西安奇芯光电科技有限公司

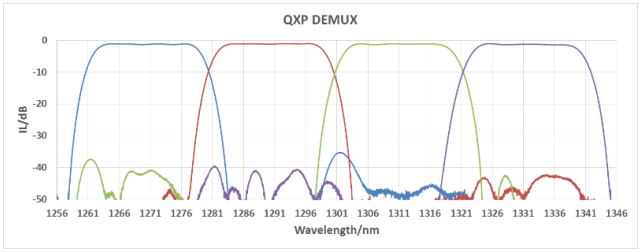
Demux Chip Specifications

Description

QXP CWDM4 DEMUX Chips, designed for Data Center optical transceiver applications, are compact with superior performance and lower cost, meeting Telcordia GR-1221-CORE requirements and RoHS2.0 compliant.

Key Features

1. Low Insertion Loss
2. High Channel Isolation
3. Flat Spectrum Top and Broad Passband
4. High Stability and Reliability
5. Low Temperature Dependence
6. Small Form Factor



Applications

1. Data Center Network
2. ROSA for 100/400Gbps Transceiver

Performance Specifications

1. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Operating temperature Range	Top	-5	80	℃
Storage Temperature Range	Tstg	-40	85	S
Relative Humidity – Storage	RHS		95	%
Power Handling※			300	mW

※ Maximum continuous input optical power
Exceeding maximum ratings may cause permanent device damage

2. Optical Characteristics

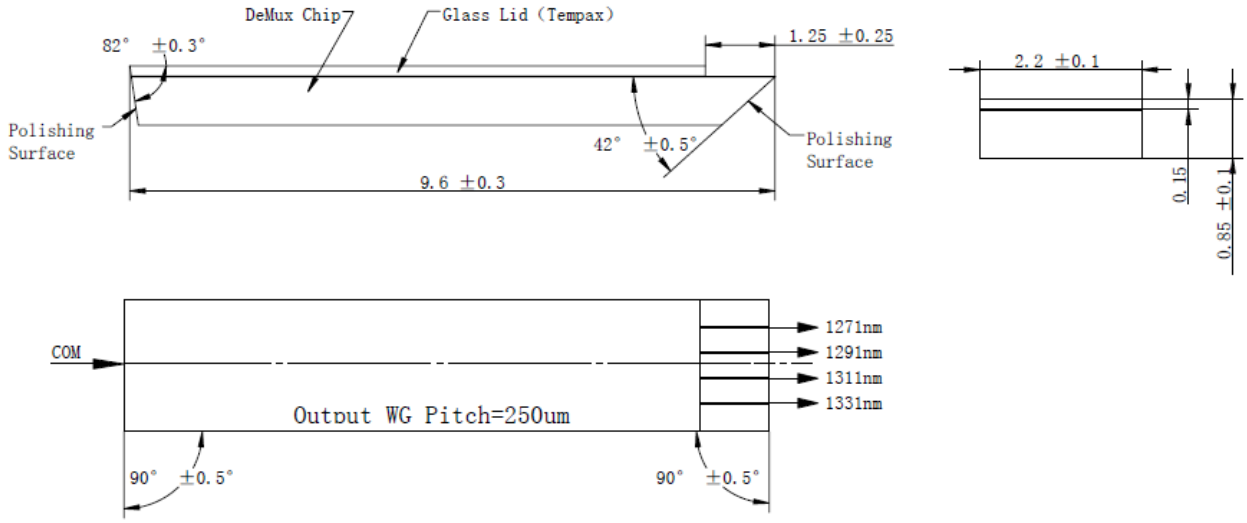
(Test at room temperature)

