

CWDM Module

1. Features

- ◆ Low Insertion Loss
- ◆ High Isolation
- ◆ Low PDL
- ◆ Compact Design
- ◆ Good Channel-to-channel Uniformity
- ◆ Wide Operating Wavelength:
1260nm~1620nm or 1460nm~1620nm
- ◆ Wide Operating Temperature:
-5°C~75°C
- ◆ High Reliability and Stability



2. Applications

- ◆ CWDM System
- ◆ PON Networks
- ◆ CATV Links



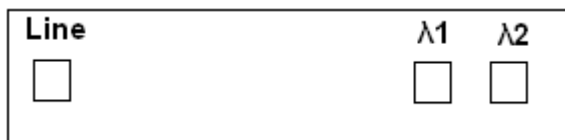
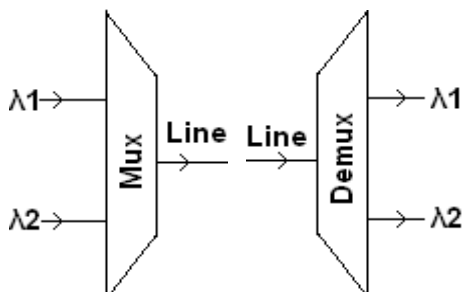
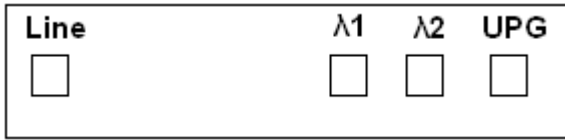
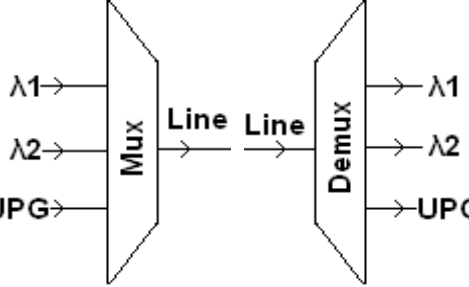
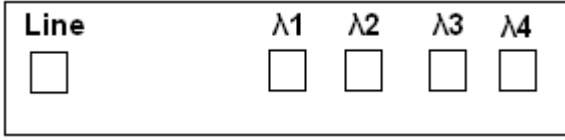
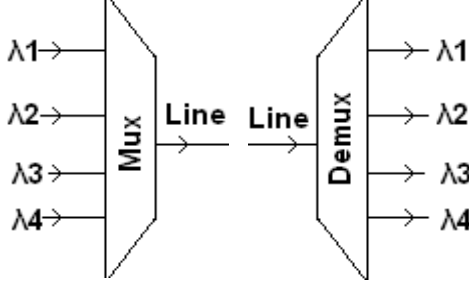
3. Compliance

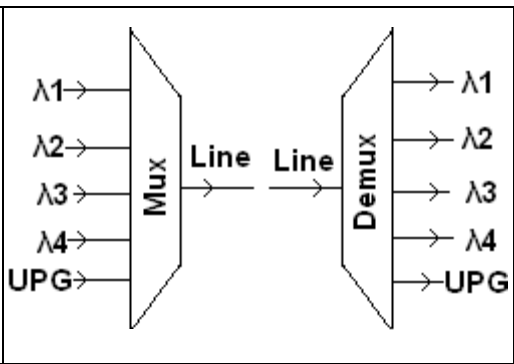
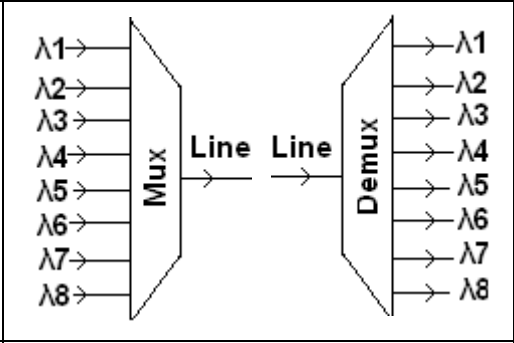
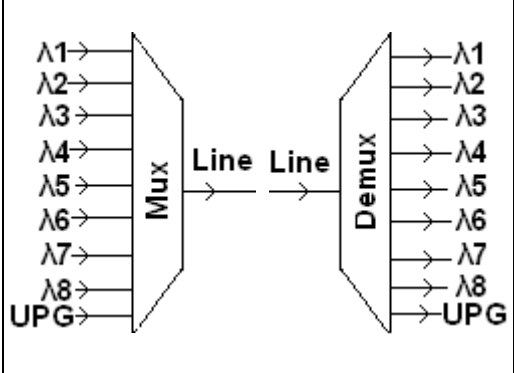
- ◆ Telcordia GR-1209-CORE-2001
- ◆ Telcordia GR-1221-CORE-1999
- ◆ ITU-T G.694.1
- ◆ RoHS

