

Fiber Optic Patch Chords- Single Mode



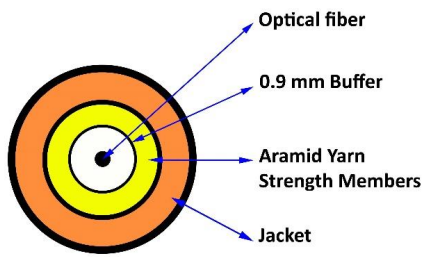
Features

- Flexible Angle Boots: Can be set to any angle & will remain in that angle
- Single Mode- G.652D or G.657A1 fiber
- Connectors: SC , FC and LC - In UPC and APC polishing
- Cable can be simplex, duplex or oval duplex
- Cable standard diameter 2mm. 3mm diameter also available

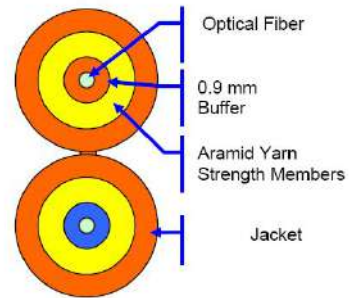
A. Product Specifications

Parameter	LC-UPC	SC, FC or ST in UPC finish	LC-APC	SC-APC and FC-APC
Insertion Loss (Typ)	0.10 dB	0.10 dB	0.15 dB	0.15 dB
Insertion Loss (Max)	0.30 dB	0.30 dB	0.30 dB	0.30 dB
Return Loss (Typ)	58dB	58dB	65dB	65dB
Return Loss (Min)	55dB	55dB	60dB	60dB
Operating Wavelength	1490nm, 1310nm and 1550nm			
Fiber Size	9/125um, Single Mode, ITU G.652D/ G.657.A1			
Cable Type	Indoor, LSZH Jacket, 2mm or 3mm OD			
Cable Colour	Yellow			
Operating Temperature	-20 to +70 ⁰ C			
Storage Temperatue	-25 to +70 ⁰ C			
Complying Stanadards	IEC 61753-021-2 Fibre optic interconnecting devices and passive components performance standard & Telcordia GR-326			
Mating Durability	500 Cycles minimum (as per IEC 61300-2-2)			

B. Cable Construction:



Simplex Cable



Duplex Zip Cable

C. Optical Fiber Specification

C.1. Single mode optical fibres; dispersion-unshifted fibres

The following specifications apply to the optical performance of the single mode fibers as supplied in a cable.

General description		Dispersion-unshifted fibre Matched cladding			
Performance		G652D		G657A1	
Characteristic	Units	Value		Value	
MFD, 1310nm	µm	9.2 ± 0.3		9.0 ± 0.4	
MFD, 1550nm	µm	10.4 ± 0.6		10.2 ± 0.6	
Core non-circularity	%	≤ 6.0		≤ 6.0	
Core/cladding concentricity error	µm	< 0.4		< 0.4	
Cladding diameter	µm	125.0± 0.3		125.0± 0.3	
Cladding non-circularity	%	≤ 0.5		≤ 0.5	
Coating diameter, uncoloured cloured	µm	242 ± 5 250± 15		242 ± 5 250± 15	
Coating/cladding concentricity error	µm	≤ 12		≤ 12	
Temperature sensitivity -60°C ≤ temp. ≤ +85°C	dB/km	≤ 0.05		≤ 0.05	
Point Discontinuity	dB	≤ 0.05		≤ 0.05	
Bending sensitivity 100 turns Ø50 mm; 1550 nm 100 turns Ø50 mm; 1625 nm 15 turns Ø15 mm; 1550 nm 15 turns Ø15 mm; 1625 nm 1 turn Ø10 mm; 1550 nm 1 turn Ø10 mm; 1625 nm	dB	≤ 0.05 ≤ 0.05		≤ 0.02 ≤ 0.03 ≤ 0.1 ≤ 0.3 ≤ 0.75 ≤ 1.5	
Proof stress level	GPa	≥ 0.7		≥ 0.7	
Fibre cut-off wavelength (λ _C)	nm	≤ 1250		≤ 1250	
Chromatic dispersion 1285-1330nm 1550nm 1625nm	ps/nm.km	≤ 3.0 ≤ 17.0 ≤ 21.0		≤ 3.2 ≤ 17.0 ≤ 21.0	
PMD	ps/√km	≤ 0.1		≤ 0.1	
IOR (indication)	-	1.465		1.465	
Attenuation @ 1383 nm	dB/km	≤ 0.35		≤ 0.35	