Item	Parameter	Unit	Value	Conditions
1	Number of channels	-	4 x 1	-
2	Spectral region	nm	1260~1360	-
3	AWG channel center wavelength	nm	1271(λ1)	-
		nm	1291(λ2)	-
		nm	1311(λ3)	-
		nm	1331(λ4)	-
4	Channel spacing	nm	20	-
5	Center Wavelength Accuracy	nm	≤ ±2	Difference between ITU wavelength and Average Wavelength of 3dB bandwidth
6	1dB Bandwidth	nm	≥ 14	1dB down from IL min
7	3dB Bandwidth	nm	≥ 16	3dB down from IL min
8	PDL	dB	≤ 0.5	At ITU
9	Insertion Loss	dB	≤ 2.5	ITU±2 nm, including PDL
10	Return Loss	dB	≥ 30	Light Source: TLS/Step 100pm; ITU±6.5nm
11	Adjacent Channel Crosstalk	dB	≥ 21	ITU±6.5nm
12	Non-adjacent Channel Crosstalk	dB	≥ 30	ITU±6.5nm
13	Ripple	dB	≤ 1	ITU±5nm
14	Uniformity	dB	≤ 1	IL max-IL min (All Channels)

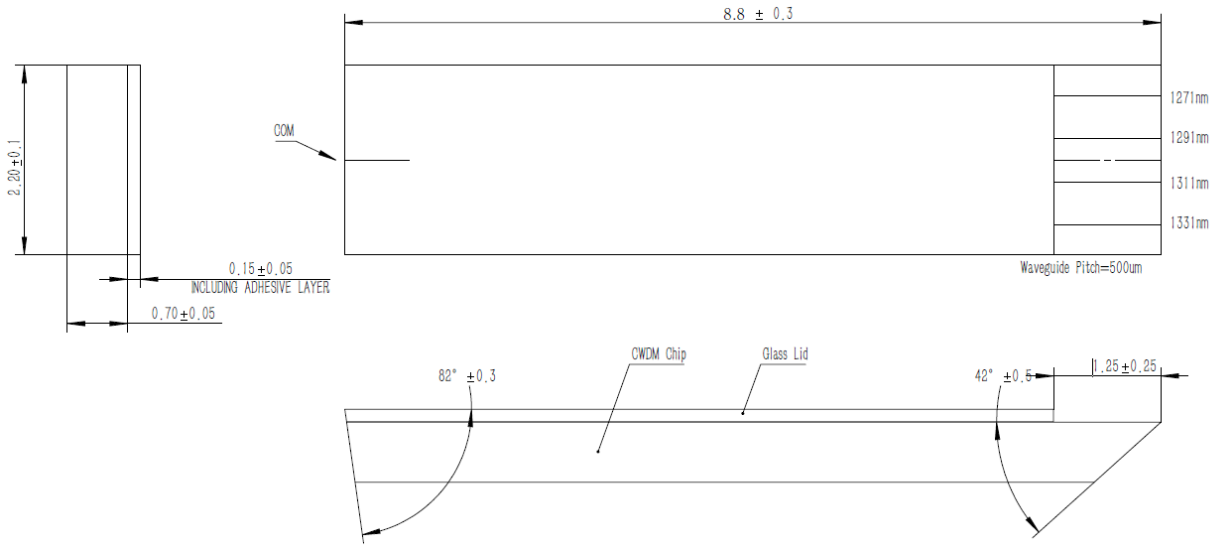
Shape and Dimensions

Parameters	Dimensions	Units	Remark
Length(L)	9.6±0.3	mm	For 250um Pitch ,Double Side
	8.8±0.3	mm	For 500um Pitch ,Double Side
	9.1±0.3	mm	For 750um Pitch ,Double Side
	8.3±0.3	mm	For 500um Pitch ,Single Side
Width(W)	2.2±0.1	mm	For 250/500 um Pitch , Double Side
	2.65±0.1	mm	For 750um Pitch , Double Side
	2.7±0.2	mm	For 500um Pitch , Single Side
Wafer Height(H)	0.73±0.1	mm	All
Glass lid Height(H)	Customize	mm	All
Angle	Glass plane: 90°±0.5° Or customize	Degree	NA
	Polishing surface A: 82°±0.5°Or customize		
	Polishing surface B: 42°±0.5°Or customize		
Output Spacing	250/500/750 or customize	μm	μm
Type	Double Side	-	-

