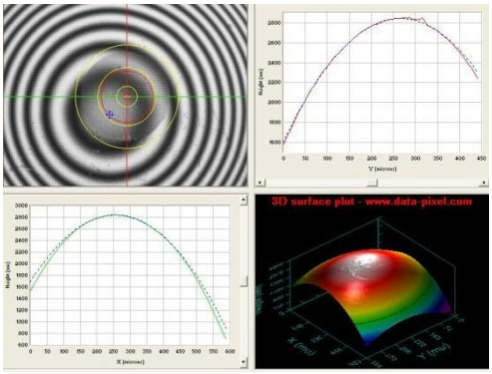
Master Patchcord

Description:

We offer an extensive range of pre-terminated cable assemblies that are 100% tested to ensure conformance with your specifications. These assemblies are used for measuring and manufacturing of fiber optic components and optical network testing.

The Master patchcord is equipped with a Master connector according to the specifications below. The master connector is specified with its Serial Number on connector body, which ensures traceability of transmission and geometrical parameters. The second connector is a standard type. For the hybrid patchcord version different types of master and standard connector types are also available.

M-UPC/UPC-20S7A



Interferometer testing

Specifications:	Single mode	Multimode
Insertion loss (IL)	≤ 0.1 dB (λ = 1310, 1550, 1650 nm)	≤ 0.1 dB (λ = 850, 1300 nm)
Return loss (RL)	UPC ≥ 55 dB, APC ≥ 65 dB	PC ≥ 30 dB
Geometrical parameters:		
Eccentricity of core for the center of ferrule	≤ 0.3 / 0.5[5] µm	N/A
Outer diameter of ferrule	Standard connectors: 2.499 µm	
	SFF connectors: 1.249 µm	
End curve offset	≤25 µm	
Fiber height	-30 to +50 nm	
End curve radius	Standard connectors: PC polishing 10 – 18 mm	
	APC polishing 5 – 12 mm	
	SFF connectors: PC/APC 5 – 12 mm	
APC angle	8 ± 0.1°	N/A
Temperature stability (-40°C to +80°C)	< 0.2 dB	< 0.2 dB
Mating durability (500 cycles)	< 0.2 dB	< 0.2 dB
Cable retention[5]	100 N	100 N
Material:		
Connector body	metal, plastic	metal, plastic
Ferrule material	full ceramic zirconia	full ceramic zirconia
Fiber	9/125	50/125; 62.5/125
Crimp sleeve	metal	metal
Boot	rubber	rubber

OPTOKON, a.s., Cerveny Kriz 250, 586 01Jihlava, Czech Republic
tel. +420 564 040 111, WWW.OPTOKON.COM, INFO@OPTOKON.CZ

Features:

- ISO 9100 approved
- 100% Return loss test
- 100% Visual Inspection
- 100% Insertion loss test
- 100% Interferometric test
- Manufactured to meet IEC/EN Standards
- Batch tracebility

Visual inspection:

Single mode

Allowable Defects and Scratches

Zone	Description	Diameter	Defects (diameter)	Scratches (width)
1a	Core Zone	0 to 25 µm	none	none
1b	Cladding Zone	25 to 120 µm	any < 2 µm 5 from 2 - 5 µm none > 5 µm	none > 3 µm
-	Adhesive Zone	120 to 130 µm	any	any
2	Contact Zone	130 to 250 µm	none > 10 µm	any

Ordering code:

M - YYY / AAA - XX XX(S²) – (LL³)

	connectors	
	YYY – Master connector	
	AAA[1] – standard connector	
	code	**type**
LC[5]	**LC**	LC/PC
	ULC	LC/UPC
	NLC	LC/APC
MU	**MU**	MU/PC
	UMU	MU/UPC
	NMU	MU/APC
FC	**PC**	FC/PC
	UPC	FC/UPC
	NPC	FC/APC
SC	**SC**	SC/PC
	USC	SC/UPC
	NSC	SC/APC
ST	**SL**	ST/PC
	USL	ST/UPC
LSH	**PE2**	LSH (E2000)/PC
	UE2	LSH(E2000)/UPC
	NE2	LSH(E2000)/APC

XX – Ø of cable		**XX - type of fiber[2]**	
20	cable Ø 2.0 mm	**OM1**	MM 62.5/125 µm
		OM2-5	MM 50/125 µm
		S2D	SM 9/125 µm (G.652D)
		S5X[4]	SM 9/125 µm (G.655X)
		S7X[4]	SM 9/125 µm (G.657X)

Note:

