

# SFM -S85-01x02

## Multimode Band Couplers

### Description:

Multimode Band Couplers are ultra reliable devices featuring low backreflection, low insertion loss, and high port isolation over wide ranges of temperature and wavelength. The Multimode Band Couplers are designed to divide and/or combine different optical signals in optical fiber systems. With its innovative Fused Technology process, series SFM Band Couplers have proven to provide exceptional characteristics for all applications demanding critical performance. Splitting ratios can be customer specified in range 1%:99% and 50%:50%. Available in a wide variety of packaging configurations, these SFM series are operable in 850 nm and 1300 nm wavelength range. Various types of pigtailing and connector terminations are available to meet your requirements.

### Features:

- Low insertion loss
- High port isolation
- Custom defined specifications
- Environmentally stable



### Applications:

- Telecommunications
- Local area network
- Fiber to the home
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV

### Coupling Ratio vs. Insertion Loss

Coupling Ratio (%)	Insertion Loss (dB)	
	Super Grade ( S )	High Grade ( H )
50 / 50	3.9	4.3
40 / 60	4.9 / 3.0	5.4 / 3.5
30 / 70	6.2 / 2.3	6.7 / 2.7
20 / 80	8.0 / 1.6	8.7 / 2.1
10 / 90	11.3 / 1.1	12.2 / 1.6
5 / 95	14.9 / 0.9	16.2 / 1.3
1 / 99	22.1 / 0.7	22.7 / 1.0
Other ratio	To be confirmed	

**Performance specifications:**

ITEM	Multimode Band Couplers	
Operating Wavelength, nm	800 or 1300	
Grade	Super ( S )	High ( H )
Coupling Ratio Tolerance (%)	5	7
Uniformity, dB (50:50)	0.5	
Thermal Stability, dB (peak-peak)	< 0.2	< 0.3
Port Configuration	1 x 2 or 2 x 2	
Coupling Ratio	1:99 to 50:50, (50:50 standard)	
Insertion Loss, dB	Refer to the Coupling ratio vs. Insertion loss chart	
Directivity, dB	> 40	
Operating Temperature*, °C	-25 to +70	
Storage Temperature*, °C	-40 to +85	

\*) Conditioned by the cable type

**Ordering Code:**

**SFMX - S85 - 01 x 02 - XX - XXX - NC-NC**

<b>SFM5</b>	MM 50/125
<b>SFM6</b>	MM 62.5/125

<b># port</b>
<b>01 x 02</b>
<b>02 x 02</b>

<b>coupling ratio</b>
<b>50</b> 50/50
<b>40</b> 40/60
<b>30</b> 30/70
<b>20</b> 20/80
<b>10</b> 10/90
<b>05</b> 5/95
other

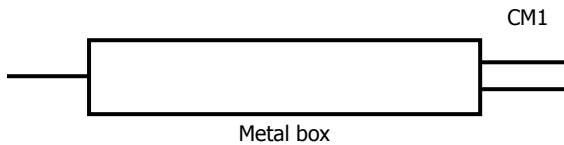
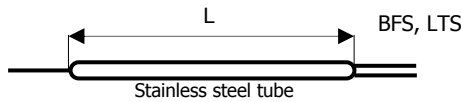
<b>grade + wavelength</b> (S – super)
<b>S85</b> 850 nm
<b>S13</b> 1300 nm

no input and output connectors  
connector type:  
-can be defined following CON\_14-01  
(Jumper Ordering Code)

**Note:** standard fiber/cable length = 1 m

**package option I**

**BFS** Bare fiber 250 µm, standard tube  
(stainless steel tube Ø 3 mm, L=54 mm)  
**CM1** Cable 3 mm, metal box 100x15x9 mm



**package option II**

**CAPM** Optokon cassette  
**RM** rack mounted unit (MCNP-1U)  
**WM** wall mounted box (MPIC-4)  
**SC** splice cassette (TC251S-1X)  
**SA** stand alone (plastic box)