



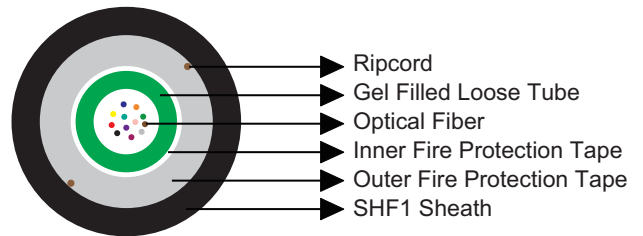
Fire Resistant Central Loose Tube Optical Fiber Cables

Application

These optical fiber cables are designed to data transmission in ship and specially in cruise ship where low smoke, halogen free and fire resistant cables are required to increase safety on board, suitable for flexible installation on and below deck of commercial ships without constant exposure to oil, grease and other lubricants.

Standards

- IEC 60092-350/351/352/353/359/370/376
- IEC 60332-1-2
- IEC 60332-3-22
- IEC 60754-1/2
- IEC 61034
- IEC 60331-11 and -25



Construction

- Optical Fiber: Loose tube, gel filled.
- Inner Tape: Fire protection tape.
- Outer Tape: Fire protection tape.
- Outer Sheath: SHF1.

Fiber Specification

		G50/125	G62.5/125	E9/125
Geometry/Mechanical Properties				
Core Diameter	μm	50 ± 2.5	62.5 ± 3	
Mode Field Diameter (at 1310 nm)	μm			9.2 ± 0.4
Cladding Diameter	μm	125 ± 2	125 ± 1	125 ± 2
Coating Diameter	μm	245 ± 10	245 ± 5	245 ± 10
Core Non-circularity	%	< 5	< 5	
Cladding Non-circularity	%	< 1	< 1	< 1
Core/Clad Concentricity Error	μm	< 1.5	< 1.5	< 0.8



Eccentricity of Coating	μm	< 10		< 10		< 10	
Screen Test		≥100 kpsi		≥100 kpsi		≥100 kpsi	
Transmission Properties		OM2		OM1		OS1	
Wavelength	nm	850	1300	850	1300	1310	1550
Attenuation Max.	dB/km	2.7	0.8	3.2	0.9	0.36	0.22
Bandwidth Min.	MHz. km	500	1000	250	600		
Effective Group of Refraction		1.483	1.478	1.497	1.493	1.4695	1.4701
Numerical Aperture		0.200 ± 0.015		0.275 ± 0.015			
Dispersion Coefficient Max.	ps/nm.km					3.5	18
Zero Dispersion Wavelength	nm						1300 -1322
Dispersion Slope	ps/nm ² .km						≤0.092
Cutoff Wavelength (cabled)	nm						≤1250
Polarization Mode Dispersion	ps/km ^{1/2}						≤0.1

Mechanical and Thermal Properties

Bending Radius for Fixed Installations: 20 × OD
Temperature Range: -20°C ~ +60°C

Dimensions and Weight

Part No.	No. of Optical Fibers	Nominal Overall Diameter mm	Nominal Weight kg/km
MLN-FCLA-X-12-H-J	12	10.0	115
MLN-FCLB-X-24-H-J	24	10.5	125

Note: X: Fiber type (0=Fiber and copper conductors in cable 4=50/125 multi-mode fiber (OM3); 5=50/125 multi-mode fiber (OM2); 6=50/125 multi-mode fiber (OM1); 7=NZDS SM fiber per G.656.; 8=NZDS SM fiber per G.655.; 9=Standard SM fiber per G.652.D)