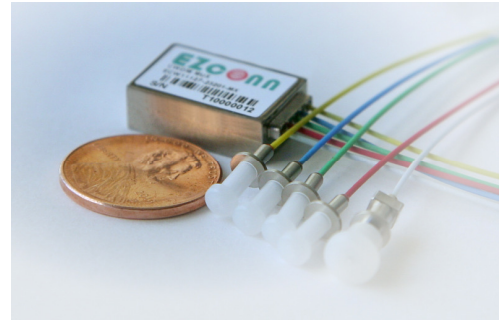


GT-9005
4-Channel
Ultra Compact
CWDM Mux or DeMux

1 Description

EZconn's GT-9005 module is designed for space limited transceiver modules, line cards and subsystems. Based on thin film filters and free space packaging method, the four-channel module is designed to meet or exceed Telcordia requirements for performance and reliability. The GT-9005 module is available in two package sizes for the best fit into your design. The Ultra Low Package (UL) allows MUX and DeMUX to be stacked one on top of the other inside the CFP package resulting in less area being used and provides more space inside the packaging for other components.



The Ultra Low Package (UL) allows MUX and DeMUX to be stacked one on top of the other inside the CFP package resulting in less area being used and provides more space inside the packaging for other components.

1.1 Features

- Low insertion loss (Typ. 0.8dB)
- Very low TDL (Typ. < 0.1dB @-5°C to 80°C)
- Epoxy free in light path
- Small Size (UL option 10.8 mm x 18.5 mm x 4.8 mm)
- Very low PDL (Polarization Dependent Loss)
- Express channel option (available upon request)
- High channel isolation
- Reliable and robust design
- Low profile package allows MUX and DeMUX to be stacked one on top of the other
- TELCORDIA GR-1221 Compliance
- RoHS compliant

1.2 Applications

- CFP transceivers
- Optical Add/Drop Multiplexing
- FTTx Sub-systems
- Metro Core, Metro Access, Metro Enterprise
- Cable TV, Datacomm
- Sensor Applications
- 3G Telephony (UMTS)
- 40 Gbps IEEE 802.3ba standard

2 Performance Specifications

2.1 Optical Specifications

Table 1: All parameters are specified over the full operating case temperature -5°C to 80°C

Parameter	Min	Typ.	Max	Unit	Notes
Center Wavelength Range	1271		1611	nm	4 Channels
Channel Spacing		20		nm	
Channel Passband	13	15		nm	
Insertion Loss within Passband		0.8	1.5	dB	*1
Passband Ripple		0.2	0.3	dB	
Adjacent Channel Isolation	30	40		dB	
Non-Adjacent Channel Isolation	45	50		dB	
Polarization Dependent Loss			0.2	dB	
Polarization Mode Dispersion			0.2	ps	
Optical Return Loss	45	50		dB	
Directivity	50			dB	
Maximum Optical Power			300	mW	

2.2 Other Specifications

Table 2: Other specifications

Parameter	Min	Typ.	Max	Unit	Notes
Operating Temperature	-40		85	°C	
Storage Temperature	-40		85	°C	
Fiber Types	ClearCurve ZBL				Bending R=5mm
	SMF-28e				
Operation Wavelength range	1260-1460 or 1460-1620			nm	DX – Half Band
	1260-1620			nm	MX – Full Band
Dimensions	11.5 x 18.5 x 6.5			mm	SP – Standard Package
	10.8 x 18.5 x 4.8			mm	UL – Ultra Low Package

¹ With passband, over temperature range (-5°C – 80°C) measured without connector losses.

2.3 Channel Plan and Standard Fiber Length

Table 3: Channel Plan and fiber length

MX – MUX					
Channel No.	1	2	3	4	COM
Center wavelength [nm]	1271	1291	1311	1331	IN
Color	Red	Green	Blue	Yellow	White
Fiber Length [m]	1.0 ±0.1				
DX – DEMUX					
Channel No.	1	2	3	4	COM
Center wavelength [nm]	1271	1291	1311	1331	OUT
Color	Red	Green	Blue	Yellow	Black
Fiber Length [m]	1.0 ±0.1				

Custom fiber colors and lengths are available upon request. Other wavelengths are available upon request. Please contact EZconn Europe GmbH for more information.

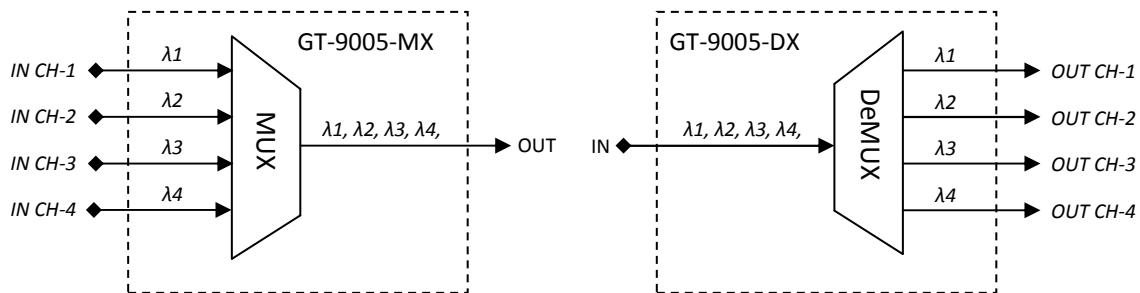


Fig:1 Port Configuration

3 Package Specifications

The GT-9005 module is available in two different sizes for best fit into your design. The UL package allows MUX and DeMUX to be stacked one on top of the other inside the CFP package, resulting in less area being used and provides more space inside the packaging for other components.

