

## Patch cord and Pigtail

### 1. General:

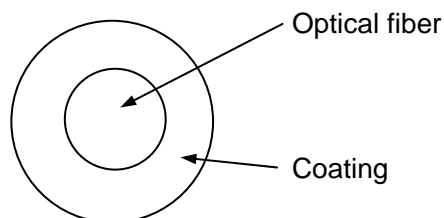
This specification covers the optical fiber Patch cord and Pigtail for laying in indoor installation and designed for telecommunication networks applications. The optical fiber is based on subcategory G.652.D in the ITU-T recommendation G.652 June 2005 and subcategory G.657.A in the ITU-T recommendation G.657 November 2006, and the optical fiber cable is based on the IEC 60794-3-10, March 2002.

### 2. Specifications:

#### Fiber characteristics

Item		Construction
		SM
Mode field diameter	at 1310 nm	$9.2 \pm 0.4 \mu\text{m}$
Cladding diameter		$125 \pm 0.7 \mu\text{m}$
Core concentricity error		$\leq 0.5 \mu\text{m}$
Cladding non-circularity		$\leq 2.0 \%$
Coating-cladding concentricity error		$\leq 12.5 \mu\text{m}$
Primary coating (UV curable material)		$250 \pm 15 \mu\text{m}$
Secondary coating (Polyester-elastomer)		$0.9 \pm 0.1 \text{mm}$

#### Construction of fiber



Transmission characteristics

Item		Performance
Attenuation*	at 1310 nm	≤ 0.35 dB/km
	at 1383 nm**	≤ 0.35 dB/km
	at 1550 nm	≤ 0.21 dB/km
	at 1650 nm	≤ 0.23 dB/km
Macro bending loss***		≤0.50dB ϕ=32 mm, 1turn at 1550nm ≤0.05dB ϕ=50 mm, 100turn at 1310nm ≤0.10dB ϕ=50 mm, 100turn at 1550nm ≤0.10dB ϕ=60 mm, 100turn at 1625nm
Cut-off wavelength (λ <sub>cc</sub> )		≤ 1260 nm
Chromatic dispersion	at 1310 nm	≤ 3.5 ps/nm·km
	at 1550 nm	≤ 18 ps/nm·km
Zero dispersion wavelength	—	1300 - 1324 nm
Zero dispersion slope	—	≤ 0.092 ps/nm <sup>2</sup> ·km

\* Attenuation may be large when measurement length is less than 1km.

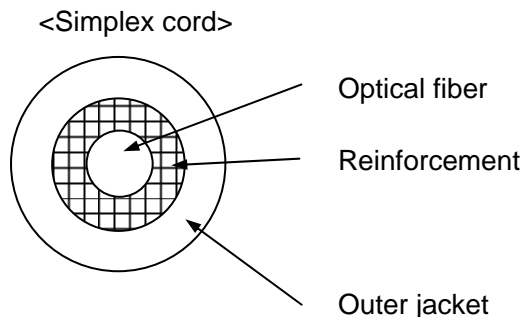
\*\* Attenuation increase due to hydrogen aging at this wavelength in optical fiber is tested in accordance with IEC60793-2-50 test procedure.

\*\*\* This characteristics is measured in bare fiber.

Mechanical characteristics

Item	Performance
Proof level	≥ 1.0 % strain

Construction of cord



Construction

Item	2.0mm Simplex
Fiber count	1
Cord diameter	2.0 mm
Cable weight	Approx. 4 kg/km

Patch cord specifications

Outer Diameter	Color	Outer Jacket Material	Flame Resistance	Fiber Length Tolerance (Ferrule to Ferrule)
0.9mm	White	TPEE	—	$<1\text{m} : +10/-0\text{cm}$ $1\text{m} \leq L < 10\text{m} : +10\%/-0\text{m}$ $10\text{m} \leq L < 50\text{m} : +1/-0\text{m}$ $\geq 50\text{m} : +2\%/-0\text{m}$
2.0mm	Yellow	PE	Non-halogen frame retardant sheath (LSZH)	

Humidity

Item	Performance
Humidity	0 to 100%

Connector specifications

Connectors	Compliance	External parts	Polish	Color (Housing/Boot)
SC	IEC 61754-4(2002-03) Ed. 1.2	Plastic	UPC	Blue / Lavender

\*Dust caps shall be preinstalled onto the connector ends.

\*Telcordia GR-326 complied.

