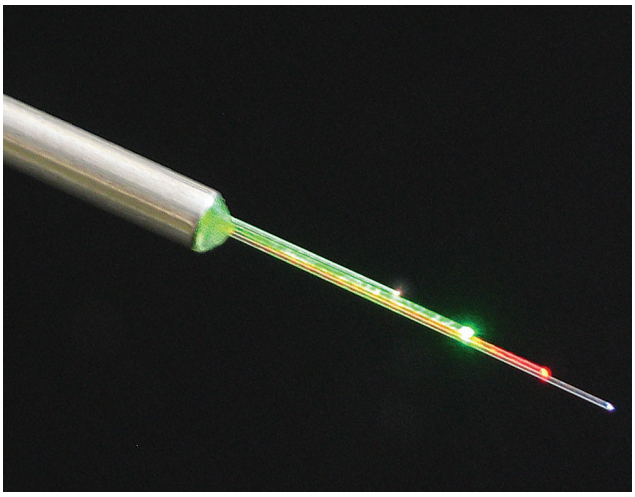
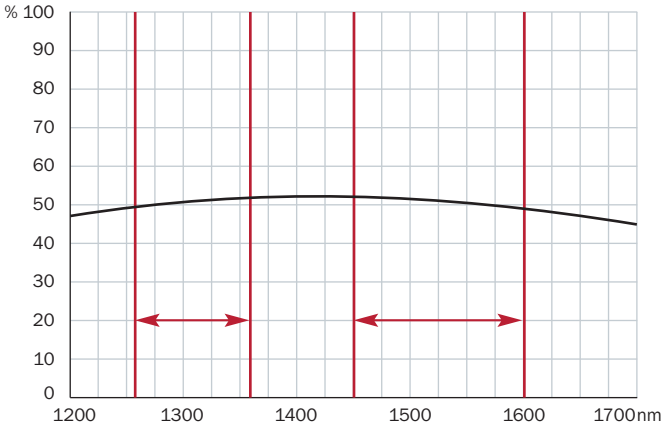
Extended Wavelength Independent Coupler (EIC)

For the extended wavelength range 1310 ± 50 nm and 1550 +50/-100 nm





Wavelength dependence from Coupling Ratio of a symmetrical coupler EIC

Extended Wavelength Independent Couplers (EIC) are passive optical devices which allow the distribution and combination of optical signals of a broad wavelength range. In difference to the established couplers of the WIC type EIC are designed for using additional wavelengths in the third optical window.
The couplers are manufactured on the basis of an advanced Fused Biconcal Taper (FBT) technology to provide optimum performance and longtime stability.

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 return loss, i.e. no reflections interfering with the transmitter in analogue systems
- High thermal, mechanical and enviromental stability to meet the requirements of Telcordia GR-1209 and GR1221
- Option of manufacture to customer specifications

Applications

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

Designs

- 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 for 1x2 and 2x2 configurations

Wavelength [nm]		1310 ±50 and 1550 +50/-100	
Output port		**O 1**	**O 2**
Max. Insertion Loss [dB] with Coupling Ratio	50/50 %	4,0	4,0
	60/40 %	3,0	5,2
	67/33 %	2,5	6,2
	70/30 %	2,2	6,8
	80/20 %	1,5	9,0
	90/10 %	0,9	12,8
	95/05 %	0,6	16,6
	99/01 %	0,4	24,5
Min. Directivity [dB]		55 for 1x2, 60 for 2x2	
Min. Return Loss [dB]		55 for 1x2, 60 for 2x2	
Polarisation Dependent Loss (1,2) [dB]		typical 0,05	

(1) maximum 0,1 dB for port O 1, maximum 0,2 dB for port O 2, for symmetrical couplers (2) measured at 1310 nm and 1550 nm

Optical parameter for 1x3 configurations

Wavelength [nm]		1310 ±50 and 1550 +50/-100		
Output port		**O 1**	**O 2**	**O 3**
Max. Insertion Loss [dB] with power splitting	90/05/05 %	0,9	17,4	17,4
	80/10/10 %	1,6	13,0	13,0
	70/15/15 %	2,3	10,9	10,9
	60/20/20 %	3,0	9,1	9,1
	50/25/25 %	4,0	7,8	7,8
	40/30/30 %	5,1	6,7	6,7
	33/33/33 %	6,2	6,2	6,2
	30/35/35 %	6,7	5,8	5,8
	20/40/40 %	9,1	5,1	5,1
	10/45/45 %	15,0	4,5	4,5
Min. Directivity [dB]		55		
Min. Return Loss [dB]		55		
Polarisation Dependent Loss (1,2) [dB]		typical 0,05		

(1) maximum 0,1 dB for port O 1, maximum 0,2 dB for port O 2 and for port O 3, for symmetrical couplers
(2) measured at 1310 nm and 1550 nm

Optical parameter for 1x4 configurations

Wavelength [nm]	1310 ±50 and 1550 +50/-100			
Output port	**O 1**	**O 2**	**O 3**	**O 4**
Max. Insertion Loss [dB] with equal power splitting	7,6	7,6	7,6	7,6
Min. Directivity [dB]	55			
Min. Return Loss [dB]	55			
Polarisation Dependent Loss (1,2) [dB]	typical 0,25			

(1) maximum 0,5 dB (2) measured at 1310 nm and 1550 nm