



# PATCH CORDS, PIGTAILS, ADAPTERS

## Fibre Optic Patch Cables

SXPC-LC/ST-UPC-OS-D

Outer jacket	LSOH
Strength member	aramid yarn
Operating temperature	-40 to +70 °C
Storage temperature	-40 to +70 °C
Cable diameter	2,0 mm
The diameter of the primary protection	250 µm
The diameter of the secondary protection	900 µm
Singlemode fibre type	G.652.D, G.657.A1
Multimode fibre type	G.651.1
Ferrule	UPC, APC
Minimum bend radius (short term)	10x D cable
Minimum bend radius (long term)	20x D cable
Life cycle	min. 1 000 insertions
Ferrule diameter of the LC connector	1,25 mm
Ferrule diameter of the SC/ST/E2000 connectors	2,5 mm

Solarix fibre optic patch cables provides connection between active and/or passive components at the end of physical link. All patch cables are made of LSOH coating. Their ferrules are of the UPC (ultra physical contact) type for both singlemode and multimode patch cables or APC (angled physical contact) type for singlemode patch cables. Singlemode patch cables use the G.652.D or G.657.A1 type fibres, on the other hand, multimode patch cables use the G.651.1 type. Solarix fibre optic patch cables are available in various combinations with different connectors such as LC, SC, ST, E2000. E2000 connectors are supplied by R & M. The standard lengths of Solarix patch cables are 1, 2, 3, and 5 m or any length to the specific order, but most often in the length of 7, 10, 15 and 20 m.

Parameter	Multimode UPC	Singlemode UPC	Singlemode APC
Max IL – insertion loss	< 0,3 dB	< 0,3 dB	< 0,3 dB
Max RL – return loss	> 35 dB	> 50 dB	> 60 dB

Part No.	Description
SXPC-LC/ST-UPC-OS-D	Patch cable 9/125 LCupc/STupc SM OS Duplex
SXPC-LC/ST-UPC-OM1-D	Patch cable 62,5/125 LCupc/STupc MM OM1 Duplex
SXPC-LC/ST-UPC-OM2-D	Patch cable 50/125 LCupc/STupc MM OM2 Duplex
SXPC-LC/ST-UPC-OM3-D	Patch cable 50/125 LCupc/STupc MM OM3 Duplex
SXPC-LC/ST-UPC-OM4-D	Patch cable 50/125 LCupc/STupc MM OM4 Duplex
SXPC-LC/ST-UPC-OM5-D	Patch cable 50/125 LCupc/STupc MM OM5 Duplex



# FIBRE OPTICS

## Optical Fibres Parameters

### Singlemode Fibres Basic Parameters

Geometric Parameters	Unit	ITU-T G.652.D	ITU-T G.657.A1	ITU-T G.657.A2
<b>Mode Field Diameter (MFD)</b>				
@ 1 310 nm	µm	9,2 ± 0,4	9,0 ± 0,4	8,6 ± 0,4
@ 1 550 nm	µm	10.4 ± 0,5	9,2 ± 0,4	9,6 ± 0,4
Cladding diameter	µm	125 ± 1,0	125 ± 0,7	125 ± 0,7
Coating diameter	µm	247 ± 7,0	245 ± 5,0	242 ± 5,0
Core-Cladding Concentricity Error	µm	≤ 0,6	≤ 0,5	≤ 0,5
Cladding-Coating Concentricity Error	µm	≤ 12	≤ 10	≤ 12
<b>Transmission Parameters</b>				
<b>Attenuation</b>				
@ 1 310 nm	dB/km	≤ 0,35 <sup>1)</sup>	≤ 0,38 <sup>1)</sup>	≤ 0,35 <sup>1)</sup>
@ 1 550 nm	dB/km	≤ 0,21 <sup>1)</sup>	≤ 0,22 <sup>1)</sup>	≤ 0,20 <sup>1)</sup>
@ 1 625 nm	dB/km	≤ 0,24 <sup>1)</sup>	≤ 0,25 <sup>1)</sup>	≤ 0,23 <sup>1)</sup>
<b>Dispersion Coefficient</b>				
@ 1 550 nm	ps/(nm*km)	≤ 18	≤ 18	≤ 18
@ 1 625 nm	ps/(nm*km)	≤ 22	≤ 22	≤ 23
PMD individual fibre	ps/√km	0,1	0,1	0,06
Cable Cutoff Wavelength λ <sub>cc</sub>	nm	≤ 1 260	≤ 1 260	≤ 1 260
Fibre Cutoff Wavelength λ <sub>c</sub>	nm	1 150 - 1 330	1 150 - 1 330	1 150 - 1 330

<sup>1)</sup> A typical value for fibres in loose tube cables.

### Multimode Fibres Basic Parameters

Geometric Parameters	Unit	ITU-T G.651.1 OM2	ITU-T G.651.1 OM3	ITU-T G.651.1 OM4	ITU-T G.651.1 OM5
Core diameter	µm	50 ± 2,0	50 ± 2,0	50 ± 2,0	50 ± 2,0
Cladding diameter	µm	125 ± 1,0	125 ± 1,0	125 ± 1,0	125 ± 1,0
Core-Cladding Concentricity Error	µm	≤ 1,0	≤ 1,0	≤ 1,0	≤ 1,0
Cladding-Coating Concentricity Error	µm	≤ 6,0	≤ 6,0	≤ 10,0	≤ 10,0
<b>Transmission Parameters</b>					
Numerical aperture	-	0,200 ± 0,015	0,200 ± 0,015	0,200 ± 0,015	0,200 ± 0,015
<b>Attenuation</b>					
@ 850 nm	dB/km	≤ 2,7 <sup>1)</sup>	≤ 3,0 <sup>1)</sup>	≤ 3,0 <sup>1)</sup>	≤ 3,0 <sup>1)</sup>
@ 1 300 nm	dB/km	≤ 0,8 <sup>1)</sup>	≤ 1,0 <sup>1)</sup>	≤ 1,0 <sup>1)</sup>	≤ 1,0 <sup>1)</sup>
<b>Bandwidth</b>					
@ 850 nm	MHz*km	≥ 500	≥ 1 500	≥ 3 500	≥ 3 500
@ 953 nm	MHz*km	-	-	-	≥ 1 850
@ 1 300 nm	MHz*km	≥ 500	≥ 500	≥ 500	≥ 500

<sup>1)</sup> A typical value for fibres in loose tube cables.