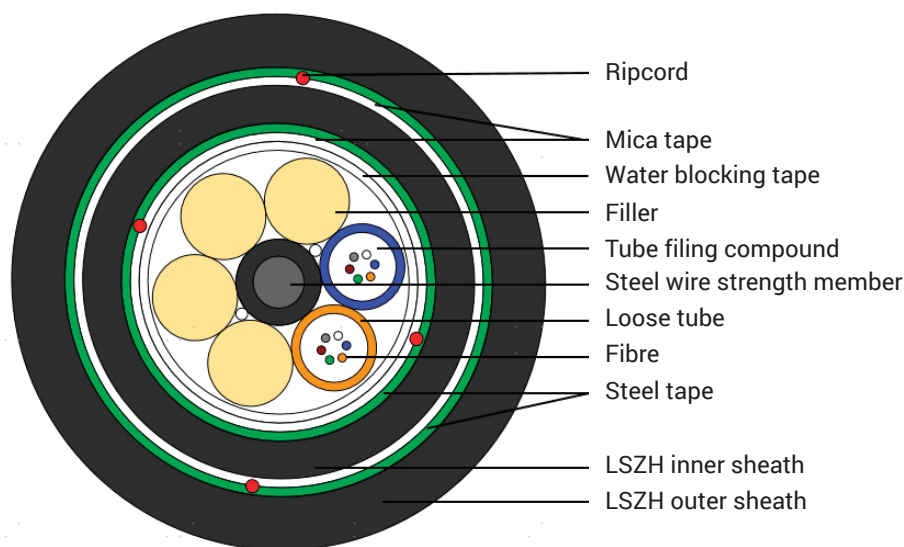


Fibre Cable Fire Rated (750°C 90min) Loose Tube SM 6 v Fibre – Black

FCFRLTS6BK

The unique second coating and stranding technology provide the fibres with enough space and bending endurance which ensure good optical property of the fibres in the cable. Accurate process control ensures good mechanical and temperature performance. High quality raw material guarantees the long service life of cable.

Structure Diagram



Schematic for reference only

Fibre and Loose Tube Identification

	1	2	3	4	5	6
COLOUR CODE	Blue	Orange	Green	Brown	Grey	White

Application

ITEM	VALUE
OPERATION TEMPERATURE	-40°C~+70°C
STORAGE TEMPERATURE	-40°C~+70°C
INSTALLATION TEMPERATURE	-10°C~+50°C
STATIC BENDING RADIUS	15 x the cable diameter
DYNAMIC BENDING RADIUS	30 x the cable diameter

Optical Fibre

Optical fibres supplied in this specification meet the requirements of ITU-T G.652.D

PARAMETER	SPECIFICATION
MFD (1310NM)	8.7~9.5μm
CLADDING DIAMETER	125±1.0μm
FIBRE DIAMETER	235~255μm, with UV coating and coloured to: 250±15um
CORE/CLADDING CONCENTRICITY ERROR	≤0.6um
COATING/CLADDING CONCENTRICITY ERROR	≤12.0um
CLADDING NON-CIRCULATORY	≤1.0%
CUT OFF WAVELENGTH	$\lambda_{cc} \leq 1260\text{nm}$
ATTENUATION COEFFICIENT	1310nm: 0.36dB/km max after cabling 1550nm: 0.22dB/km max after cabling
BENDING-LOSS PERFORMANCE OF OPTICAL FIBRE @ 1310NM & 1550NM	≤0.05dB (100 turns around a mandrel of 50mm diameter)
POLARISATION MODE DISPERSION MAXIMUM INDIVIDUAL FIBRE	≤0.2ps/√km
POLARISATION MODE DISPERSION LINK VALUE	≤0.1ps/√km
ZERO-DISPERSION WAVELENGTH	1300~1324nm
ZERO-DISPERSION SLOPE	≤0.092ps/nm ² km

Cable Dimensions and Descriptions

ITEM	CONTENTS	VALUE	
		6	12
STRUCTURE	Type	1+6	
LOOSE TUBE	Number	1	2
	Fibre counts/tube	6	
	Outer diameter (mm)	Nominal: 2.1	
FILLER	Number	5	4
CENTRAL STRENGTH MEMBER	Material	Steel Wire With PE Layer	
WATER BLOCKING	Material	Water blocking tape & yarn	
FIRE RESISTANT ELEMENT	Material	Mica tape	
ARMOR	Material	Steel tape	
INNER SHEATH	Material	LSZH	
	Colour	Black	
	Thickness (mm)	Nominal:1.0	
FIRE RESISTANT ELEMENT	Material	Mica tape	
ARMOR	Material	Steel tape	
OUTER SHEATH	Material	LSZH	
	Colour	Black	
	Thickness (mm)	Nominal: 2.0	
RIPCORDER	Number	2+2	
CABLE DIAMETER(MM) APPROX.		16.8	
CABLE WEIGHT(KG/KM) APPROX.		360	

Main Mechanical and Environmental Performance

Main Mechanical Performance

ITEM	TENSION(N)		CRUSH(N/100MM)	
	Short term	Long term	Short term	Long term
6/12	2700	1500	2200	1100

Main Flame Retardant and Fire Resistance

TEST	STANDARD
IEC 60332-1-2	Single vertical wire test
IEC 60331-25	750 °C 90min, no cooling
IEC 60754-1	No halogens
IEC 60754-2	No acid matters

Mechanical, Physical and Environmental Test Characteristics

ITEMS	TEST METHOD	REQUIREMENTS
TENSION	IEC 60794-1-21-E1 Load: According to 3.5 Sample length: Not less than 50m Duration time: 1min	Additional attenuation: ≤0.1dB after test No damage to outer jacket and inner elements
CRUSH	IEC 60794-1-21-E3 Load: According to 3.5 Duration of load: 1min	Additional attenuation: ≤0.1dB after test No damage to outer jacket and inner elements
IMPACT	IEC 60794-1-21-E4 Radius: 300 mm Impact energy: 10 J Impact number: 1 Impact points: 3	Additional attenuation: ≤0.1dB No damage to outer jacket and inner elements
REPEATED BENDING	IEC 60794-1-21-E6 Bending radius: 30*D Cycles: 25 Load: 150N	Additional attenuation: ≤0.1dB No damage to outer jacket and inner elements
TORSION	IEC 60794-1-21-E7 Cycles:10 Length under test: 1m Turns: ±90° Load: 150N	Additional attenuation: ≤0.1dB No damage to outer jacket and inner elements
WATER PENETRATION	IEC 60794-1-22-F5B Time : 24 hours Sample length : 3m Water height : 1m	No water leakage.
TEMPERATURE CYCLING	IEC 60794-1-22-F1 Sample length: at least 1000m Temperature range: -40 °C ~+70 °C Cycles: 2 Temperature cycling test dwell time: 12 hours	The change in attenuation coefficient shall be less than 0.1 dB/km.
OTHER PARAMETERS	According to IEC 60794-1	