

**Fire Resistant Loose Tube Cable Armoured
QFCI / QFCU / QFOI / QFOU / QFNI / QFNU**

ST/0203/02
Rev.15

25/06/2024

MLO-000--*(n)*-M1-*armour*-FR**

000 = Type of fibres

**** = n° of fibres**

(n) = n° of tubes

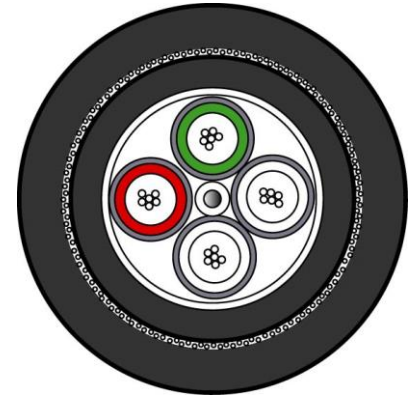
Range of fibres type

G.651 (Multi mode fibre)

G.652 (Single mode fibre)

G.655 (NZD single mode fibre)

G.657 (Bend Insensitive single mode fibre)



Suitable for indoor/outdoor installation

Rodent protected

Fire resistant – Flame retardant – Halogen Free – Low smoke emission



Certificate
No: TAE00000U0
Rev. 5



Certificate
No: 16-GE1548587-PDA

606 Type F6

Cable construction

Central strength member (CSM)	: steel wire with plastic oversheathing
Loose tube	: thermoplastic material (PBT), filled with jelly compound
Fire barrier	: each tubes are protected by fire resistant mica/glass
Fibers color-code	: according to EIA/TIA 598 (or other colours)
Tubes color-code	: red-green-white-white (or other colours)
Fillers	: thermoplastic rods, where needed
Cable core	: loose tube (and fillers), SZ stranded around the CSM
Inner jacket	: flame retardant LSZH compound
Metallic armor	: galvanized steel wire braid (GSWB) or copper wire braid (TCWB) or corrugated steel tape (CST)
Outer jacket	: flame retardant LSZH compound (SHF1 – SHF2 – SHF2 MUD) UV stabilized

Marking printed (QFCI)	: CAVICEL – QFCI - FIBER OPTIC CABLE - MLO-000-**(n)-M1-A1-FR- **** - IEC 60331-25 [180 min] - IEC 60332-3-22/24 – BATCH *****/**** + meter marking
Marking printed (QFCU)	: CAVICEL – QFCU - FIBER OPTIC CABLE - MLO-000-**(n)-M1-A1-FR- **** - IEC 60331-25 [180 min] - IEC 60332-3-22/24 – BATCH *****/**** + meter marking
Marking printed (QFOI)	: CAVICEL – QFOI - FIBER OPTIC CABLE - MLO-000-**(n)-M1-TCWB-FR- **** - IEC 60331-25 [180 min] - IEC 60332-3-22/24 – BATCH *****/**** + meter marking
Marking printed (QFOU)	: CAVICEL – QFOU - FIBER OPTIC CABLE - MLO-000-**(n)-M1-TCWB-FR- **** - IEC 60331-25 [180 min] - IEC 60332-3-22/24 – BATCH *****/**** + meter marking
Marking printed (QFNI)	: CAVICEL – QFNI - FIBER OPTIC CABLE - MLO-000-**(n)-M1-A3-FR- **** - IEC 60331-25 [180 min] - IEC 60332-3-22/24 – BATCH *****/**** + meter marking
Marking printed (QFNU)	: CAVICEL – QFNU - FIBER OPTIC CABLE - MLO-000-**(n)-M1-A3-FR- **** - IEC 60331-25 [180 min] - IEC 60332-3-22/24 – BATCH *****/**** + meter marking

Cable configuration

Number of fibres	Number of tubes + fillers	Tube diameter [mm]	Outer diameter nom. [mm]			Cable weight [Kg/Km]
			GSWB armour	TCWB armour	CST armour	
4	2+2	2.5	13.5	13.5	14.9	230
6	3+1	2.5	13.5	13.5	14.9	230
8	2+2	2.5	13.5	13.5	14.9	230
12	3+1	2.5	13.5	13.5	14.9	230
24	4+0	2.5	13.5	13.5	14.9	230
48	4+0	2.5	13.5	13.5	14.9	230

Mechanical and installation characteristics

Operation temperature	-40°C ÷ +70°C
Installation temperature	-10°C ÷ +70°C
Storage temperature	-40°C ÷ +70°C
Minimum bending radius (Static)	10 x outside diameter (for QFCI / QFCU / QFOI / QFOU)
	15 x outside diameter (for QFNI / QFNU)
Minimum bending radius (Dynamic)	20 x outside diameter
Maximum tensile strength (installation)	1500 N (for QFCI / QFCU / QFOI / QFOU)
	500 N (for QFNI / QFNU)
Maximum tensile strength (operation)	500 N (for QFCI / QFCU / QFOI / QFOU)
	200 N (for QFNI / QFNU)
Crush	3000 N/10cm
Impact	20 impacts, 5J
Torsion	± 1 turns/ 1 m (for QFCI / QFCU / QFOI / QFOU)

General standards

IEC 60793 – IEC 60794 -1-2 – NEK 606

Behaviour under fire conditions

Fire resistance	IEC 60331-25	750°C, 3 hours	< 1.0 dB/excess loss
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 60332-3-22/24		
Halogen content	IEC 60754-1-2		
Smoke density	IEC 61034-1-2		