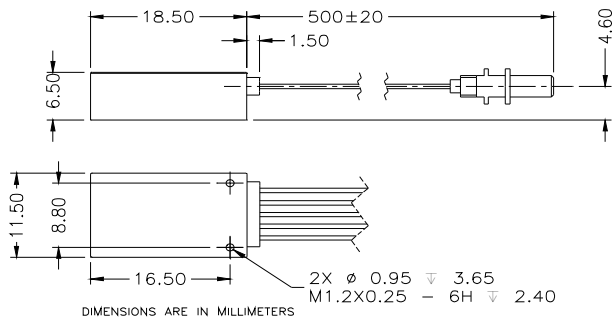


Fig:2 SP – Standard Package

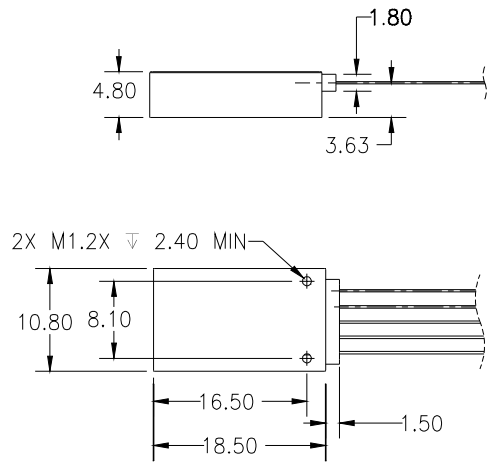


Fig:3 UL – Ultra Low Package

4 Applicable Standard

The GT-9005 module is TELCORDIA GR-1221 qualified. The full qualification report is available upon request.

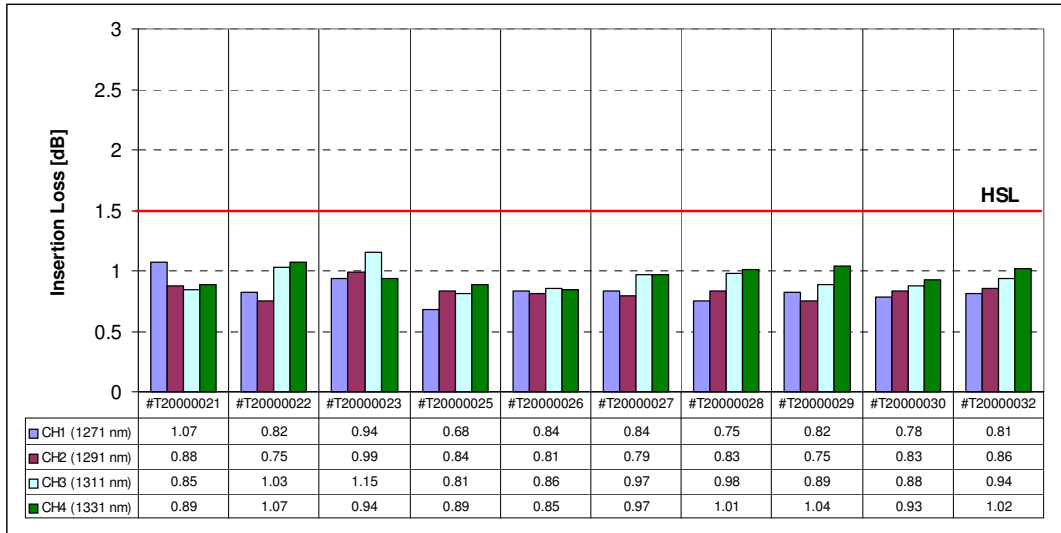


Fig:4 Typical Insertion Loss (measurement data)



Fig:5 Typical TDL over temperature rage -5°C – 80°C (measurement data)
(Temperature Dependent Loss)

5 Ordering Information

Part No.:

<u>GT-9005</u>	-	<u>XX</u>	-	<u>XX</u>	-	<u>XX</u>	-	<u>XX</u>
Series		Operation Wavelength range		Package Option		Connector/Fiber Jacket		
		<i>DX – Full Band (DeMUX)</i> <i>MX – Half Band (MUX)</i>		<i>SP – Standard Package</i> <i>UL – Ultra Low Package</i> <i>Cx – Custom dimensions on request</i>		<i>Standard:</i> <i>LC – LC / 600um Loose Tube</i> <i>Other Options:</i> <i>SC – SC / 900um Loose Tube</i> <i>FC – FC/PC / 900um Loose Tube</i> <i>FA – FC/APC / 900um Loose Tube</i> <i>E2 – E2000 / 900um Loose Tube</i> <i>NL – No connector / 900 Loss Tube</i> <i>NB – No connector / 250 Bare Fiber</i>		
			Channel Plan					
			<i>Standard:</i> <i>01 – 1271, 1291, 1311, 1331 nm</i> <i>Other Options on request:</i> <i>02 – 1471, 1491, 1511, 1531 nm</i> <i>03 – 1511, 1531, 1551, 1571 nm</i> <i>04 – 1551, 1571, 1591, 1611 nm</i> <i>11 – Custom</i>					

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