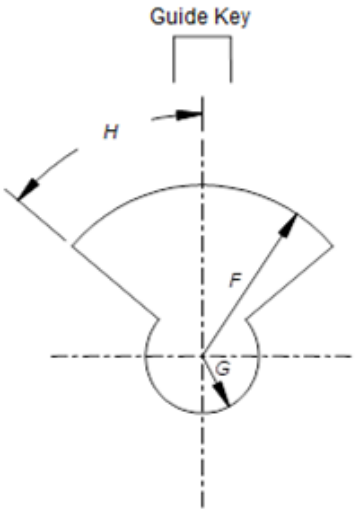
1) **AAA** – additional connector types according to CON_13-01_EN - ORD_CODE datasheet
2) **Mode scrambler** shall be used for MM measurement
3) Standard master patchcord length – 2 m or 3 m
4) X – according fiber subtype (e.g. G.657A1)
   - NPC – 2.02 standard, 2.15 on demand
   - Other connector types on request
   - Polishing types:
     PC – multimode connectors
     UPC – ultra PC, singlemode connectors
     APC – angled PC, 8° singlemode connectors
5) Cable retention for LC connectors = 90 N

MASTER ADAPTOR:

Attenuation between two master plugs: <0.15 dB

Example of marking:
FC connector type

Serial number at connector body



Note 6) Eccentricity of core

G = 0.3 µm
F = 0.5 µm
H = 30°

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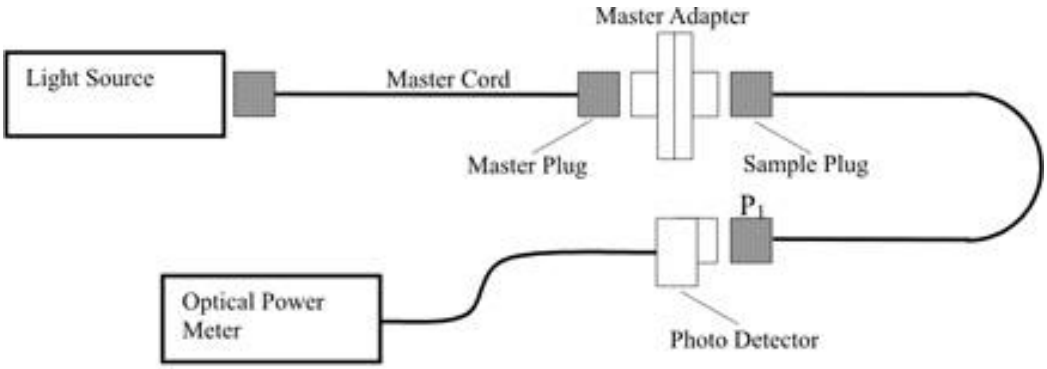
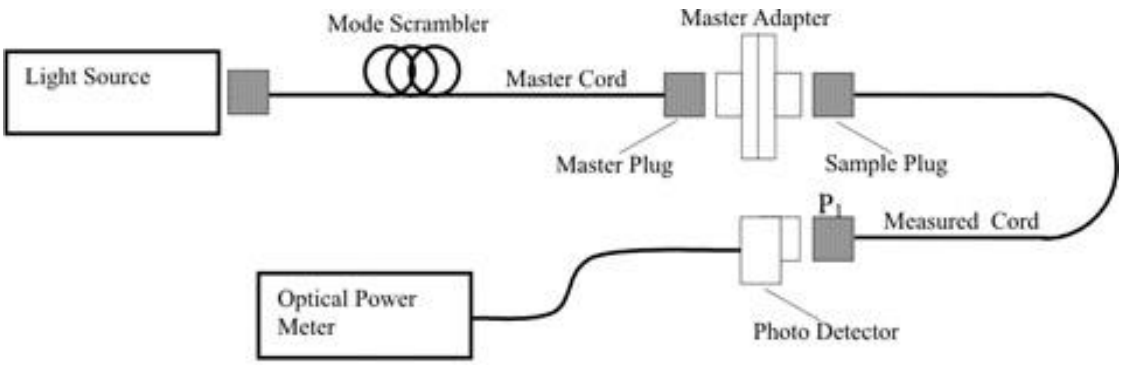
IEC 61300-3-4, Insertion method (C2)

Single mode:



$$\text{Insertion loss} = -10 \log \frac{P1}{P0} \text{ [dB]}$$

Multimode:



$$\text{Insertion loss} = -10 \log \frac{P1}{P0} \text{ [dB]}$$

Mode scrambler view