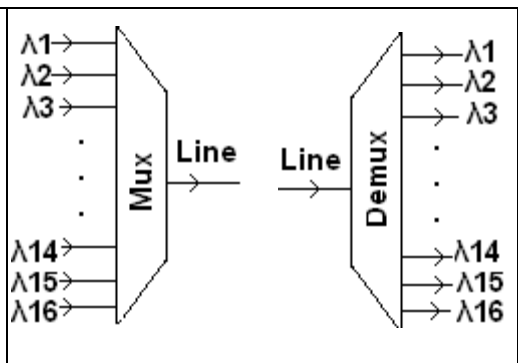
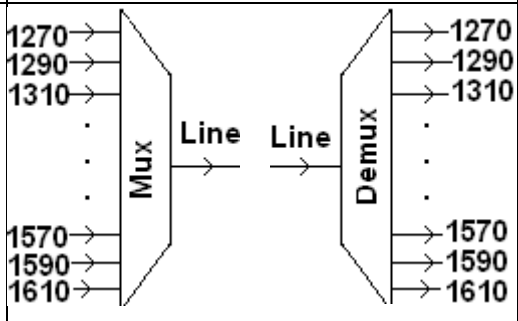


4. Specifications

CWDM Mux/Demux Module

GWM-02QMXX190910-55 		2 Channel CWDM Mux/Demux $\lambda 1, \lambda 2$ IL Link(dB): ≤ 1.2 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620 or 1460~1620
GWM-02Q3XX190910-55 		2CH+Upgrade CWDM Mux/Demux $\lambda 1, \lambda 2, \text{Upgrade}$ 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
GWM-04QMXX190910-55 		4 Channel CWDM Mux/Demux $\lambda 1, \lambda 2, \lambda 3, \lambda 4$ IL Link(dB): ≤ 1.9 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1460~1620 or 1260~1620

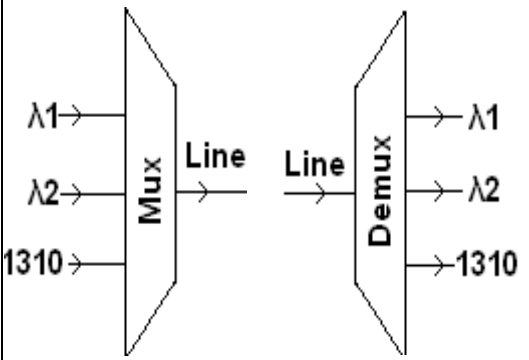
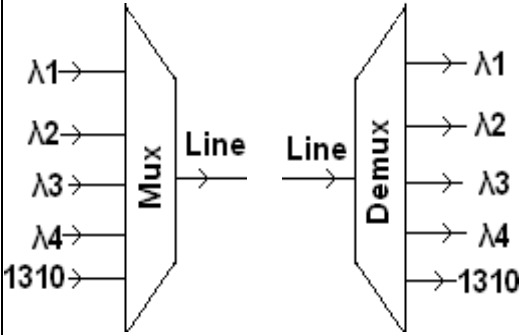
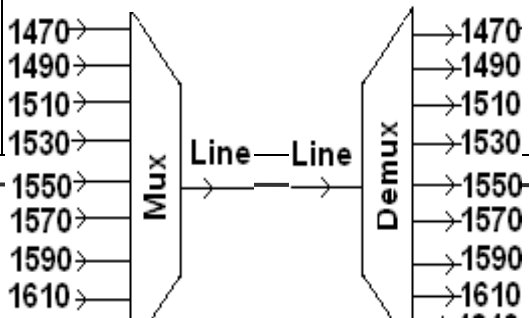
GWM-04Q3XX190910-55 Line λ1 λ2 λ3 λ4 UPG ☐ ☐ ☐ ☐ ☐ ☐		4 CH+Upgrade CWDM Mux/Demux λ1, λ2, λ3, λ4, Upgrade IL Link(dB): ≤2.0 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Upgrade Channel: ≥12 Return Loss (dB): ≥45 Operating Wavelength(nm): 1460~1620 or 1260~1620
GWM-08QMXX190910-55 Line λ1 λ2 λ3 λ4 λ5 λ6 λ7 λ8 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		8 Channel CWDM Mux/Demux λ1, λ2, λ3, λ4, λ5, λ6, λ7, λ8 IL Link(dB): ≤2.7 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1460~1620 or 1260~1620
GWM-08Q3XX190910-55 Line λ1 λ2 λ3 λ4 λ5 λ6 λ7 λ8 UPG ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		8CH+Upgrade CWDM Mux/Demux λ1, λ2, λ3, λ4, λ5, λ6, λ7, λ8, 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

