\lambda 16$</p> <p>□ □ □ □ . . . □ □ □</p> </div>		<p>$\lambda 1, \lambda 2, \lambda 3, \lambda 4, \lambda 5, \lambda 6, \lambda 7, \lambda 8,$ $\lambda 9, \lambda 10, \lambda 11, \lambda 12, \lambda 13, \lambda 14,$ $\lambda 15, \lambda 16$ IL Link(dB): ≤ 4.2 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620</p>
<p>18 Channel CWDM Mux/Demux</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Line 1270 1290 1310 1570 1590 1610</p> <p>□ □ □ □ . . . □ □ □</p> </div>		<p>1270nm, 1290nm~ 1590nm, 1610nm IL Link(dB): ≤ 4.2 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620</p>

Notes:

1. $\lambda = \text{ITU, ITU+1}$
2. $\lambda = 1270\text{nm}, 1290\text{nm}, 1310\text{nm}, 1330\text{nm}, 1350\text{nm}, 1370\text{nm}, 1390\text{nm}, 1410\text{nm}, 1430\text{nm}, 1450\text{nm}, 1470\text{nm}, 1490\text{nm},$
3. $1510\text{nm}, 1530\text{nm}, 1550\text{nm}, 1570\text{nm}, 1590\text{nm}, 1610\text{nm}$
4. Specified with connectors.
5. Available modules or LGX or 19 "case packaging.
6. Operating Temperature (°C): -5~75.
7. Storage Temperature (°C): -40~85.

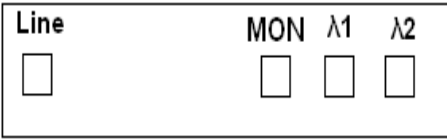
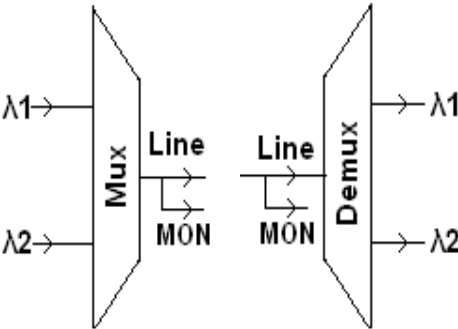
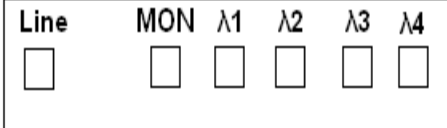
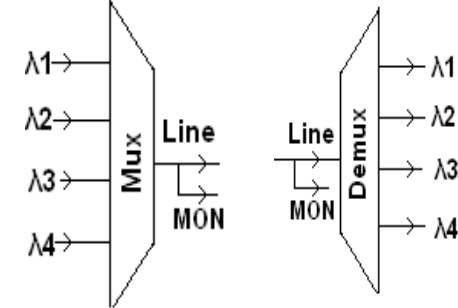
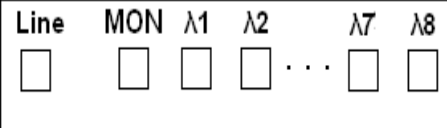
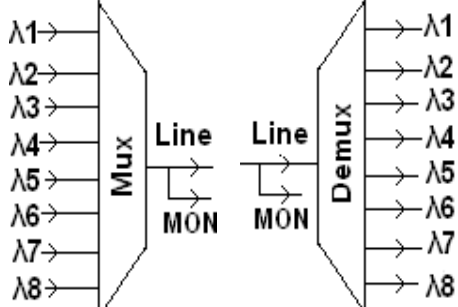
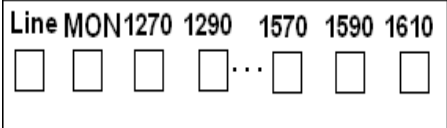
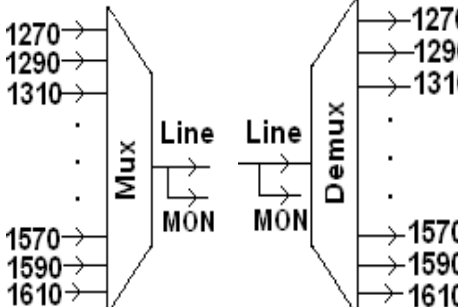
CWDM Mux/Demux Module with 1310nm Expansion Port

