16 pairs CWDM MUX & DEMUX +MPO

Description

QXP 16 pairs CWDM MUX & DEMUX: Designed for Data Center Network optical transceiver applications are compact with superior performance and lower cost, meeting Telcordia GR-1221-CORE requirements and are RoHS 10 compliant.

Key Features

- ✧ Low Insertion Loss
- ✧ Flat Spectrum Top and Broad Pass band
- ✧ Integrated Design
- ✧ High Stability and Reliability
- ✧ Low Temperature Dependence

1. Performance Specifications

1.1 Mux Spec.

Parameter	MIN.	TYP.	MAX.	Unit	Comments
Channel Number		4		-	
Spectral Region		1300		nm	
Channel Spacing		20		nm	
Center Wavelength		1271(λ1)		nm	
		1291(λ2)		nm	
		1311(λ3)		nm	
		1331(λ4)		nm	
Center Wavelength Accuracy	-2	-	2	nm	Offset from ITU Grid
Insertion Loss	-	-	2.3	dB	Channels => COM, at ITU±2 nm.（include PDL and one MPO connector）
Uniformity	-	-	1.0	dB	ILmax - ILmin (All channels)

1 dB Bandwidth	14	-	-	nm	Measure 1 dB down from min IL
Polarization Dependent Loss	-	-	0.5	dB	
Polarization Mode Dispersion	-	-	0.15	ps	By design
Ripple(ITU±5nm)			1	dB	
IL Slope(ITU±5nm)			0.3	dB/nm	
Temperature dependent wavelength shift		11		pm/℃	By design

1.2 Demux Spec.

Parameter	MIN.	TYP.	MAX.	Unit	Comments
Channel Number		4		CH	
Spectral Region		1300		nm	
Channel Spacing		20		nm	
Center Wavelength		1271(λ1)		nm	
		1291(λ2)		nm	
		1311(λ3)		nm	
		1331(λ4)		nm	
Center Wavelength Accuracy	-2	-	2	nm	Offset from ITU Grid
Insertion Loss	-	-	2.8	dB	COM => Channels, at ITU±2 nm. （include PDL and one MPO connector）
Uniformity	-	-	1.0	dB	ILmax - ILmin (All channels)
1 dB Bandwidth	14	-	-	nm	Measure 1 dB down from min IL
Adjacent Channel Crosstalk	21	-	-	dB	
Non-adjacent Channel Crosstalk	30	-	-	dB	
Polarization Dependent Loss	-	-	0.5	dB	
Polarization Mode Dispersion	-	-	0.15	ps	By design
Ripple(ITU±5nm)			1	dB	
IL Slope(ITU±5nm)			0.3	dB/nm	
Temperature dependent wavelength shift		11		pm/℃	By design

2. Operating Conditions

NO	PARAMETER	SPECIFICATION	UNITS	NOTE
3.1	Operation Temperature	0～70	°C	-
3.2	Operation Humidity	5～95	%RH	-
3.3	Storage Temperature	-40～85	°C	-
3.4	Storage Humidity	5~95	%RH	-

