K209B LSZH Armoured Optical Fiber Cables

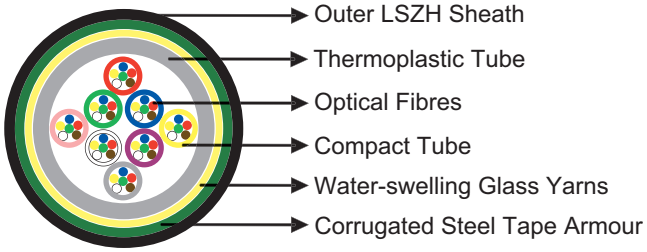
Applications

The cables are designed for long distance telecommunication and using optical fibres in urban railways infrastructure. These low smoke halogen-free cables are laid on hooks, pulled through ducts or cable trays.

Standards

- RATP K209B or RATP K209A

Construction



- Compact Tube: 6 or 12 singlemode optical fibres G652 or multimode fibers assembled under thermoplastic "peelable" skin. Tube diameter: maximum 1.5mm.
- Filling: Water-swelling yarns.
- Tube: Thermoplastic.
- Peripheral Strength Member: Water-swelling glass yarns.
- Armour: Corrugated steel tape armour 25/100.
- Sheath: LSZH.

Optional

K209A Type: For K209A type, the cables have loose tubes with 6-12 fibers, steel wire strand as central strength member, glass yarn reinforced, incorporating a corrugated steel tape armour and an outer UV stabilized LSZH jacket.

Electrical Characteristics at 20℃

Optical & Geometrical Properties for Single Mode Fibers

Maximum Attenuation		G652
@1310nm	dB/km	0.35
@1550nm	dB/km	0.22
Maximum Chromatic Dispersion		
Between 1260 and 1360nm	ps/(nm/km)	3.5
Between 1530 and 1565nm	ps/(nm/km)	19
Zero Dispersion Wavelength	nm	1310±11
Zero Dispersion Slope	ps/(nm^2.km)	0.09
Numerical Aperture		0.14
Point discontinuity	dB	0.1
PMD (individual fiber)	ps/km	0.2
Maximum Cutoff Wavelength	nm	1260
Cladding Diameter	um	125±1
Core/Cladding Concentricity Error	um	≤0.5
Cladding Non Circularity	%	≤1
Coating Non Circularity	%	≤6
Proof Test Level	Kpsi (GN/m^2)	100 (0.7)
Crush Resistance	N/cm	300
Maximum Laying Tension	N	3000

Optical & Geometrical Properties for Multimode Fibers

		50/125	62.5/125
Maximum Attenuation			
@850nm	dB/km	≤2.5	≤3.0
@1300nm	dB/km	≤0.7	≤0.8
Maximum Chromatic Dispersion			
@850nm	MHz*km	≥500	≥200
@1300nm	MHz*km	≥800	≥500
Zero Dispersion Wavelength	nm	1310	1310
Numerical Aperture	-	0.20±0.015	0.275±0.015
Core Diameter	um	50±3	62.5±3
Cladding Diameter	um	125±2	125±2
Core/Cladding Concentricity Error(Offset)	um	≤1.5	≤1.5
Coating-Clad Concentricity Error(Offset)	um	≤8	≤8
Core Non-Circularity	%	≤6	≤6
Cladding Non-Circularity	%	≤2 1	≤2 1
Coating Diameter	um	245±10	245±10
Proof-Test Level	Kpsi (GN/m^2)	100 (0.7)	100 (0.7)

↘ Mechanical and Thermal Properties

- Bending Radius: 20×OD
- Temperature Range: -40℃ to +60℃ (during operation); -10℃ +60℃ (during installation)

↘ Dimensions and Weight

K209A

Cable Code	No. of fibres	Distribution	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
RO/K209A-ML-C-9-TnxFn-SR-(STA)H	1-36	6 fibre per tubes	1.8	12	190
RO/K209A-ML-C-9-TnxFn-SR-(STA)H	42-72	6/12 fibre per tubes	1.8	13.5	230

Tn: Number of tubes; Fn: Number of fibers in a tube

K209B

Cable Code	No. of fibres	No of Tubes x No of Fibers/Tube	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
Singlemode Fibres From 6 to 36 OF – G652					
RO/K209B-ML-C-9-2x6-F-(STA)H	12	2 tubes of 6 OF	1.8	13	112
RO/K209B-ML-C-9-4x6-F-(STA)H	24	4 tubes of 6 OF	1.8	13	112
RO/K209B-ML-C-9-6x6-F-(STA)H	36	6 tubes of 6 OF	1.8	13	112
Singlemode Fibres From 48 to 72 OF – G652					
RO/K209B-ML-C-9-8x6-F-(STA)H	48	8 tubes of 6 OF	2.5	15.5	230
RO/K209B-ML-C-9-6x12-F-(STA)H	72	6 tubes of 12 OF	2.8	15.5	230
Multimode Fibres From 6 to 36 OF – 50/125					
RO/K209B-ML-C-5-1x6-F-(STA)H	6	1 tubes of 6 OF	1.8	13	112
RO/K209B-ML-C-5-2x6-F-(STA)H	12	2 tubes of 6 OF	1.8	13	112


Impact Resistant

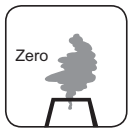

Mineral Oil Resistant


Acid&Alkaline Resistant


Laid in Cable Trays/on Hooks


Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1


Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266



Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1


Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073


Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453


Low Toxicity