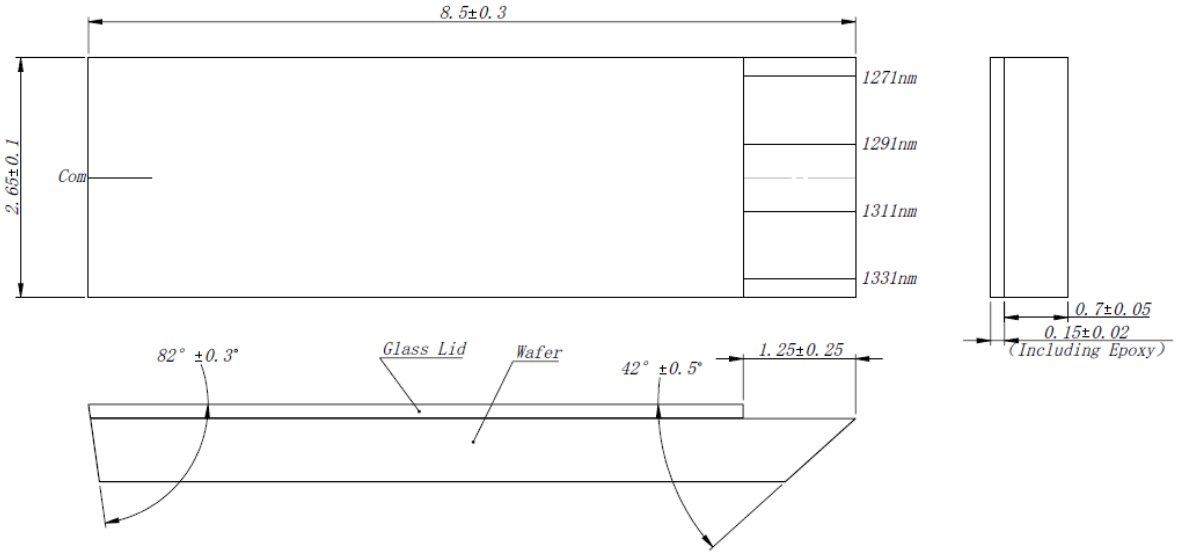
P250um Demux Chip Drawing



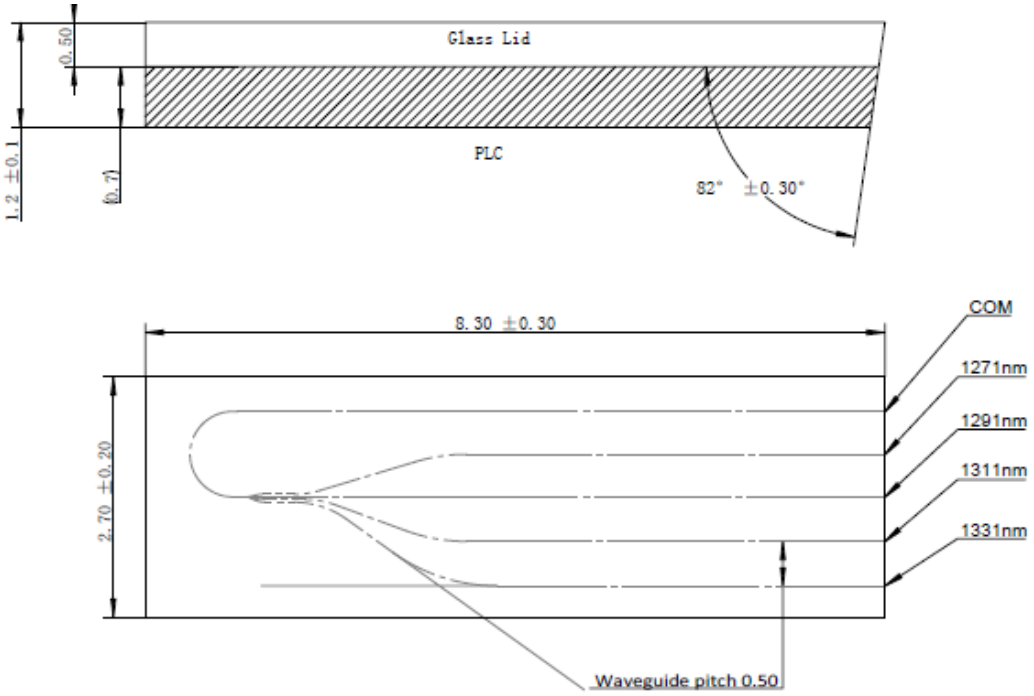
P500um Demux Chip Drawing



P750um Demux Chip Drawing



P750um Demux Chip Drawing(Single side)



Mux Chip Specifications

Description

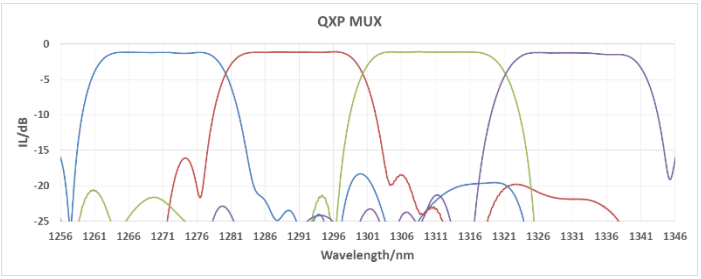
QXP CWDM4 MUX Chips, designed for Data Center optical transceiver applications, are compact with superior performance and lower cost, meeting Telcordia GR-1221-CORE requirements and RoHS2.0 compliant.

Key Features

7. Low Insertion Loss
8. High Channel Isolation
9. Flat Spectrum Top and Broad Passband
10. High Stability and Reliability
11. Low Temperature Dependence
12. Small Form Factor

Applications

1. Data Center Network
2. TOSA for 100/400Gbps Transceiver



Performance Specifications

3. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Operating temperature Range	T_{op}	-5	80	℃
Storage Temperature Range	T_{stg}	-40	85	℃
Relative Humidity – Storage	RH_S		95	%
Power Handling※			300	mW