3. Fiber Assignment

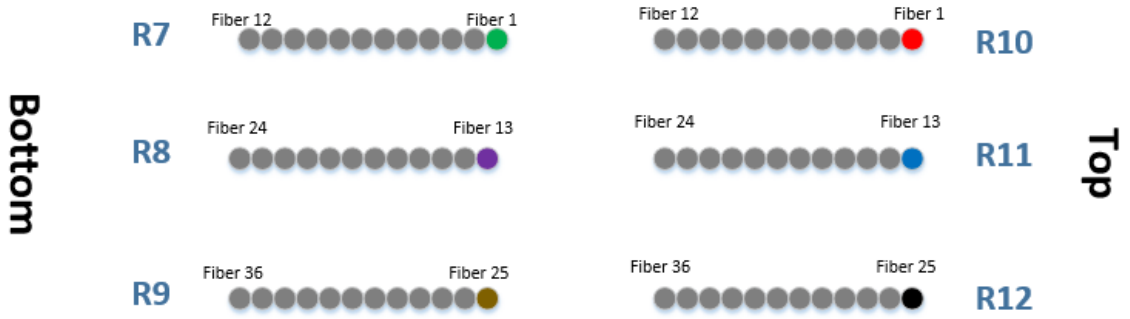
3.1 Fiber Assignment

Fiber Number	Symbol	Wavelength	Description	Left,TOP			Left,Bottom			Right,Top			Right, Bottom		
				Ribbon	COM	Color	Ribbon	COM	Color	Ribbon	COM	Color	Ribbon	COM	Color
1	NC			R10		Red	R7		Green	R4		Red dot line	R1		Green dot line
2	NC					Clear			Clear			Clear			Clear
3	RX12	1271nm	Receive Output 12		R16	Clear		R12	Clear		R08	Clear		R04	Clear
4	RX13	1291nm	Receive Output 13			Clear			Clear			Clear			Clear
5	RX14	1311nm	Receive Output 14			Clear			Clear			Clear			Clear
6	RX15	1331nm	Receive Output 15			Clear			Clear			Clear			Clear
7	TX15	1331nm	Transmit Input 15		T16	Clear		T12	Clear		T08	Clear		T04	Clear
8	TX14	1311nm	Transmit Input 14			Clear			Clear			Clear			Clear
9	TX13	1291nm	Transmit Input 13			Clear			Clear			Clear			Clear
10	TX12	1271nm	Transmit Input 12			Clear			Clear			Clear			Clear
11	RX8	1271nm	Receive Output 8		R15	Clear		R11	Clear		R07	Clear		R03	Clear
12	RX9	1291nm	Receive Output 9			Clear			Clear			Clear			Clear
13	RX10	1311nm	Receive Output 10	R11		Blue	R8		Purple	R5		Blue dot line	R2		Purple dot line
14	RX11	1331nm	Receive Output 11			Clear			Clear			Clear			Clear
15	TX11	1331nm	Transmit Input 11		T15	Clear		T11	Clear		T07	Clear		T03	Clear
16	TX10	1311nm	Transmit Input 10			Clear			Clear			Clear			Clear
17	TX9	1291nm	Transmit Input 9			Clear			Clear			Clear			Clear
18	TX8	1271nm	Transmit Input 8			Clear			Clear			Clear			Clear
19	RX4	1271nm	Receive Output 4		R14	Clear		R10	Clear		R06	Clear		R02	Clear
20	RX5	1291nm	Receive Output 5			Clear			Clear			Clear			Clear

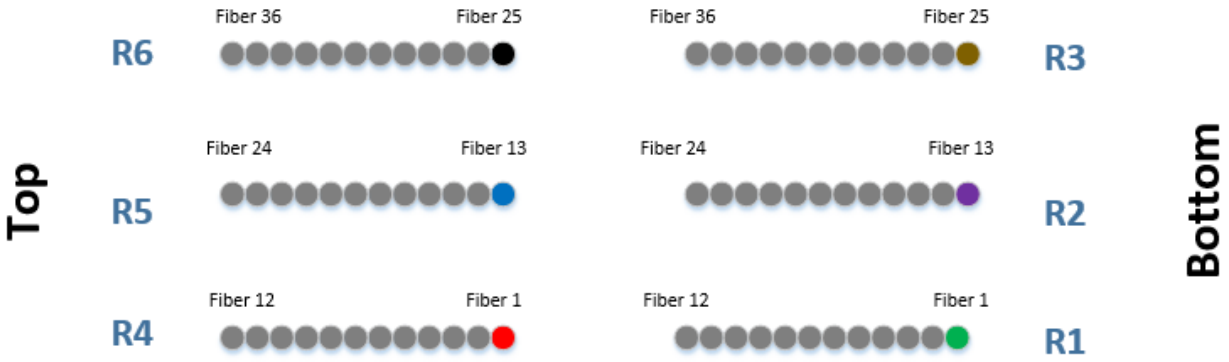
21	RX6	1311nm	Receive Output 6			Clear			Clear			Clear			Clear
22	RX7	1331nm	Receive Output 7			Clear			Clear			Clear			Clear
23	TX7	1331nm	Transmit Input 7		T14	Clear		T10	Clear		T06	Clear		T02	Clear
24	TX6	1311nm	Transmit Input 6			Clear			Clear			Clear			Clear
25	TX5	1291nm	Transmit Input 5			**Black**			**Brown**			**Black dot line**			**Brown dot line**
26	TX4	1271nm	Transmit Input 4			Clear			Clear			Clear			Clear
27	RX0	1271nm	Receive Output 0		R13	Clear		R09	Clear		R05	Clear		R01	Clear
28	RX1	1291nm	Receive Output 1			Clear			Clear			Clear			Clear
29	RX2	1311nm	Receive Output 2			Clear			Clear			Clear			Clear
30	RX3	1331nm	Receive Output 3	R12		Clear	R9		Clear	R6		Clear	R3		Clear
31	TX3	1331nm	Transmit Input 3		T13	Clear		T09	Clear		T05	Clear		T01	Clear
32	TX2	1311nm	Transmit Input 2			Clear			Clear			Clear			Clear
33	TX1	1291nm	Transmit Input 1			Clear			Clear			Clear			Clear
34	TX0	1271nm	Transmit Input 0			Clear			Clear			Clear			Clear
35	NC					Clear			Clear			Clear			Clear
36	NC					Clear			Clear			Clear			Clear