<p>2CH+1310nm CWDM Mux/Demux</p> 		<p>1310±40nm, λ1, λ2, IL Link(dB): ≤1.3 IL Link@1310nm(dB): ≤1.0 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 1310nm Channel: ≥30 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620</p>
<p>8CH+1310nm CWDM Mux/Demux</p> 		<p>1310±40nm, λ1, λ2, λ3, λ4 IL Link(dB): ≤2.0 IL Link@1310nm(dB): ≤1.0 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 1310nm Channel: ≥30 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620</p>
<p>8CH+1310nm CWDM Mux/Demux</p> 		<p>1310±40nm, 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm IL Link(dB): ≤2.8 IL Link@1310nm(dB): ≤1.0 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 1310nm Channel: ≥30 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620</p>

Notes:

8. λ=ITU, ITU+1
9. λ=1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm
10. Specified with connectors.
11. Available modules or LGX or 19 "case packaging.
12. Operating Temperature (°C): -5~75.
13. Storage Temperature (°C): -40~85.

CWDM Mux/Demux Module with Monitoring Port

<p>2CH+MON CWDM Mux/Demux</p> 		<p>λ1, λ2 IL Link(dB): ≤1.7 IL MON(dB): 5%TAP: ≤16.0 2%TAP: ≤20.6 1%TAP: ≤23.9 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620 or 1460~1620</p>
<p>4CH+MON CWDM Mux/Demux</p> 		<p>λ1, λ2, λ3, λ4 IL Link(dB): ≤2.3 IL MON(dB): 5%TAP: ≤16.7 2%TAP: ≤21.3 1%TAP: ≤24.1 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620 or 1460~1620</p>
<p>8CH+MON CWDM Mux/Demux</p> 		<p>λ1, λ2, λ3, λ4, λ5, λ6, λ7, λ8 IL Link(dB): ≤3.2 IL MON(dB): 5%TAP: ≤17.5 2%TAP: ≤22.1 1%TAP: ≤25.4 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620 or 1460~1620</p>
<p>18CH+MON CWDM Mux/Demux</p> 		<p>1270nm, 1290nm~ 1590nm, 1610nm IL Link(dB): ≤4.7 IL MON(dB): 5%TAP: ≤19.0 2%TAP: ≤23.6 1%TAP: ≤26.9 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620</p>

Datasheet

<p>8CH+1310nm+MON CWDM</p> <p>Mux/Demux</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Line MON 1310 1470 1490 1590 1610</p> <p>□ □ □ □ □ ... □ □</p> </div>		<p>1310±40nm, 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm</p> <p>IL Link(dB): ≤4.0</p> <p>IL Link@1310nm(dB): ≤1.5</p> <p>IL MON(dB):</p> <p>5%TAP: ≤17.5</p> <p>2%TAP: ≤22.1</p> <p>1%TAP: ≤24.9</p> <p>Isolation(dB):</p> <p>Adjacent: ≥30</p> <p>Non-Adjacent: ≥45</p> <p>1310nm Channel: ≥30</p> <p>Return Loss (dB): ≥45</p> <p>Operating Wavelength(nm): 1260~1620</p>
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Notes:

- 14. $\lambda=ITU, ITU+1$
- 15. $\lambda=1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm$
- 16. Specified with connectors.
- 17. Available modules or LGX or 19" case packaging.
- 18. Operating Temperature (°C): -5~75.
- 19. Storage Temperature (°C): -40~85.

