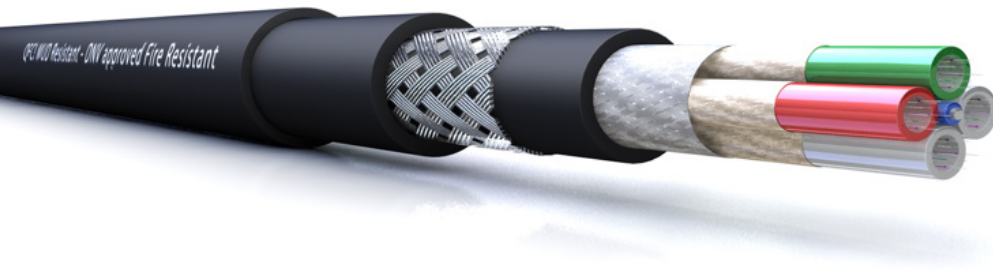


# SureLIGHT™ QFCI MUD Resistant Fibre Optic Cable

MUD Resistant • Fire resistant • HFFR



Cable Construction		Mechanical Characteristics	
Central Strength Member:	Steel with plastic oversheathing	Installation	1500 N
Loose Tube:	Thermoplastic material (PBT), jelly filled	Operation	500 N
Fire Barrier:	Fire resistant mica/glass tapes	Static	10 x Ø
Fibre Colour Code:	EIA/TIA 598	Dynamic	20 x Ø
Tubes Colour Code:	1 - Red / 2 - Green - others White	Crush resistance	3000 N/10cm
Filler Elements:	Thermoplastic rods	Impact	20 impacts, 5J
Cable Core:	Loose tubes (and fillers) are stranded around a steel strength member	Torsion	± 1 turns/ 1m
Inner Jacket:	Black LSZH FireFighter™ SHF-1	Thermal Characteristics	
Metallic Armour:	Galvanised Steel Wire Braid (GSWB)	Storage	-40° C to +70° C
Outer Jacket 1:	Black LSZH FireFighter™ SHF-1	Installation	-10° C to +70° C
Outer Jacket 2:	SHF-2 Compound (mud, oil, hydrocarbon and UV-Stabilised)	Operating	-40° C to +70° C
		Fire behaviour	
		Fire Resistance	IEC 60331-25 Upgraded 1000° C, 3 hours < 1.5 dB/excess loss
		Flame retardant	IEC 60332-1-2
		No-Fire propagation	IEC 60332-3-22
		Halogen content	IEC 60754-1-2
		Smoke density	IEC 61034-1-2

No. of fibres	No. of Tubes + Fillers	Tube Diameter (mm)	Nominal Ø (mm)	Cable Weight (kg/km)
12	3+1	2.5	15.0	290
24	4+1	2.5	15.0	290

## Optical Characteristics

Single Mode		
IEC 11801 Classification		OS1/OS2
ITU-T Type		G.652D
Mode Field Diameter	at 1310 nm	$9.0 \pm 0.4 \mu\text{m}$
Mode Field Diameter	at 1550 nm	$10.1 \pm 0.5 \mu\text{m}$
Cladding Diameter		$125.0 \pm 0.7 \mu\text{m}$
Coating Diameter (nom.)		$242 \pm 7 \mu\text{m}$
Numerical Aperture		0.13 (nom.)
Attenuation (max.)	at 850 nm	-
	at 1300 nm	-
	at 1310 nm	$\leq 0.35 \text{ dB/km}$
	at 1383 nm	$\leq 0.35 \text{ dB/km}$
	at 1460 nm	$\leq 0.25 \text{ dB/km}$
	at 1550 nm	$\leq 0.21 \text{ dB/km}$
	at 1625 nm	$\leq 0.23 \text{ dB/km}$
Bending Loss 1 turns D= 30mm	at 1550 nm	$\leq 0.25 \text{ dB}$
	at 1625 nm	$\leq 1.0 \text{ dB}$
Chromatic Dispersion	at 1285 - 1330 nm	$\leq 3.0 \text{ ps/nm x km}$
	at 1550 nm	$\leq 18 \text{ ps/nm x km}$
	at 1565 - 1625 nm	$\leq 22 \text{ ps/nm x km}$
Gigabit Ethernet	SX (1310 nm)	10000 m
	LX (1550 nm)	40000 m
10 Gigabit Ethernet	SX (1310 nm)	10000 m
	LX (1550 nm)	40000 m

		Multi Mode 62.5/125	Multi Mode 50/125	
IEC 11801 Classification		OM1	OM2	OM3
ITU-T Type		-	G.651	G.651
Core Diameter		$62.5 \pm 2.5 \mu\text{m}$	$50 \pm 2.5 \mu\text{m}$	$50 \pm 2.5 \mu\text{m}$
Cladding Diameter		$125.0 \pm 2.0 \mu\text{m}$	$125.0 \pm 2.0 \mu\text{m}$	$125.0 \pm 2.0 \mu\text{m}$
Coating Diameter		$242 \pm 5.0 \mu\text{m}$	$242 \pm 7.0 \mu\text{m}$	$242 \pm 7.0 \mu\text{m}$
Numerical Aperture		$0.275 \pm 0.015$	$0.200 \pm 0.015$	$0.200 \pm 0.015$
Attenuation (max.)	at 850 nm	$\leq 3.5 \text{ dB/km}$	$\leq 2.8 \text{ dB/km}$	$\leq 2.8 \text{ dB/km}$
	at 1300 nm	$\leq 1.0 \text{ dB/km}$	$\leq 1.0 \text{ dB/km}$	$\leq 1.0 \text{ dB/km}$
Bending Loss 100 turns D= 75mm	at 1550 nm	$\leq 0.05 \text{ dB}$	$\leq 0.5 \text{ dB}$	$\leq 0.5 \text{ dB}$
	at 1625 nm	$\leq 0.05 \text{ dB}$	$\leq 0.5 \text{ dB}$	$\leq 0.5 \text{ dB}$
Bandwidth	at 850 nm	$\geq 200 \text{ MHz x km}$	$\geq 500 \text{ MHz x km}$	$\geq 1200 \text{ MHz x km}$
	at 1300 nm	$\geq 500 \text{ MHz x km}$	$\geq 500 \text{ MHz x km}$	$\geq 600 \text{ MHz x km}$
Gigabit Ethernet	SX (850 nm)	275 VCLS (m)	550 VCLS (m)	1100 VCLS (m)
	LX (1300 nm)	550 Laser (m)	550 Laser (m)	550 VCLS (m)
10 Gigabit Ethernet	SX (850 nm)	33 VCSL (m)	82 VCSL (m)	300 VCSL (m)
	LX (1300 nm)	300 WWDM (m)	300 WWDM (m)	300 WWDM (m)