GWM-16QMXX190910-55 Line $\lambda 1$ $\lambda 2$ $\lambda 3$ □ □ □ □ . . . □ □ □ $\lambda 14$ $\lambda 15$ $\lambda 16$		16 Channel CWDM Mux/Demux $\lambda 1, \lambda 2, \lambda 3, \lambda 4, \lambda 5, \lambda 6, \lambda 7, \lambda 8, \lambda 9, \lambda 10, \lambda 11, \lambda 12, \lambda 13, \lambda 14, \lambda 15, \lambda 16$ IL Link(dB): ≤ 4.2 Isolation(dB): Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
GWM-18QM27190910-55 Line 1270 1290 1310 1570 1590 1610 □ □ □ □ . . . □ □ □		18 Channel CWDM Mux/Demux 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

Notes:

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

CWDM Mux/Demux Module with 1310nm Expansion Port

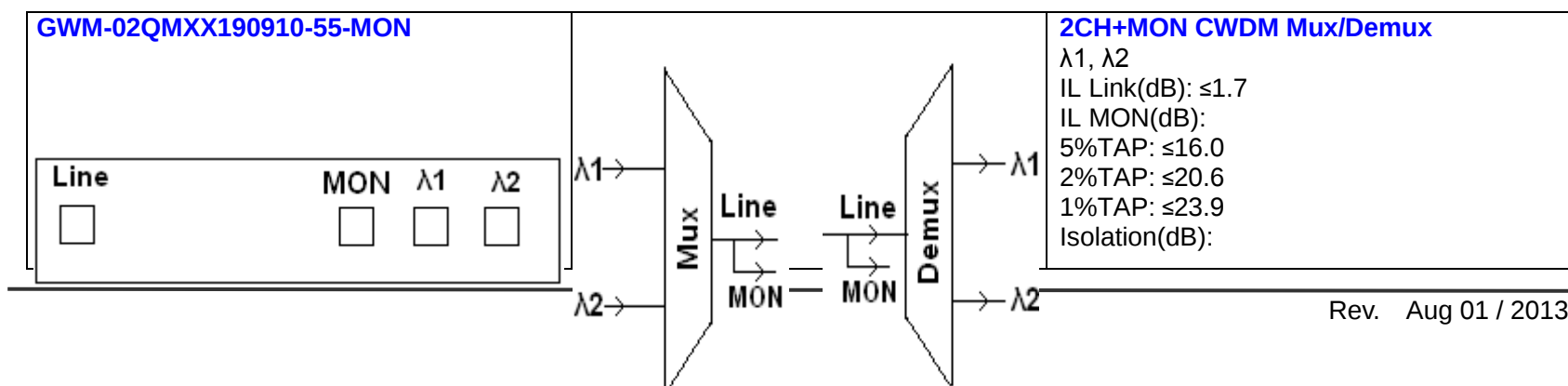
GWM-02Q1XX190910-55 Line 1310 $\lambda 1$ $\lambda 2$ ☐ ☐ ☐ ☐		2CH+1310nm CWDM Mux/Demux 1310±40nm, $\lambda 1$, $\lambda 2$, IL Link(dB): ≤1.3 IL Link@1310nm(dB): ≤1.0 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 1310nm Channel: ≥30 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620
GWM-04Q1XX190910-55 Line 1310 $\lambda 1$ $\lambda 2$ $\lambda 3$ $\lambda 4$ ☐ ☐ ☐ ☐ ☐ ☐		4CH+1310nm CWDM Mux/Demux 1310±40nm, $\lambda 1$, $\lambda 2$, $\lambda 3$, $\lambda 4$ 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
GWM-08Q147190910-55 Line 1310 1470 1490 1570 1590 1610 ☐ ☐ ☐ ☐ ... ☐ ☐ ☐		8CH+1310nm CWDM Mux/Demux 1310±40nm, 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm IL Link(dB): ≤2.8 IL Link@1310nm(dB): ≤1.0 Isolation(dB):

