



Passive Optical Devices - Splitters 700 Series

Ridgemount Technologies Ltd offers a full line of Singlemode and Multimode passive optical devices that support precise characteristics in a range of compact packages for all applications of advanced fibre optic communication systems.

Ridgemount designs device configurations and integrates these with the customer's choice of packaging and connectorisation. Full prototype, test and maintenance services are supported from our UK facility.

Volume production is carried out on our Asian production lines in a world class facility fitted with extensive test equipment ensuring that all products comply with Telcordia GR1209 and GR1221.

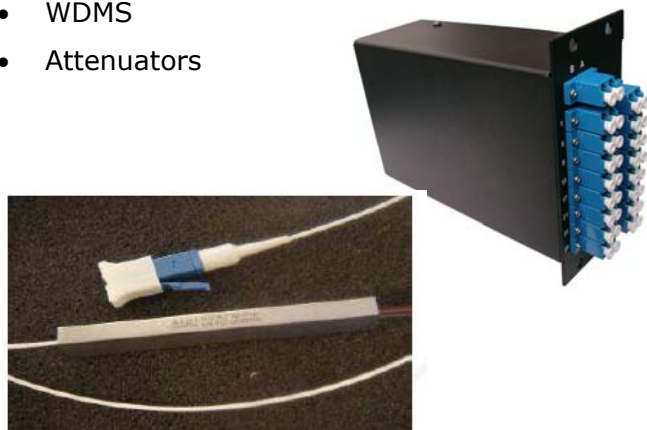


Applications

- Fibre to the Home [FTTH]
- Cable TV [CATV]
- Local Area Network [LAN]
- Secure Access Networks [SAN]
- Passive Optical Networks [PON]
- Monitor Systems
- Sensor Systems
- Test Instrumentation
- Telecommunication Systems

Product Range

- Singlemode Fused Tapered Splitters
- Singlemode PLC – Planar Light Circuits
- Multimode FTP Splitters
- WDMS
- Attenuators



Singlemode - Dual Window Wideband Couplers

Performance Specification	Single Window	Dual Window
Wavelength	1310nm or 1550nm ±40nm	1310nm and 1550nm ±40nm
Operating Temperature	-40°C to +85°C	-40°C to +85°C
Storage Temperature	-40°C to +85°C	-40°C to +85°C
Temp. Coefficient (dB/°C)	≤0.002	≤0.002
Directivity	≥55dB 1x2 ≥60dB 2x2	≥55dB 1x2 ≥60dB 2x2
Return Loss	≥55dB	≥55dB
Uniformity (50/50)	≤0.6dB	≤0.8dB
Polarization Dependent Loss	≤0.1dB	≤0.15dB
Typical Excess Loss	≤0.15dB	≤0.2dB
Fibre Type	Corning SMF23e	Corning SMF28e
Package Dimension (mm)	250µm Fiber : 3.0(OD)x54(L) 900µm Loose Tube:3.0(OD)x60(L) Ruggedized:100(L)x12(W)x8(H)	250µm Fiber : 3.0(OD)x54(L) 900µm Loose Tube:3.0(OD)x60(L) Ruggedized:100(L)x12(W)x8(H)

*Specifications may change depending on connector type.

Coupling Ratio / Insertion Loss	Single Window	Dual Window
50/50	3.4/3.4	3.6/3.6
45/55	3.9/2.97	4.2/3.1
40/60	4.4/2.5	4.8/2.8
35/65	4.9/2.3	5.3/2.6
30/70	5.6/1.8	6.0/1.9
25/75	6.4/1.6	6.8/1.7
20/80	7.5/1.2	7.9/1.25
15/85	8.6/1.1	9.6/1.2
10/90	11.5/0.6	11.3/0.65
5/95	14.6/0.4	15.2/0.45
2/98	19.0/0.2	21.5/0.3
1/99	21.5/0.2	23.5/0.3

1. Insertion loss is excluding connector loss at 0.2dB.
2. Devices also available in miniature housings from 3.0(OD) x 25(L).
3. Ultra low WDL and PDL specifications available.
4. Low bending loss fibres can be used for devices housed in confined spaces.

