

Transceiver Wavelength Division Multiplexer (WDM) Passive Optical Subassembly (POSA)



Features and Benefits

Supports major transceiver form factors CFP2/4/8, QSFP28, QSFP-DD, and beyond

Implemented as receiver optical subassembly (ROSA) or transmitter optical subassembly (TOSA) with highly customizable design

Ultra-low insertion loss (<1.0 dB) with thin-film-filter technology

Robust design protects against thermal perturbation and shock

Flat-top broad passband spectrum with excellent isolation between channels

Applications

Metro and access networks long reach/extended reach transceivers

Data center transceivers

Standards

RoHS2011/65/EU

GR-1221 and GR-1209 qualified

Corning's passive optical subassembly (POSA) uses our free-space-optics wavelength division multiplexing (WDM) platform to deliver optical mux/demux functionality directly inside standard or customized small-form-factor platform transceivers. Our unique substrate-based POSA and glass-block POSA are designed to seamlessly integrate with your specific input and output interface.



Figure 1 – Glass Block POSA

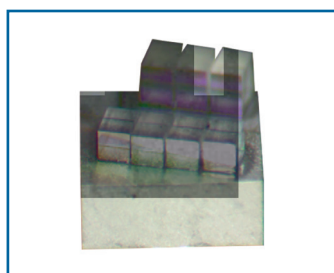


Figure 2 – Substrate POSA

Transceiver Wavelength Division Multiplexer (WDM) Passive Optical Subassembly (POSA)



Substrate POSA Specifications (LAN WDM)

Optical Performance Characteristics				
Operating Wavelength Range		1260 ~ 1360 nm		
Passband Definition	CH1	1294.53 ~ 1296.59 nm		
	CH2	1299.02 ~ 1301.09 nm		
	CH3	1303.54 ~ 1305.63 nm		
	CH4	1308.09 ~ 1310.19 nm		
Parameter		Minimum	Typical	Maximum
Central Wavelength (nm)	CH1	1295.56-0.3	1295.56	1295.56+0.3
	CH2	1300.05-0.3	1300.05	1300.05+0.3
	CH3	1304.58-0.3	1304.58	1304.58+0.3
	CH4	1309.14-0.3	1309.14	1309.14+0.3
Output Beam Angle (deg)*		-0.1		0.1
Passband Insertion Loss (dB)			0.6	1
Adjacent Channel Isolation (dB)		25		
Passband PDL (dB)				0.15
Passband Ripple (dB)				0.3
Optical Power (mW)				300
Operating Temperature Range (°C)		-5		85

* With fixed COM port beam as input and reference. Minimum pitch of 500 µm.

Transceiver Wavelength Division Multiplexer (WDM) Passive Optical Subassembly (POSA)



Substrate POSA Specifications (CWDM)

Optical Performance Characteristics				
Operating Wavelength Range		1260 ~ 1360 nm		
Passband Definition	CH1	1271 ± 6.5 nm		
	CH2	1291 ± 6.5 nm		
	CH3	1311 ± 6.5 nm		
	CH4	1331 ± 6.5 nm		
Parameter		Minimum	Typical	Maximum
Central Wavelength (nm)	CH1	1271-0.3	1271	1271+0.3
	CH2	1291-0.3	1291	1291+0.3
	CH3	1311-0.3	1311	1311+0.3
	CH4	1331-0.3	1331	1331+0.3
Output Beam Angle (deg)*		-0.1		0.1
Passband Insertion Loss (dB)			0.6	1
Adjacent Channel Isolation (dB)		30		
Passband PDL (dB)				0.15
Passband Ripple (dB)				0.3
Optical Power (mW)				300
Operating Temperature Range (°C)		-5		85

* With fixed COM port beam as input and reference. Minimum pitch of 500 µm.

Transceiver Wavelength Division Multiplexer (WDM) Passive Optical Subassembly (POSA)



Glass Block POSA Specifications (LAN WDM)

Optical Performance Characteristics				
Operating Wavelength Range		1260 ~ 1360 nm		
Passband Definition	CH1	1294.53 ~ 1296.59 nm		
	CH2	1299.02 ~ 1301.09 nm		
	CH3	1303.54 ~ 1305.63 nm		
	CH4	1308.09 ~ 1310.19 nm		
Parameter		Minimum	Typical	Maximum
Central Wavelength (nm)	CH1	1295.56-0.3	1295.56	1295.56+0.3
	CH2	1300.05-0.3	1300.05	1300.05+0.3
	CH3	1304.58-0.3	1304.58	1304.58+0.3
	CH4	1309.14-0.3	1309.14	1309.14+0.3
Output Beam Angle (deg)*		-0.3		0.3
Passband Insertion Loss (dB)			0.6	1
Adjacent Channel Isolation (dB)		25		
Passband PDL (dB)				0.2
Passband Ripple (dB)				0.4
Optical Power (mW)				300
Operating Temperature Range (°C)		-5		85

* With fixed COM port beam as input and reference. Minimum pitch of 500 µm.

Transceiver Wavelength Division Multiplexer (WDM) Passive Optical Subassembly (POSA)



Glass Block POSA Specifications (CWDM)

Optical Performance Characteristics				
Operating Wavelength Range		1260 ~ 1360 nm		
Passband Definition	CH1	1271 ± 6.5 nm		
	CH2	1291 ± 6.5 nm		
	CH3	1311 ± 6.5 nm		
	CH4	1331 ± 6.5 nm		
Parameter		Minimum	Typical	Maximum
Central Wavelength (nm)	CH1	1270	1271	1272
	CH2	1290	1291	1292
	CH3	1310	1311	1312
	CH4	1330	1331	1332
Output Beam Angle (°)*		-0.3		0.3
Passband Insertion Loss (dB)			0.6	1
Adjacent Channel Isolation (dB)		30		
Passband PDL (dB)				0.2
Passband Ripple (dB)				0.4
Optical Power (mW)				300
Operating Temperature Range (°C)		-5		85

* With fixed COM port beam as input and reference. Minimum pitch of 500 µm.

Ordering Information

WDM POSA is highly customizable for a customer's specific needs; please contact OEM sales at oemsales@corning.com and visit www.corning.com/opcomm/oem for sales support.

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