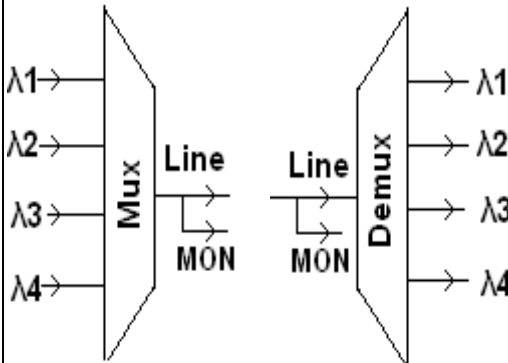
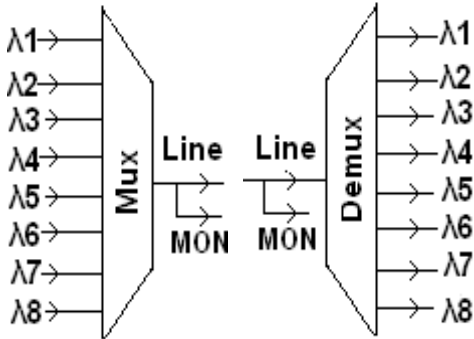
		Adjacent: ≥ 30 Non-Adjacent: ≥ 45 1310nm Channel: ≥ 30 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
--	--	--

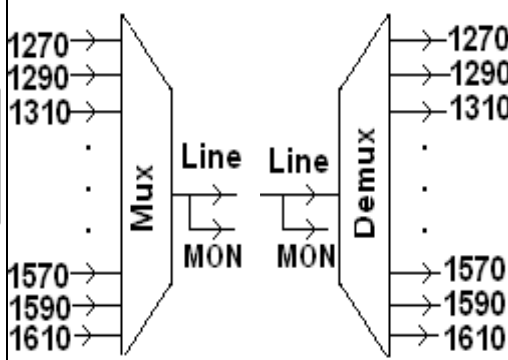
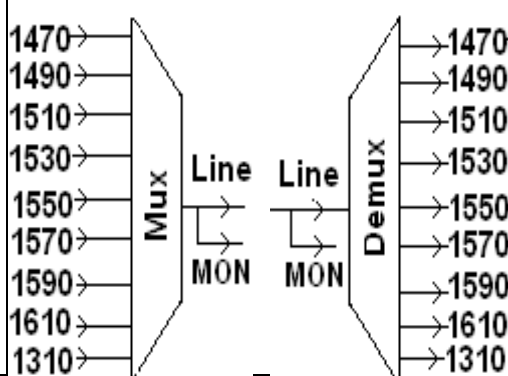
Notes:

1. $\lambda = \text{ITU}, \text{ITU}+1$
2. $\lambda = 1470\text{nm}, 1490\text{nm}, 1510\text{nm}, 1530\text{nm}, 1550\text{nm}, 1570\text{nm}, 1590\text{nm}, 1610\text{nm}$
3. Specified with connectors.
4. Available modules or LGX or 19 "case packaging.
5. Operating Temperature ($^{\circ}\text{C}$): $-5 \sim 75$.
6. Storage Temperature ($^{\circ}\text{C}$): $-40 \sim 85$.

