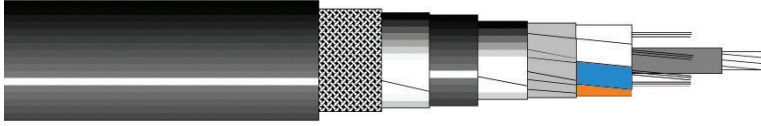


Lifeline® Specialty: Fire Resistant QFCI Cable

Fire Resistant, Flame Retardant Halogen-Free Loose Tube | UL Riser Rated

Technical Information Sheet #601

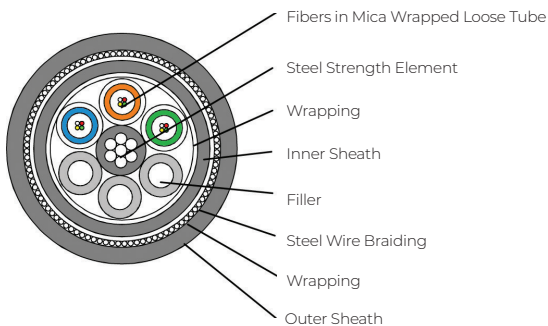


OVERVIEW

The first UL flame listed optical cable designed for indoor/outdoor use in vital communication and emergency systems that need to be operational during fire. The cable has a patented design that ensures operation for more than 3 hours in fires up to 1000°C. The cable is halogen free and flame retardant to protect against secondary damage to electronic equipment during and after fire. Outer sheath is made from black UV-stabilized and weather resistant LSZH jacketing material.

The cable is reinforced with a steel wire braiding. The fibers are protected in gel-filled loose tubes stranded around a central strength member to ensure optimum performance and long life. Each fiber and loose tube is color coded for easy identification during splicing and termination. The outer sheath is marked to show fiber type and cable type in addition to UL listings demonstrating compliance to NEC 770, NFPA 130 and NFPA 502.

CROSS SECTION



SPECIFICATIONS / RATINGS

Listings to UL and CSA Standards

- OFCR UL 1666 Riser
- OFCG IEEE 1202/FT4 General Use
- UL 1685 FT4-ST1 Limited Smoke Release
- UL 1651
- CSA C22.2 NO. 232-17

Fire and smoke classifications

- IEC 60331-25 (750°C, 3 hours) <1 dB excess loss
- Upgraded IEC 60331-25 (1000°C, 3 hours) <1.5 dB excess loss
- IEC 61034
- IEC 60332-3 cat. A and C
- IEC 60754-1
- IEC 60754-2

Tensile strength (IEC 60794-1-21, method E1)

- Max tensile load during installation 1500 N
- Max tensile load during operation 500 N

Color Coding (TIA-598)

Crush (IEC 60794-1-21, method E3) 3000 N/10cm

Impact (IEC 60794-1-21, method E4) 20 impacts, 5J

Torsion (IEC 60794-1-21, method E7) ± 1 turn/1m

Cable bending

- Minimum Bending Diameter 250 mm
- Cable bend (IEC 60794-1-21, method E11) < 0.1dB/ ±5 turn

Temperature window

- Operation -30°C to +60°C
- Installation -10°C to +60°C
- Storage -40°C to +70°C

IDENTIFICATION:

"MADE IN USA DRAKA MA PN LIFELINE QFCI [Fiber Type Core/clad] LSFROH OPTICAL CABLE - [Fiber ISO Designation] TYPE OFCR FT4-ST1 90C c(UL)us E108843 [Batch No.] [month/year]" Plus sequential meter markings.

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Fiber Type	9/125 ITU-T G652.D	50/125 OM2	62.5/125 OM1
Core Diameter	8.3 μm (typical)	50 ± 2.5 μm	62.5 ± 2.5 μm
Mode Field Diameter	1310 nm 9.0 ± 0.4 μm 1550 nm 10.1 ± 0.5 μm	n/a	n/a
Cladding Diameter	125 ± 0.7 μm	125 ± 1.0 μm	125 ± 1.0 μm
Primary Coating Diameter	242 ± 7 μm	242 ± 5 μm	242 ± 5 μm
Attenuation of Finished Cable			
850 nm	n/a	≤ 3.5 dB/km	≤ 3.0 dB/km
1300 nm	n/a	≤ 1.5 dB/km	≤ 1.0 dB/km
1310 nm	≤ 0.40 dB/km	n/a	n/a
1550 nm	≤ 0.30 dB/km	n/a	n/a
Bandwidth			
850 nm	n/a	> 500 MHz.km	>200 MHz.km
1300 nm	n/a	> 500 MHz.km	>500 MHz.km
Dispersion			
1285-1330 nm	< 3.0 ps/nm.km	n/a	n/a
1550 nm	< 18 ps/nm.km	n/a	n/a
Numerical Aperture	0.13 (typical)	0.200 ± 0.015	0.275 ± 0.015
Minimum Permanent			
Bending Diameter	25 mm	75 mm	75 mm

Other fiber types and qualities are available on request.

Ordering Information

Fiber Count	Single Mode Fiber	50/125 Fiber	62.5/125 Fiber	Number of Fibers	Number of Fibers in Each Tube	Number of Tubes + Fillers	Loose Tube Diameter (mm)	Outer Diameter (mm)	Weight (kg/km)	Heat Release (MJ/km)
	Part Number	Part Number	Part Number							
2	QFCI2-02R-010X	QFCI2-02R-50H	QFCI2-02R-62X	2	2	1+5	2.2	14.3	307	1390
4	QFCI4-04-010X	QFCI4-04-50H	QFCI4-04-62X	4	4	1+5	2.2	14.3	307	1390
6	QFCI6-06-010X	QFCI6-06-50H	QFCI6-06-62X	6	6	1+5	2.2	14.3	307	1325
8	QFCI4-08-010X	QFCI4-08-50H	QFCI4-08-62X	8	4	2+4	2.2	14.3	307	1381
10	QFCI2-10-010X	QFCI2-10-50H	QFCI2-10-62X	10	2	5+1	2.2	14.3	307	1201
12	QFCI6-12-010X	QFCI6-12-50H	QFCI6-12-62X	12	6	2+4	2.2	14.3	307	1324
16	QFCI4-16-010X	QFCI4-16-50H	QFCI4-16-62X	16	4	4+2	2.2	14.3	307	1264
20	QFCI4-20-010X	QFCI4-20-50H	QFCI4-20-62X	20	4	5+1	2.2	14.3	307	1201
24	QFCI6-24-010X	QFCI6-24-50H	QFCI6-24-62X	24	6	4+2	2.2	14.3	307	1138
32	QFCI8-32-010X	QFCI8-32-50H	QFCI8-32-62X	32	8	4+2	2.2	14.3	307	1264
36	QFCI6-36-010X	QFCI6-36-50H	QFCI6-36-62X	36	6	6+0	2.2	14.3	307	1138
40	QFCI8-40-010X	QFCI8-40-50H	QFCI8-40-62X	40	8	5+1	2.2	14.3	307	1201
48	QFCI8-48-010X	QFCI8-48-50H	QFCI8-48-62X	48	8	6+0	2.2	14.3	307	1138

The data herein is approximate and subject to normal manufacturing tolerances. Other fiber counts are available on request.