D. Cable Characteristics

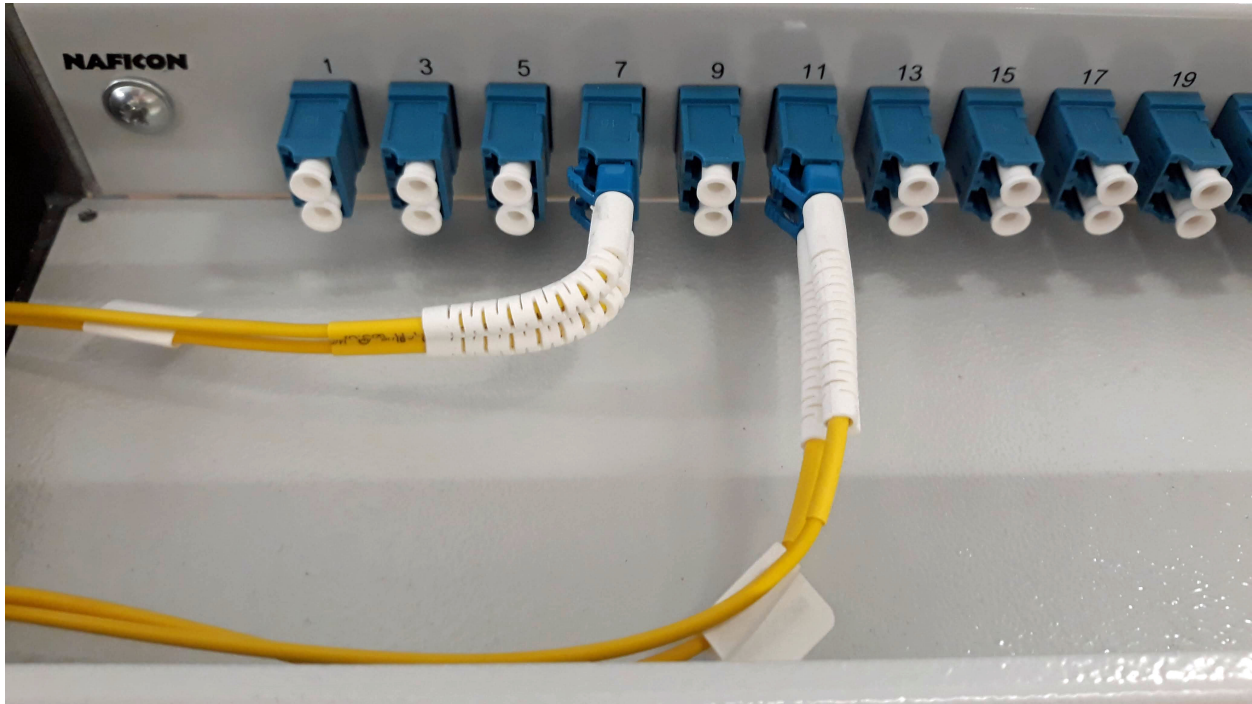
Parameter	Unit	2mm Cable	3mm Cable
Jacket Material		LSZH	LSZH
Buffer Diameter	mm	0.9	0.9
Aramid Surface, approx.	mm ²	0.8	1.0
Outer Sheath, Inner Diameter	mm	1.4	2.0
Sheath Thickness tolerance	mm	± 0.1	± 0.1
Outer Sheath: Outer Diameter ± 0.1* Width ± 0.3 (for Duplex Cable only)	mm	2.0 4.1	3.0 5.9
Cable Weight, approx.	kg/km	7.5	9.5
Fire Load , approx	MJ/Km	126	126
Max Tensile Load	N	200	300
Max Fiber Strain	%	0.33	0.33
Minimum Bend Radius 1. Static 2. Dynamic	mm	40 30	40 30
Crush Resistance	N/dm	500	500
Impact Resistance	J	1	1
Torsion Resistance	°/m	+/- 360	+/- 360
Operating Temperature	°C	-20/70	-20/70
Installation Temperature	°C	-5/45	-5/45
Storage Temperature	°C	-25/70	-25/70

* When duplex is separated to 2 x simplex, each simplex's diameter is in 2.0 or 3.0 ±0.1

D1: Optical Characteristics of Single Mode Fiber in the Cable

OTDR-attenuation of full production lengths at delivery (23°C) [dB/km]			
Attenuation at 1310nm/1550nm/1625nm			
Fibre Type	G652D		G657A1
Max [dB/km]	0.4/0.3/0.4		0.4/0.3/0.4
Attenuation curve irregularities	Short length used only, no detailed limit requirement		
Point Discontinuity	<0.10 dB		

Flexible Angle boots gives uniform bending and avoids congestion in panels



How to order:

PH-XXX - XXX- YYY- ZZ- LLm

Connector- End1:
SC- For SC-UPC
SCA- For SC-APC
LC- For LC-UPC
LCA- For LC-APC

Connector- End2:
SC- For SC-UPC
SCA- For SC-APC
LC- For LC-UPC
LCA- For LC-APC

Fiber Type

SM: Single Mode
OM1: Multimode 62.5/125um
OM3: Multimode 50/125um- OM3
OM4: Multimode 50/125um- OM4

Cable Length:

1m : 1 meter
2m : 2 meters
3m : 3 meters
5m : 5 meters
10m: 10 meters

Cable Construction:

21: 2mm Simplex
22: 2mm Duplex
31: 3mm Simplex
32: 3mm Duplex

Product Example: [PH-LC-SCA-SM-22-7.5m](#) for LC UPC - SC APC SM 2mm Duplex Patch chord, 7.5m

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