

# Master HMA 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 HMA connector according to the specifications below. The second connector is a standard type.

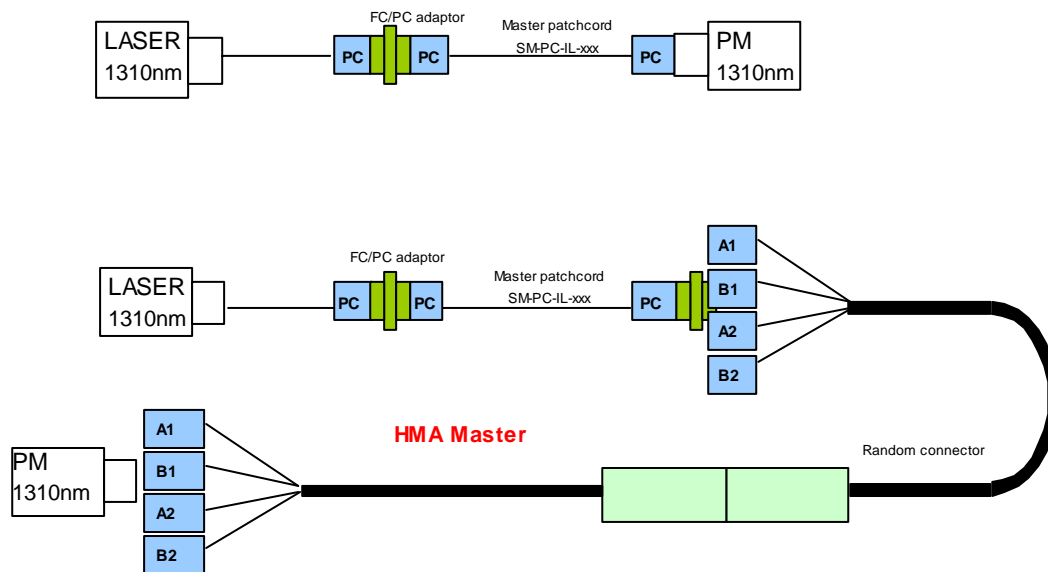


Fig. 1: Master HMA measuring

### HMA Master definition:

HMA master connector is selected from standard HMA connectors. At first step the reference value is set to 0 dB for channel A1. Then the IL is measured against 5 random HMA connectors according to the fig. 1. Insertion loss of all measured channels must to fill the demands defined in Table 1:

Table 1: Master HMA transmission parameters:

Optical Loss	Multimode: 50/125 @ 850/1300 nm	1.5 dB max
(connection of 2 HMA)	deviation for all channels:	0.5 dB max
	Singlemode: 9/125 @ 1310/1550 nm	2.0 dB max
	deviation for all channels:	0.8 dB max
Return Loss	Singlemode: 9/125 @ 1310/1550 nm	30 dB

Table 2: Master HMA environmental and mechanical parameters:

Operating temperature	-55 to +85 °C
Storage temperature	-60 to +85 °C
Water immersion	2 m depth duration 24 hours
Vibration Sinusoidal	10-500 Hz, 0.75 amplitude @ 10 g acceleration
Free fall resistance	500 falls onto concrete from 1.2 m height
Bump resistance	4000 bumps @ 40 g acceleration
Tensile Strength	Tensile of 1500 N, cable dependent
Cable Variations	Compatible with tactical cable: Plug: 5.0-5.5 mm Other cable sizes available on request

Table 3: Geometrical parameters of ferrule connected into HMA insert:

Eccentricity of core for the center of ferrule	≤ 0.5 μm
Outer diameter of ferrule	1.249 μm
End curve offset	≤ 25 μm
Fiber height	-30 to +50 nm
End curve radius	5 – 12 mm

Table 4: Visual inspection of ferrule connected into HMA insert:

Singlemode				
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 - HMAX / CCC FFF - XX - XX**

Connector type	
<b>HMA4</b>	Plug 4 fibers
<b>HMA6</b>	Plug 6 fibers

<b>CCC – Cable type</b>	
<b>LD4</b>	Tactical cable 4 fibers
<b>28</b>	Cable Ø 2.8 mm
<b>FF – Fiber type</b>	
<b>M6</b>	MM 62.5/125 μm
<b>M5</b>	MM 50/125 μm
<b>SM</b>	SM 9/125 μm (G.652)

<b>Total Cable length</b>	
<b>XX</b>	Length (m) (max. 10 m)
<b>Fan-out length</b>	
<b>XX</b>	Length (m) (max. 2 m)