Singlemode Monolithic Coupler -1x4 Wideband Coupler

Performance Specification		
Wavelength	1310nm or 1550nm ± 40nm	1310nm and 1550nm ± 20nm
Operating Temperature	-40°C to +85°C	
Storage Temperature	-40°C to +85°C	
Temp. Coefficient (dB/°C)	≤0.002	
Directivity	≥55dB	
Return Loss	≥55dB	
Uniformity (50/50)	≥7.2dB	≥7.6dB
Polarization Dependent Loss	≤1.4dB	≤2.5dB
Typical Excess Loss	≤0.15dB	≤0.3dB
Fiber Type	Corning SMF-28e	
Package Dimension (mm)	250µm Fiber : 4.0(OD)X60(L) 900µm Loose Tube : 4.0(OD)X65(L)	

*Specifications will be changed depending on connector types

Singlemode Planar Light Circuits

Type	1 X 4	2X4	1 X 8	2X8	1 X 16	2X16	1 X 32	2X32	1X64
Fiber Type	9/125µm SMF28e or customer specified								
Operation Wavelength	1260~1360/1480~1650								
Insertion Loss (dB)(Typ) ¹	<7.1	<7.3	<10.0	<10.3	<13.5	<14.0	<16.8	<17.3	<20.0
Insertion Loss (dB)(Max) ¹	<7.5	<7.7	<10.5	<10.8	<14.0	<14.7	<17.5	<18	<20.3
Uniformity (dB)(Max)	<0.7	<1.0	<1.0	<1.2	<1.5	<2.0	<2.0	<2.5	<2.5
Polarization Dependent Loss (dB)(Max)	<0.3					<0.40	<0.30	<0.40	<0.3
Directivity (dB)(Min)	≥55								
Return Loss (dB)(Min)	≥55								
Operating Temperature (°C)	-40 to +85								
Storage Temperature (°C)	-40 to +85								
Package Dimension(mm)	4x4x40	4x4x50	4x4x40	4x4x50	4x4x50	4x7x55		4x11x65	
LGX Box type Package Dimension	Customer Design available								

1. Insertion loss is excluding connector loss at 0.2dB.
2. Ridgemount Planar splitters and DWDMs have been approved for FTTH applications.

Multimode Wideband Couplers – Fused Tapered

Ridgemount Technologies Ltd offers a unique range of multimode 1xN couplers. The 1x3, 1x4, 1x5 devices support wavelengths at 850nm or 1300nm, providing low insertion loss and high directivity. These components are made by fused biconic taper (FBT) fusing process. They ensure consistent quality, reliability and performance.

Fibre sizes 50/125 and 62.5/125 multimode fibres (OM1, OM2 & OM3) configured to different coupling ratios are available. All OM3 products are tested using VCSEL lasers at the appropriate wavelength for the application.

Performance Specification	1x2 / 1x3 / 1x4 / 1x5
Wavelength	850 and/ or 1300nm
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Directivity	≥40dB
Return Loss	≥40dB
Uniformity(50/50)	≤0.5dB
Fibre Type	OM1; OM2; OM3
Package Dimension(mm)	250µm Fiber : 3.0(OD)X54(L) 900µm Loose Tube : 3.0(OD)X60(L) Ruggedised : 100(L)X12(W)X8(H)

Coupling Ratio / Insertion Loss	1x2
50/50	4.1/4.1
40/60	5.2/3.2
30/70	6.4/2.5
20/80	8.4/1.8
10/90	11.8/1.3
5/95	15.2/1.1
1/99	22.5/0.9

Performance Specification			
Specifications	1x3	1x4	1x5
Insertion Loss	≤6.5	≤8.0	≤8.5
Package Dimension(mm)	250µm Fiber : 4.0(OD)X60(L) 900µm Loose Tube : 4.0(OD)X65(L)		

*The Insertion Loss figures for multimode splitters are provided as a guide and are an absolute maximum for all multimode fibre types and test conditions. Detailed losses are available on request.