※ Maximum continuous input optical power.
Exceeding maximum ratings may cause permanent device damage.

4. Optical Characteristics

(Test at room temperature)

Item	Parameter	Unit	Value	Conditions
1	Number of channels	-	4 x 1	-
2	Spectral region	nm	1260~1360	-
3	Channel center wavelength	nm	1271(λ1)	-
		nm	1291(λ2)	-
		nm	1311(λ3)	-
		nm	1331(λ4)	-
4	Channel spacing	nm	20	-
5	Center Wavelength Accuracy	nm	≤ ±3	Difference between ITU wavelength and Intermediate wavelength (3dB down from IL max)
6	1dB Bandwidth	nm	≥ 16	1dB down from IL min
7	3dB Bandwidth	nm	≥ 18	3dB down from IL min
8	PDL	dB	≤ 1	ITU±1nm
9	Insertion Loss	dB	≤2.5	ITU±2nm, included PDL
10	Return Loss	dB	≥ 30	Light Source: TLS; ITU±6.5nm
11	Ripple	dB	≤1.0	ITU±5nm
12	Uniformity	dB	≤1.0	IL max-IL min （All Channels)

Shape and Dimensions

Parameters	Dimensions	Units
Length(L)	6.6±0.3	mm
Width(W)	2.7±0.1	mm
Height(H)	1.2±0.1	mm
Angle	Glass plane: 90°±0.5°	Degree
	Polishing surface : 82°±0.3°	
Output Spacing	500	μm
Type	Single Side	-