CWDM Mux/Demux Module with Monitoring Port



		Adjacent: ≥ 30 Non-Adjacent: ≥ 45 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620 or 1460~1620
GWM-04QMXX190910-55-MON Line MON $\lambda 1$ $\lambda 2$ $\lambda 3$ $\lambda 4$ ☐ ☐ ☐ ☐ ☐ ☐		4CH+MON CWDM Mux/Demux $\lambda 1, \lambda 2, \lambda 3, \lambda 4$ 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
GWM-08QMXX190910-55-MON Line MON $\lambda 1$ $\lambda 2$... $\lambda 7$ $\lambda 8$ ☐ ☐ ☐ ☐ ☐ ☐ ☐		8CH+MON CWDM Mux/Demux $\lambda 1, \lambda 2, \lambda 3, \lambda 4, \lambda 5, \lambda 6, \lambda 7, \lambda 8$ 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

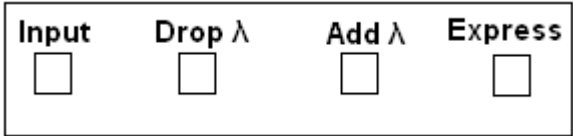
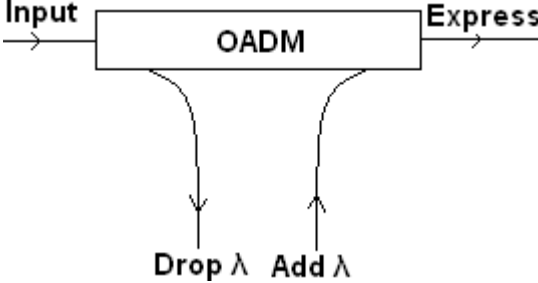
GWM-18QM27190910-55-MON Line MON1270 1290 1570 1590 1610 ...		18CH+MON CWDM Mux/Demux 1270nm,1290nm~1590nm,1610nm IL Link(dB): ≤4.7 IL MON(dB): 5%TAP: ≤19.0 2%TAP: ≤23.6 1%TAP: ≤26.9 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 Return Loss (dB): ≥45 Operating Wavelength(nm): 1260~1620
GWM-08Q7XX190910-55 Line MON1310 1470 1490 1590 1610 ...		8CH+1310nm+MON CWDM Mux/Demux 1310±40nm,1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm IL Link(dB): ≤4.0 IL Link@1310nm(dB): ≤1.5 IL MON(dB): 5%TAP: ≤17.5 2%TAP: ≤22.1 1%TAP: ≤24.9 Isolation(dB): Adjacent: ≥30 Non-Adjacent: ≥45 1310nm Channel: ≥30

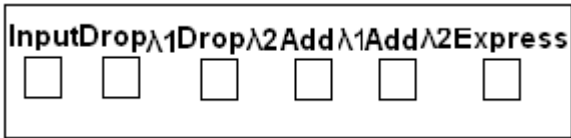
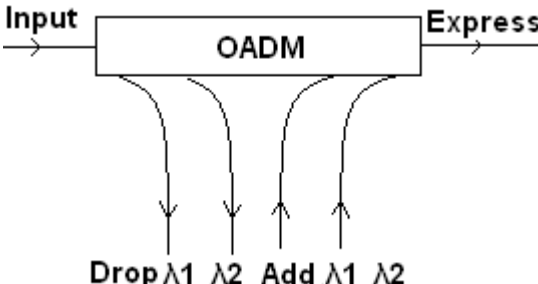
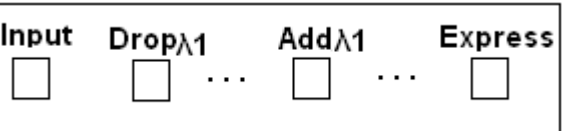
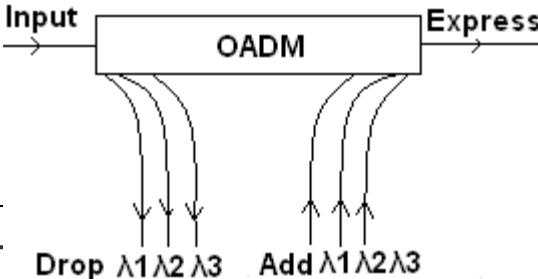
		Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
--	--	---