5. Mechanical Dimensions

CWDM Mux/Demux Module

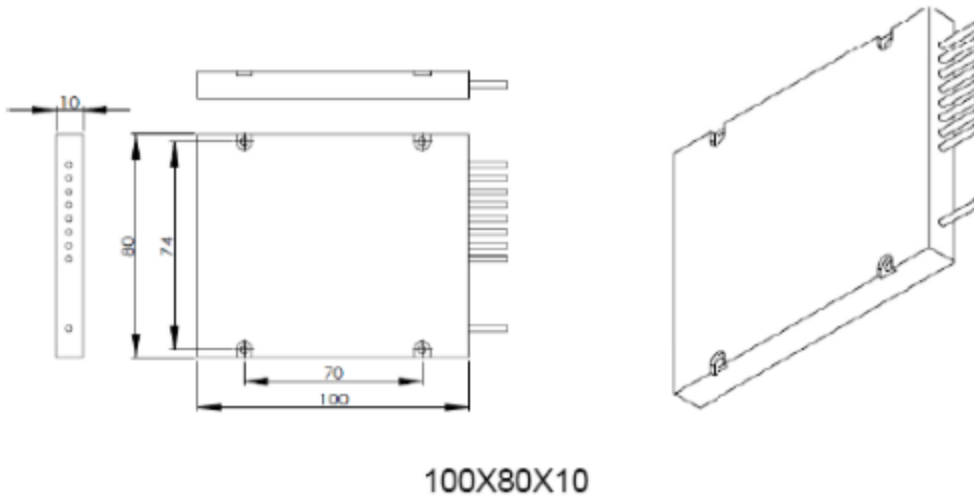


Figure1. Assembly drawing for CWDM Mux/Demux Module

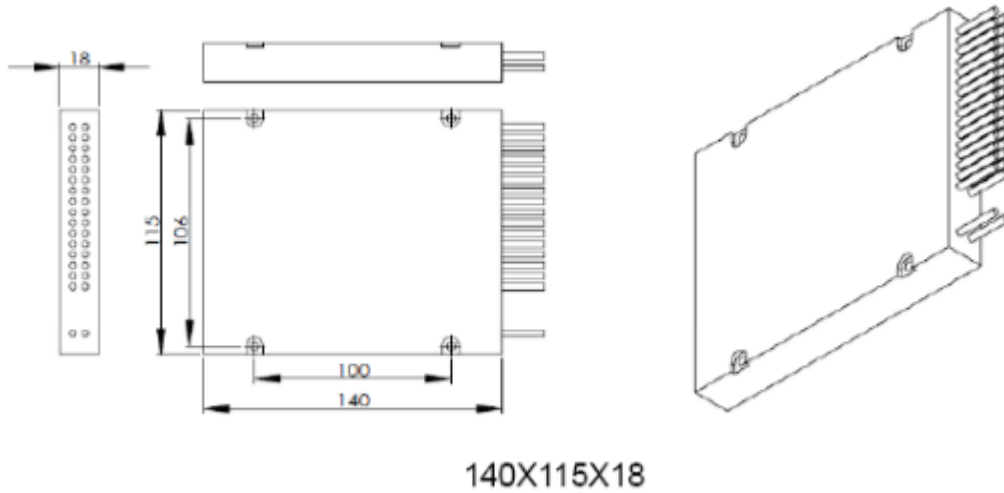
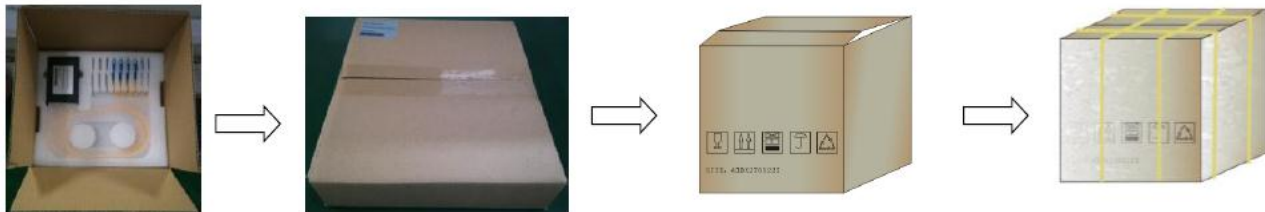


Figure2. Assembly drawing for CWDM Mux/Demux Module

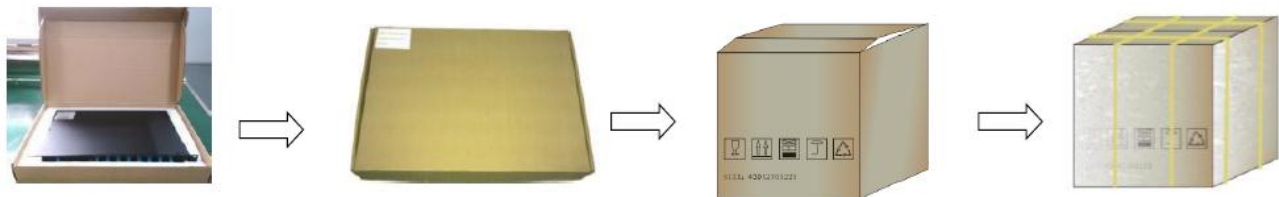
6. Packing
CWDM Module



CWDM LGX



CWDM 19" Rack-Mount



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