3.2 Ribbon Fiber Assignment

Left View



Right View



Ribbon	Label Code	1st Fiber Color	Mark on Ribbon Tape	
Ribbon#1(Right, Bottom)	R1	Green dot line	1 Green dot line	
Ribbon#2(Right, Bottom)	R2	Purple dot line	2 Purple dot lines	
Ribbon#3(Right, Bottom)	R3	Brown dot line	3 Brown dot lines	
Ribbon#4(Right, Top)	R4	Red dot line	1 Red dot line	
Ribbon#5(Right, Top)	R5	Blue dot line	2 Blue dot lines	
Ribbon#6(Right, Top)	R6	Black dot line	3 Black dot lines	
Ribbon#7(Left, Bottom)	R7	Green	1 Green line	

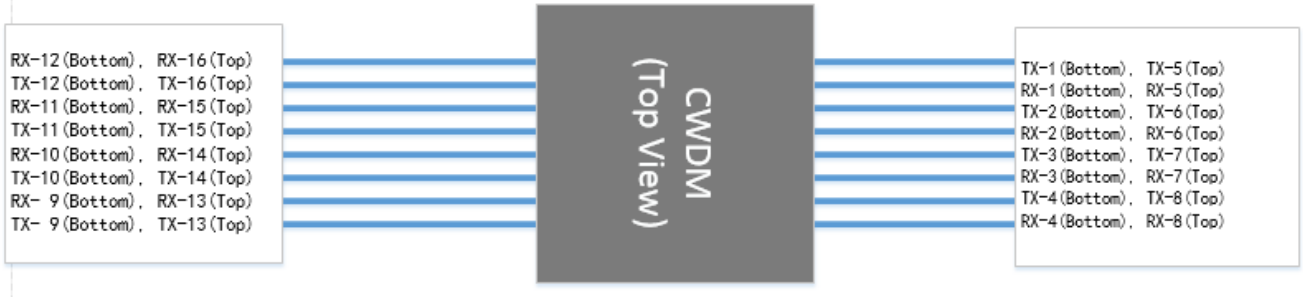
Ribbon#8(Left, Bottom)	R8	Purple	2 Purple lines	
Ribbon#9(Left, Bottom)	R9	Brown	3 Brown lines	
Ribbon#10(Left, Top)	R10	Red	1 Red line	
Ribbon#11(Left, Top)	R11	Blue	2 Blue lines	
Ribbon#12(Left, Top)	R12	Black	3 Black lines	

Note:

1. Dye the first one fiber of each ribbon to notice where to start. The other fiber will be clear without color;

2. Mark on ribbonized tape: make lines as color of 1st fiber of ribbon fiber to identify ribbon number;

3.3 Micro LC Fiber Assignment



4. Mechanical Specifications

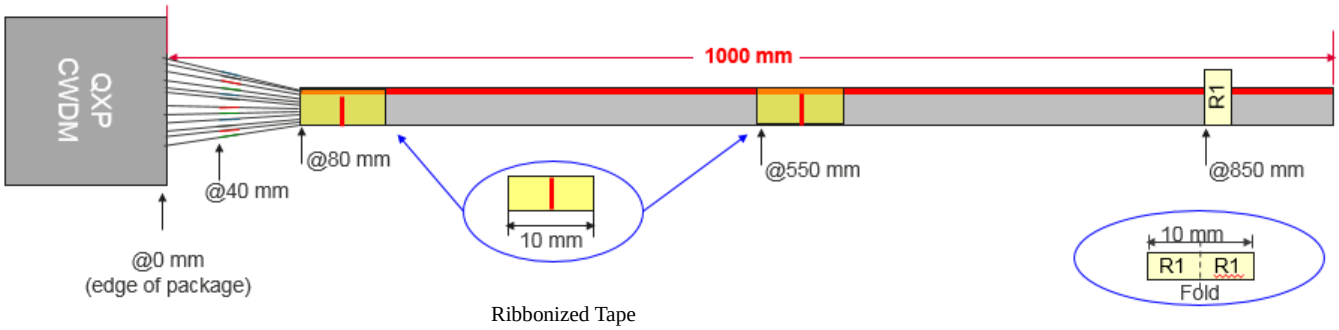
Item	Parameters	Specifications	Units	Note
Package Size	Length * Width *Height	50*50*12.5	mm	
Ribbon Fiber Length	Away from the box edge w/o ribbonized fiber	80(±10)	mm	1. Dye the first fiber of each ribbon to notice where to start. The other fiber will be clear without color; 2. Mark on ribbonized tape: make lines as color of 1st fiber of ribbon fiber to identify ribbon number; 3. Ribbonized Tape: @80mm and @550mm; Ribbon Label: @850mm and can be moved;
	Ribbonized fiber	950	mm	
Micro LC Fiber Length	Group 1 Right_(T1x & Rx1) to (Tx8 & Rx8)；	750(+0/-20)	mm	The stress relief 900μm loose tube is 8-9mm from micro LC connector; Maximum : 9mm;
	Grotup 2 Left_(Tx9 & Rx9) to (Tx16& Rx16)；	800(+0/-20)	mm	

5. Packaging and Label Requirements

5.1 Product Label

Follow customer's requirement.

5.2 Optic Port Label



Ribbonized Tape

Ribbonized Label

Note：1. Dye four different colors to distinguish the clear bare fiber of each ribbon;

Color: red, green, blue, black; Length: 10mm;

2. Ribbonized Tape: make line as color of 1st fiber of ribbon fiber to identify ribbon number

3. Ribbonized label need smallest size and can move;

6. Quality and Reliability Information

Feature	Test method	Performance
Damp heat	GR-1221-CORE 6.2.5	85℃/85%RH 500hrs
High Temperature storage	GR-1221-CORE 6.2.4	85ºC 1000hrs
Temp cycling	GR-1221-CORE 6.2.7	-40ºC/85ºC Dwell time at extremes:≥15min Temper ramp rate:≥10º/min;500Cycles
Mechanical Shock & Vibration	GR-1221-CORE 6.2.1	A.Shock:500g,1ms,5times/direction,6direction B.Vibration:.20g,20~2000Hz,a peak to peak amplitude of 1.52mm(±10%),4min/cycle, 4 cycles/axis 3axes
Fiber Integrity Straight/Side Pull	GR-1209-CORE 5.4.3	A: Straight Pull:0.45kgf,1min,single fiber; 17.5N, 10~12 fiber ribbon B: Side Pull:0.23kgf, 90 degree, single fiber; 0.45kgf, 90 degree, 10~12 fiber ribbon All the load is to be applied a distance 22 - 28 cm from the branching component housing.