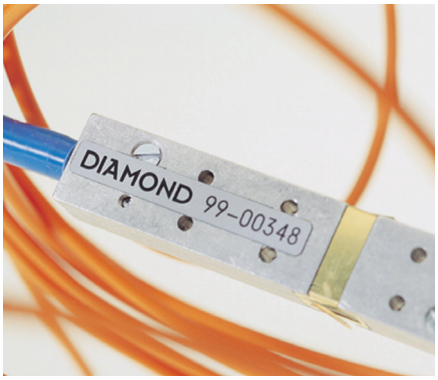
DIAMOND
Fiber Optic Components

COUPLERS

Multimode

MULTIMODE COUPLERS
820 ±40 nm, 1300 ±40 nm, 780-1340 nm



GENERAL

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

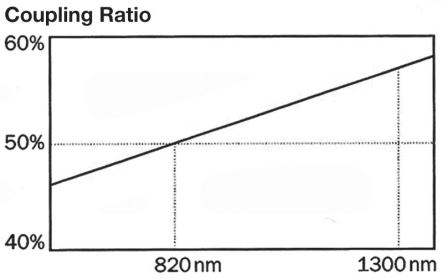
- Low insertion loss and excess loss, i.e. extremely low loss within the established fibre-optic network
- Free choice of coupling ratio, e.g. as tap coupler with a coupling ratio of 5% or as symmetrical coupler with 50%
- Extremely low wavelength dependence of the coupling ratio
- High thermal and mechanical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

APPLICATIONS

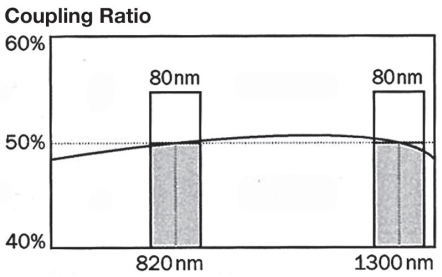
- The couplers are supplied in various sizes with fibres, loose buffered fibres or cables
- The standard fibre length is 2 m each side
- All versions are available in 1x2 or 2x2 configuration
- Couplers with more than two outlets are available as coupler modules
- Standard fibre types are graded-index fibres with core diameters of 50 µm or 62.5 µm
- 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 first optical window and guarantee constant coupling ratio and insertion loss across the wavelength range from 1260 nm to1340 nm.
- Wavelength Independent Multimode Couplers
  Wavelength independent multimode couplers are optimized for the 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.



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.

DIAMOND SA | Via dei Patrizi 5 | CH-6616 Losone - Switzerland
Tel. +41 58 307 45 45 | e-mail info@diamond-fo.com
www.diamond-fo.com

Specifications subject to change without notice

BDD 1950951 *08_13*

AVAILABLE COUPLER TYPES

FIBER TYPE	PIGTAIL TYPE	CONFIGURATIONS	HOUSING TYPE	DIMENSIONS (mm)
50/125	50/125/250	1x2, 2x2	BG04	Ø 2,9 x 55
	50/125/250/900	1x2, 2x2	BG02	Ø 3,8 x 76
		1x2, 2x2	BG05	10 x 6 x 76
	50/125/250/900/2100....3000	1x2, 2x2	BG03	13 x 9,5 x 95
		1x2	BG06	12,8 x 9,2 x 80
	50/125/250/xxx/yyyy	up to 66 ports	BG10	Ø 6,5 x 80

Other coupler types upon request

OPTICAL SPECIFICATIONS

(WAVELENGTH 820 ±40nm / 1300 ±40nm / 820 -40nm up to 1300 +40nm)

OPTICAL PARAMETER FOR 1x2 AND 2x2 CONFIGURATIONS

OUTPUT PORT		O 1	O 2
Class		1	
Max. 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

Other specifications for Multimode couplers from other fibres upon request.