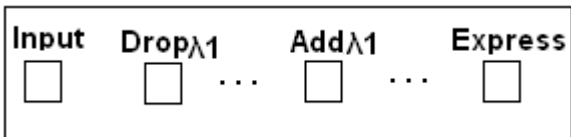
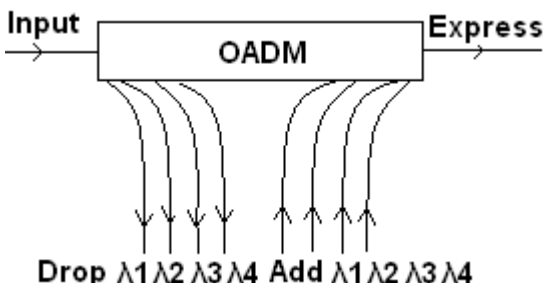
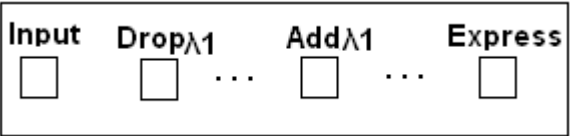
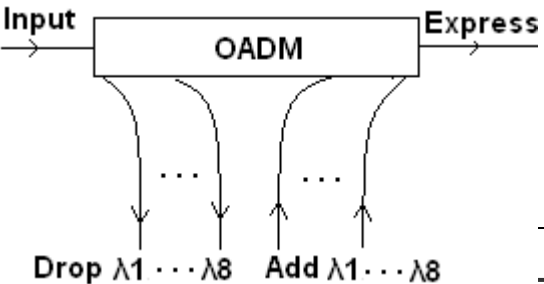
Notes:

1. $\lambda = \text{ITU}, \text{ITU}+1$
2. $\lambda = 1470\text{nm}, 1490\text{nm}, 1510\text{nm}, 1530\text{nm}, 1550\text{nm}, 1570\text{nm}, 1590\text{nm}, 1610\text{nm}$
3. Specified with connectors.
4. Available modules or LGX or 19" case packaging.
5. Operating Temperature ($^{\circ}\text{C}$): $-5 \sim 75$.
6. Storage Temperature ($^{\circ}\text{C}$): $-40 \sim 85$.

CWDM Optical Add/Drop Module without 1310nm Expansion Port

GADM-1XX190910-555 		1CH CWDM OADM λ Add/Drop Channel IL(dB): ≤ 0.8 Express Channel IL(dB): ≤ 1.0 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
--	--	---

GADM-2XX190910-555 		2CH CWDM OADM λ_1, λ_2 Add/Drop Channel IL(dB): ≤ 1.2 Express Channel IL(dB): ≤ 1.6 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
GADM-3XX190910-555 		3CH CWDM OADM $\lambda_1, \lambda_2, \lambda_3$ Add/Drop Channel IL(dB): ≤ 1.5 Express Channel IL(dB): ≤ 1.8 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm):

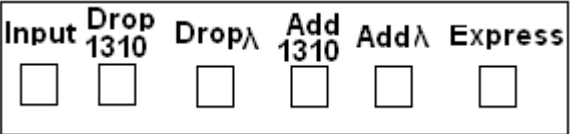
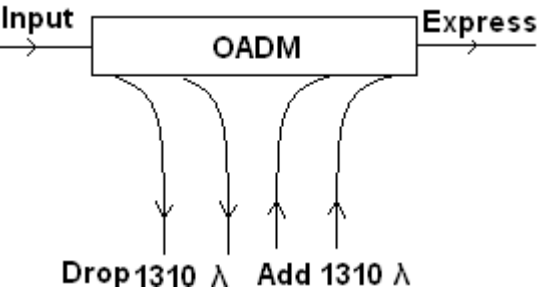
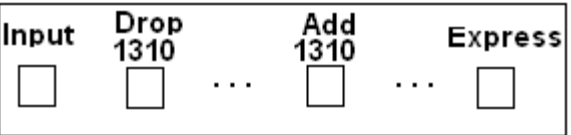
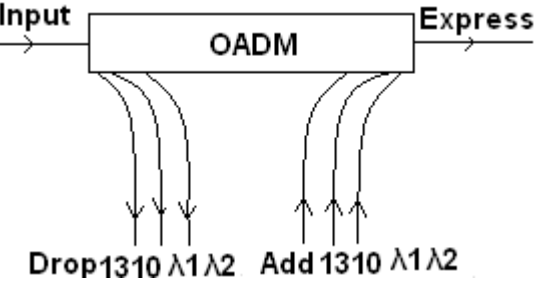
		1260~1620
GADM-4XX190910-555 		4CH CWDM OADM $\lambda_1, \lambda_2, \lambda_3, \lambda_4$ Add/Drop Channel IL(dB): ≤ 1.9 Express Channel IL(dB): ≤ 2.2 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent : ≥ 45 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
GADM-8XX190910-555 		8CH CWDM OADM $\lambda_1, \lambda_2, \lambda_3, \lambda_4, \lambda_5, \lambda_6, \lambda_7, \lambda_8$ Add/Drop Channel IL(dB): ≤ 2.7 Express Channel IL(dB): ≤ 4.0 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm):

