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Components ▶ Couplers ▶ Singlemode Couplers (SM)
▶ SM Power Splitters ▶
Singlemode-Coupler-Modules



Optical coupler modules are passive optical devices which allow the distribution and combination of optical signals. They are used in public and private fibre-optic networks as nodes for data transmission (telephone, cable TV etc.); further fields of application are in measurement set-ups, measuring instruments, and sensor technology.

The basic couplers are manufactured on the basis of an advanced Fused Biconical Taper (FBT) technology to provide optimum performance and longtime stability. The coupler modules consist of a set of different or identical fusion couplers.

Features

- Low insertion loss and extremely low excess loss
- Different modul configurations: For standard configurations see table "Optical parameter". Other configurations, e.g. 1x7 or 1x11, are available on request.
- 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 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

Module types

Coupler Modules come in distinct types, wavelength selective or with broadband properties:

They are classified just like SM-Couplers (see basic information Singlemode couplers):

- Standard Singlemode Coupler Modules
- Wavelength Flattened Coupler Modules
- Wavelength Independent Coupler Modules
- Extended Wavelength Independent Coupler Modules
- Full RangeWavelength Independent Coupler Modules

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Optical parameter

Configuration ⁽¹⁾			1x2 2x2	1x4 2x4	1x6 2x6	1x8 2x8	1x12 2x12	1x16 2x16	1x24 2x24	1x32 2x32	1x64 2x64
Insertion Loss [dB] ^(2,3)	SSC-Modules 1310 ±5 nm, 1550 ±5 nm or 1625 ±5 nm	min.	2,8	5,6	7,1	8,4	10,0	11,2	12,5	14,0	16,8
		max.	3,5	7,0	10,1	10,5	13,3	13,6	16,5	16,8	20,4
	WFC-Modules 1310 ±40 nm, 1550 ±40 nm or 1625 ±40 nm	min.	2,8	5,6	7,1	8,4	10,0	11,2	12,5	14,0	16,8
		max.	3,5	7,0	10,1	10,5	13,3	13,6	16,5	16,8	20,4
	WIC-Modules 1310 ±40 nm and 1550 ±40 nm	min.	2,7	5,4	6,8	8,1	9,6	10,8	12,0	13,5	16,2
		max.	3,6	7,2	10,2	10,6	13,5	13,8	16,7	17,0	20,6
	EIC-Modules 1310 ±50 nm and 1550 ±50 nm/-100 nm	min.	2,6	5,2	6,5	7,8	9,2	10,4	11,6	13,0	15,6
		max.	3,7	7,4	10,3	10,7	13,7	14,0	16,5	17,2	20,8
	FIC-Modules 1310 ±50 nm and 1550 ±100 nm	min.	2,5	5,0	6,2	7,5	8,8	10,0	11,2	12,5	15,0
		max.	3,8	7,6	10,4	10,8	13,8	14,1	16,7	17,4	21,0
Thermal stability (-25 °C to +70 °C)	[dB]	±0,3	±0,4	±0,4	±0,5	±0,5	±0,5	±0,5	±0,5	±0,5	±0,5
Min. Directivity ⁽³⁾	[dB]	55									
Min. Return Loss ⁽³⁾	[dB]	55									
Max. Polarization Dependent Loss ⁽⁴⁾	[dB]	0,3									

(1) For other configurations please ask. (2) incl. wavelength, temperature and polarization dependence
 (3) without connectors, (4) measured at central wavelengths of wavelength ranges

Standard housing options

Size	Description	Dimensions [mm]	Configurations	Interface type
10	Standard modul	92 x 9,5 ⁽¹⁾ x 155	up to 66 ports	tube or cable
19	19" 1HU Fiberbox	483 x 44 x 262	up to 33 ports	mating adapters at front
30	19" 3HE 7DU closed	35,6 x 128,5 x 160	up to 9 ports	mating adapters at front
31	19" 3HE 7DU compact	35,1 x 128,9 x 224	up to 12 ports	mating adapters at front
40	small table top size	135 x 40 x 185	up to 6 ports	mating adapters at front
41	large table top size	135 x 80 x 185	up to 10 ports	mating adapters at front
50	ETS 2SU Variobox	533 x 50 x 152	up to 25 ports	mating adapters at front

(1) Height depends on configuration and pigtail type.

