For a complete components overview see our website at **www.foc-fo.com**.

Components ▶ Couplers ▶ Singlemode Couplers ▶ SM for Special Wavelengths ▶

SM Short Wavelength Coupler (SWC)

For the wavelength range from 460 nm to 1060nm

Singlemode Short Wavelength Couplers (SWC) are passive optical devices which allow the distribution and combination of signals of wavelength below classical wavelengths of telecommunication.
The couplers are manufactured on the basis of an advanced Fused Biconal Taper (FBT) technology for a wavelength range from 400 nm to 1100 nm to provide optimum performance.

Features

- Low insertion loss and extremely low excess loss.
- Free choice of coupling ratio, e.g. as tap coupler with a coupling ratio of 1% or as symmetrical coupler with coupling ratio of 50% .
- High thermal, mechanical and enviromental stability to meet the requirements of Telcordia GR-1209 / GR-1221.
- Option of manufacture to customer specifications.

Applications

- Public and private fibre-optic networks.
- Measurement systems and test equipment.
- Optical transmission and monitoring systems.

Models

- Supplied in various housing sizes with bare fibre pigtails, loose buffered tube pigtails or reinforced cable pigtails.
- Couplers with more than two outlets are available as truely fused components with up to four fibres or as coupler modules.
- All connector standard types are available.

For a list of all models including dimensional specifications see the data sheets Coupler Models; Overview of Short and Standard Versions.
For check lists and additional ordering information for our products visit our website or see separate data sheets.

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Optical parameter without connectors for 1x2 and 2x2 configurations

Wavelength[3] [nm]		488		533, 650, 760		850, 980, 1060	
Output port		O 1	O 2	O 1	O 2	O 1	O 2
Max. Insertion Loss [1,2][dB] with Coupling Ratio	50/50 %	3,9	3,9	3,8	3,8	4,0	4,0
	60/40 %	3,0	5,0	2,9	4,9	3,1	5,1
	67/33 %	2,5	5,9	2,4	5,8	2,6	6,0
	70/30 %	2,3	6,5	2,2	6,4	2,4	6,6
	80/20 %	1,6	8,4	1,5	8,3	1,7	8,5
	90/10 %	1,1	12,0	1,0	11,9	1,2	12,1
	95/05 %	0,8	16,5	0,7	16,4	0,9	16,6
	99/01 %	0,5	23,5	0,4	23,4	0,6	23,6
Min. Directivitiy [dB]		55 for 1x2, 60 for 2x2 [4]					
Min. Return Loss [dB]		55 for 1x2, 60 for 2x2 [4]					

[1] includes fiber attenuation for pigtail lengths up to 1m
[2] attenuation increases by 0.2dB for 2x2 configuration
[3] couplers for other wavelengths on request
[4] measured at 1310 nm

Optical parameter without connectors for 1x3, 2x3 and 3x3 configurations

Wavelength [3] [nm]		488			533, 650, 760			850, 980, 1060		
Output port		O 1	O 2	O 3	O 1	O 2	O 3	O 1	O 2	O 3
Max. Insertion Loss [1,2][dB] with power splitting	90/05/05 %	1,1	17,5	17,5	1,0	17,4	17,4	1,2	17,6	17,6
	80/10/10 %	1,8	13,1	13,1	1,7	13,0	13,0	1,9	13,2	13,2
	70/15/15 %	2,4	10,3	10,3	2,3	10,2	10,2	2,5	10,4	10,4
	60/20/20 %	3,1	8,6	8,6	3,0	8,5	8,5	3,2	8,7	8,7
	50/25/25 %	4,0	7,4	7,4	3,9	7,3	7,3	4,1	7,5	7,5
	40/30/30 %	5,0	6,5	6,5	4,9	6,4	6,4	5,1	6,6	6,6
	33/33/33 %	5,9	5,9	5,9	5,8	5,8	5,8	6,0	6,0	6,0
	30/35/35 %	6,5	5,7	5,7	6,4	5,6	5,6	6,6	5,8	5,8
	20/40/40 %	8,6	5,0	5,0	8,5	4,9	4,9	8,7	5,1	5,1
	10/45/45 %	13,1	4,5	4,5	13,0	4,4	4,4	13,2	4,6	4,6
Min. Directivity [dB]		55 for 1x3 and 2x3, 60 for 3x3 [4]								
Min. Return Loss [dB]		55 for 1x3 and 2x3, 60 for 3x3 [4]								

[1] includes fiber attenuation for pigtail lengths up to 1m
[2] attenuation increases by 0.3dB for 2x3 and 3x3 configurations
[3] couplers for other wavelengths on request
[4] measured at 1310 nm

Optical parameter without connectors for 1x4, 2x4, 3x4 and 4x4 configurations

Wavelength[3] [nm]	488				533, 650, 760				850, 980, 1060			
Output port	O 1	O 2	O 3	O 4	O 1	O 2	O 3	O 4	O 1	O 2	O 3	O 4
Max. Insertion Loss [1,2][dB] with equal power splitting	7,1	7,1	7,1	7,1	7,0	7,0	7,0	7,0	7,2	7,2	7,2	7,2
Min. Directivity [dB]	55 for 1x4 and 2x4 and 3x4, 60 for 4x4[4]											
Min. Return Loss [dB]	55 for 1x4 and 2x4 and 3x4, 60 for 4x4[4]											

[1] includes fiber attenuation for pigtail lengths up to 1m
[2] attenuation increases by 0.2dB for 2x4, 3x4 and 4x4 configurations
[3] couplers for other wavelengths on request
[4] measured at 1310 nm