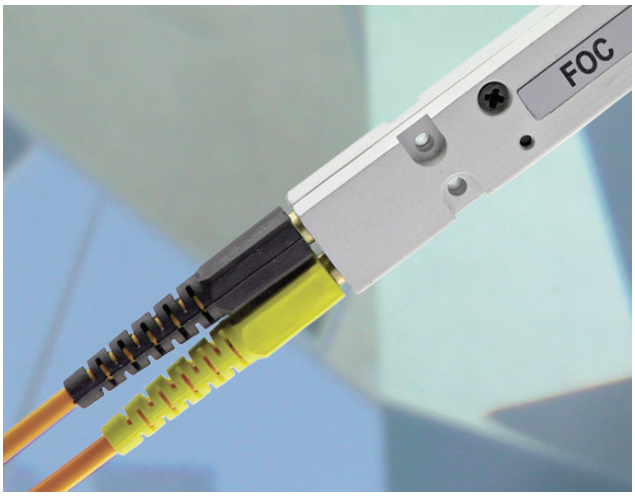
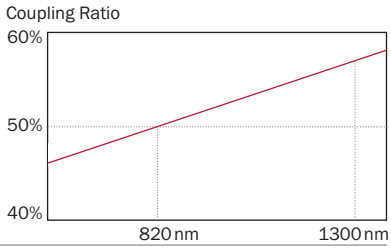
For a complete overview of components visit our website at **www.foc-fo.com**.

Components ► Couplers ►

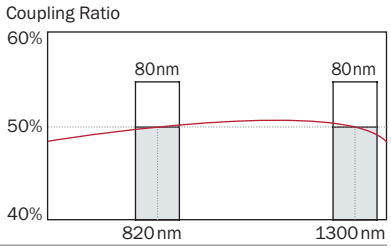
Multimode Couplers (MMC)

For the wavelength range 820 ±40 nm, 1300 ±40 nm, 780-1340 nm





Wavelength dependence of coupling ratio of a symmetrical multimode coupler for the first optical window



Wavelength dependence of coupling ratio of a symmetrical wavelength independent multimode coupler

Multimode couplers are passive optical devices which allow the distribution and combination of optical signals. They are used in private fibre-optic networks as nodes in data transmission networks. Further fields of application are measurement set-ups, measuring instruments, sensor- and automation systems.
The couplers are manufactured on the basis of a combination of etching technology and the Fused Biconical Taper (FBT) principle. They are pure fibre-optic components featuring.

Features

- Low insertion loss and excess loss, i.e. extremely low loss within the established fibre-optic network
- Free choice of coupling ratio, e.g. as tap coupler with a coupling ratio of 5% or as symmetrical coupler with 50%
- Extremly low wavelength dependence of the coupling ratio
- High thermal and mechanical stability
- Optimal solution for each individual application with respect to optical and mechanical characteristics
- Option of manufacture to customer specifications

Designs

- The couplers are supplied in various sizes with fibres, loose buffered fibres or cables.
- The standard fibre length is 2 m each side.
- All versions are available in 1x2 or 2x2 configuration.
- Couplers with more than two outlets are available as coupler modules.
- Standard fibre types are graded-index fibres with core diameters of 50µm or 62.5µm.
- On request couplers with different fibres, e.g. step index fibres or large core fibres, are available.

Multimode coupler types

Multimode couplers for the first optical window
These couplers are optimised for the first optical window and guarantee constant optical parameters for 820 ±40 nm.

Multimode couplers for the second optical window
These couplers are optimised for the second optical window andguarantee constant coupling ratio and insertion loss acrossthe wavelength range from 1260 nm to 1340 nm.

Wavelength Independent Multimode Couplers
Wavelength independent multimode couplers are optimized for the first and the second optical window. They guarantee constant optical parameters and are suitable to work over the full wavelength range from 780 nm to 1340 nm.

For check lists and additional ordering information for our products visit our website or see separate data sheets.

FOC – fibre optical components GmbH
Barbara-McClintock-Str. 5 I 12489 Berlin, Germany
p +49 30 565507-0 I **f** +49 30 565507-19
w www.foc-fo.com I **e** info@foc-fo.de

Release 22.04.2020
Subject to modifications
DBE-COM-0092V004

Specifications

Wavelength range		820 ±40 nm / 1300 ±40 nm / 820 -40 nm to 1300 +40 nm	
Class		1	
Output		Out 1	Out 2
Maximum insertion loss (dB) with coupling ratio	50/50 %	4,0	4,0
	55/45 %	3,6	4,5
	60/40 %	3,1	5,1
	65/35 %	2,8	5,8
	67/33 %	2,6	6,0
	70/30 %	2,4	6,6
	75/25 %	2,1	7,5
	80/20 %	1,8	8,8
	85/15 %	1,5	10,5
	90/10 %	1,3	13,6
	95/05 %	0,9	16,6

Designs

Size	Description	Fibre type	Dimensions [mm]	Configurations	Pigtail
02	⌀ 0,9mm tube size	all	3,8 (⌀) x 76	1x2, 2x2	⌀ 0,9mm loose tube
03	3mm standard size	all	13 x 9,5 x 95	1x2, 2x2	reinforced cable
04	Standard size	all	2,9 (⌀) x 55	1x2, 2x2	Primary coated fibre
05	⌀ 0,9mm block size	all	10 x 6 x 76	1x2, 2x2	⌀ 0,9mm loose tube
06	3mm compact size	all	12,8 x 9,2 x 80	1x2	reinforced cable
10	Standard module	all	92 x 9,5[(1)] x 155	up to 66 ports	tube or cable

[(1)]High depends on configuration

Parameters for couplers from other fibres on request.

For couplers with connectors the above insertion loss values must be increased (see separate data sheet).

FOC – fibre optical components GmbH
Barbara-McClintock-Str. 5 I 12489 Berlin, Germany
p +49 30 565507-0 I f +49 30 565507-19
w www.foc-fo.com I e info@foc-fo.de