Optical specifications

Fiber type	Polish	Wavelength	Insertion loss at each connector	Return Loss at each connector
Singlemode	UPC	1310 nm	$\leq 0.3 \text{ dB}$	$\geq 55 \text{ dB}$

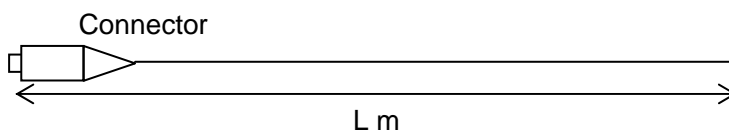
Ferrule specification

Parameter		Specification
Ferrule type		Fully zirconia-ceramic
Nominal ferrule diameter	SC	$2.5\text{mm} \pm 0.5\mu\text{m}$
Fiber concentricity		1 $\mu\text{m}$
Apex offset		$\leq 50 \mu\text{m}$

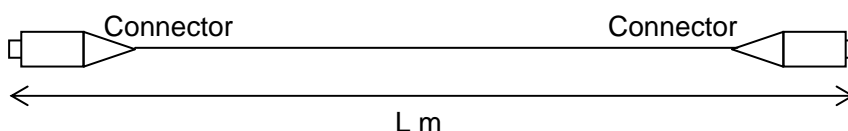
\*The ferrule end face geometry shall be measured base on an optical interferometric measuring technique.

Structure

Pigtail:

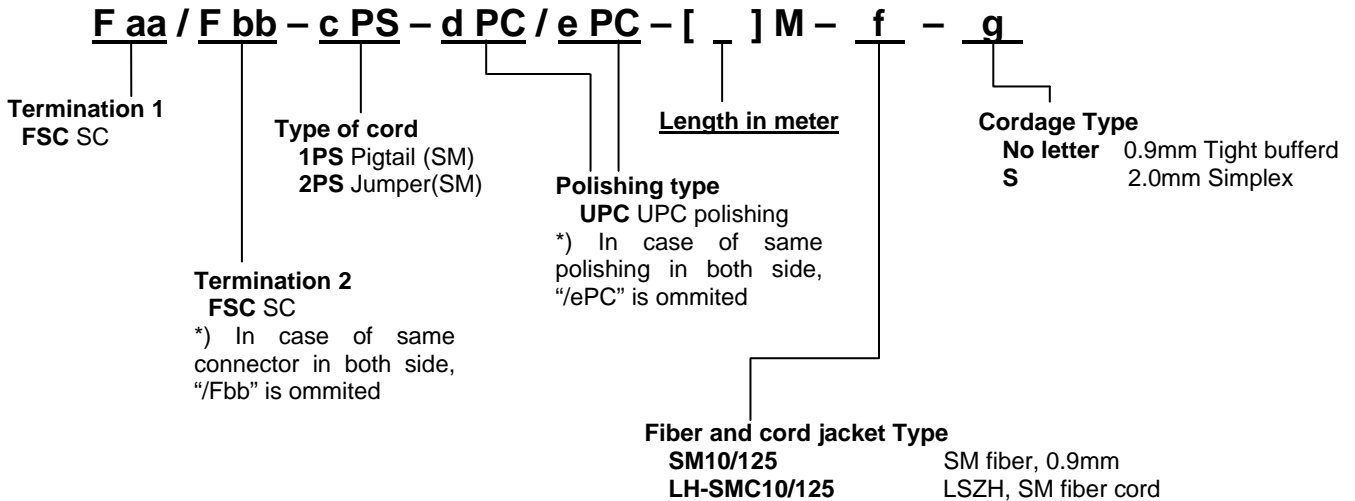


Patchcord



### 3. Ordering Information:

**Product Code:**



Examples

**FSC-2PS-UPC-5M-LH-SMC10/125-S**  
 Fiber : SM10/125, 2mm Simplex, LSZH jacket  
 Connector : SC with UPC polishing at both side.

### 4. Packing:

- \* Each pigtailed, patchcords and hybrid patchcords shall be equipped with dust cap and packed individually to protect from dust and moisture. The winding diameter shall not be less than 20 cm.
- \* Re-sealable plastic bag shall be used for the packaging of cord cables.
- \* Each pigtailed, patchcords and hybrid patchcords shall be packed individually in its own plastic bag.
- \* Each pigtailed, patchcords and hybrid patchcords shall be neatly packed in proper size hard carton boxes. Each box shall be clearly marked with the following :
  1. Description of Product code and customer's item (if required)
  2. Unit and Package quantity
  3. Supplier's/Manufacturer's name
  4. Customer name (if required)
  5. Date of Manufacture
  6. Country or Origin