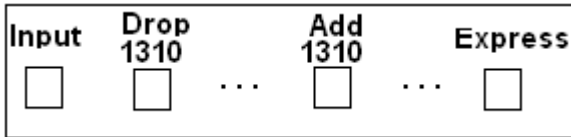
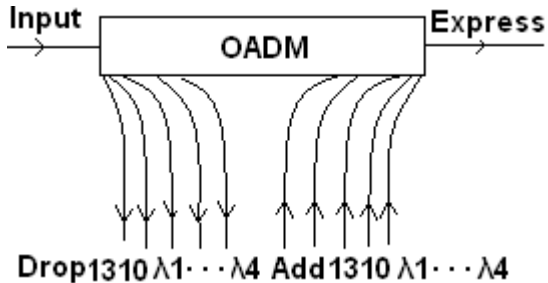
		1260~1620
--	--	-----------

Notes:

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

CWDM Optical Add/Drop Module with 1310nm Expansion Port

GADM-2F1190910-555 		1CH+1310nm CWDM OADM $1310 \pm 40\text{nm}, \lambda$ Add/Drop Channel IL(dB): ≤ 0.8 Express Channel IL(dB): ≤ 1.0 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 1310nm Channel: ≥ 30 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
GADM-3F1190910-555 		2CH+1310nm CWDM OADM $1310 \pm 40\text{nm}, \lambda 1, \lambda 2$ Add/Drop Channel IL(dB): ≤ 1.2 Express Channel IL(dB): ≤ 1.6 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 1310nm Channel: ≥ 30 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620

GADM-5F1190910-555 		4CH+1310nm CWDM OADM 1310±40nm, λ_1, λ_2, λ_3, λ_4 Add/Drop Channel IL(dB): ≤ 1.9 Express Channel IL(dB): ≤ 2.2 Isolation(dB): Add&Drop Adjacent: ≥ 30 Add&Drop Non-Adjacent: ≥ 45 1310nm Channel: ≥ 30 Express: ≥ 20 Return Loss (dB): ≥ 45 Operating Wavelength(nm): 1260~1620
--	--	---

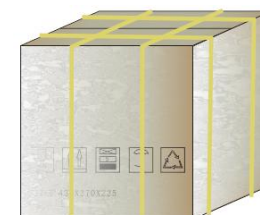
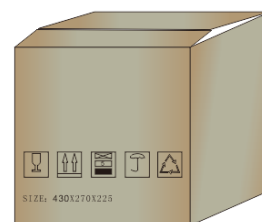
Notes:

1. $\lambda = \text{ITU}, \text{ITU}+1$
2. $\lambda = 1470\text{nm}, 1490\text{nm}, 1510\text{nm}, 1530\text{nm}, 1550\text{nm}, 1570\text{nm}, 1590\text{nm}, 1610\text{nm}$
3. Specified with connectors.
4. Available modules or LGX or 19 "case packaging.
5. Operating Temperature ($^{\circ}\text{C}$): $-5 \sim 75$.
6. Storage Temperature ($^{\circ}\text{C}$): $-40 \sim 85$.

5. Package

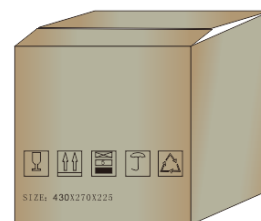
CWDM Module

Type	1X2	1X4	1X8	1X16	1X18	Box Size
Inner Box (pcs)	2	2	2	1	1	310mm*280mm*45mm
Outer Box (pcs)	12	12	12	6	6	440mm*330mm*360mm



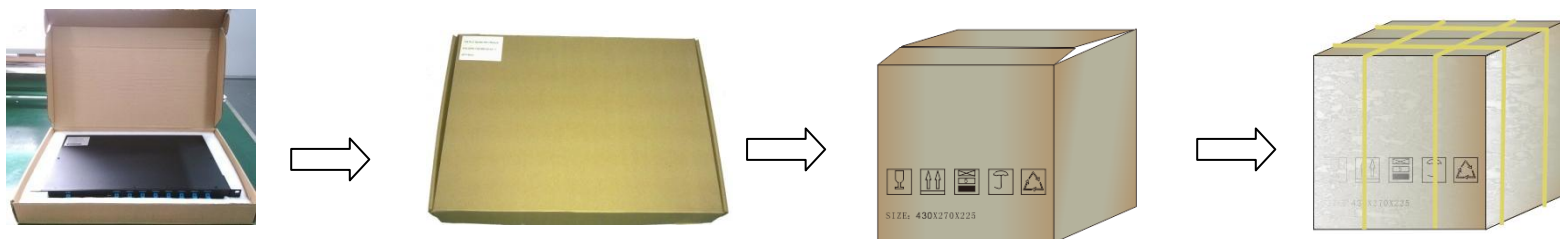
CWDM LGX

Type	1X2	1X4	1X8	Box Size
Inner Box (pcs)	2	2	2	300mm*200mm*55mm
Outer Box (pcs)	12	12	12	440mm*330mm*200mm



CWDM 19" Rack-Mount

Type	1X2	1X4	1X8	1X16	1X18	Box Size
Inner Box (pcs)	1	1	1	1	1	515mm*310mm*60mm
Outer Box (pcs)	5	5	5	5	5	515mm*310mm*300mm



6. Ordering information

CWDM Mux/Demux Module

GWM	-	XX	X	X	XX	XX	XX	XX	-	X	X
		Port Configuration	WDM Type	Module Type	Initial Wavelength	Package Type	Fiber Type	Output Fiber Length		Input Connector	Output Connector
G=Gigalight		01=1*1	C=CWDM 1460~1620	M=Mux	27=1270/1271	PS=100X80X10	09=0.9mm loose tube	05=0.5m		0=None	0=None
W=WDM		02=1*2	Q=CWDM 1260~1620	D=Demux		PM=120X80X18	20=2.0mm loose tube	10=1.0m		1=FC/UPC	1=FC/UPC
M=Module		03=1*3		1=Mux&1310nm port	61=1610/1611	PL=140X115X18	30=3.0mm loose tube	12=1.2m		2=FC/APC	2=FC/APC
				2=Demux&1310nm port		LX=LGX box metal		15=1.5m		3=SC/UPC	3=SC/UPC
		18=1*18		3=Mux&Upgrade		19=19"1U Rack-Mount		XX= Customized		4=SC/APC	4=SC/APC
				4=Demux& Upgrade		XX=Customized				5=LC/UPC	5=LC/UPC
				5=Mux&1310nm port& Upgrade						6=LC/APC	6=LC/APC
				6=Demux&1310nm port& Upgrade						XX= Customized	XX= Customized
				7=Mux& 1310nm port& Monitor							
				8=Demux& 1310nm port& Monitor							

CWDM Optical Add/Drop Module

GADM	-	XX	X	XX	XX	XX	-	X	X	X
		Channel Number	Initial Wavelength	Package Type	Fiber Type	Output Fiber Length		Input Connector	Add/Drop Port Connector	Express Port Connector
G=Gigalight		1=1CH	F1=1310±40	PS=100X80X10	09=0.9mm	05=0.5m		0=None	0=None	0=None



					loose tube					
A/D= Optical Add/Drop		2=2CH	27=1270	PM=120X80X18	20=2.0mm loose tube	10=1.0m		1=FC/UPC	1=FC/UPC	1=FC/UPC
M=Module		4=4CH	47=1470	PL=140X115X18	30=3.0mm loose tube	12=1.2m		2=FC/APC	2=FC/APC	2=FC/APC
		8=8CH	...	LX=LGX box metal		15=1.5m		3=SC/UPC	3=SC/UPC	3=SC/UPC
			61=1610	19=19"1U Rack-Mount		XX= Customized		4=SC/APC	4=SC/APC	4=SC/APC
				XX=Customized				5=LC/UPC	5=LC/UPC	5=LC/UPC
								6=LC/APC	6=LC/APC	6=LC/APC
								XX= Customized	XX= Customized	XX= Customized

E-mail: sales@gigalight.com.cn

Web: <http://www.gigalight.com.cn>