

QFCI/B

Multi loose tube metallic armored fiber optic cable

Application: The cable is suitable for the oil and offshore industry and other harsh environments. Outer sheath of UV-and weather resistant material. Color-coded optical fibers contained in color-coded loose tube. This tube is filled with gel to prevent the ingress of water and a mica tape is wrapped over each loose tube for fire protection condition. The loose tubes stranded around a central strength member to ensure optimum performance and long life. A metallic armor is applied over the inner jacket and an outer jacket completes the overall cable design. Good mechanical and environmental performance, high capacity data communication transmission.



Standards: IEC 60794, IEC 60754-1/2, IEC 60092-360, IEC 61034-1/2, UL 1581, IEC 60811, IEC 60332-3-22, IEC 60331-25, NEK 606

Design & Construction

Fiber: Loose tube
Strength member: Centre steel wire or dielectric central core
loose tube diameter: Normal Φ 2.2 mm
Color code: Individually colored fibers
Fire resistant layer(Option): Mica tape
Peripheral strength element: Water blocking yarn, when necessary
Inner jacket: SHF1
Armor: Alt.1: Galvanized steel wire braid – GSWB
 Alt.2: Corrugated steel tape
Outer jacket: QFCI: GSWB or Corrugated steel tape + SHF1
 QFCB: GSWB or Corrugated steel tape + SHF2-MUD
Outer jacket color: Black (As per request)

Environmental properties and Fire Performances

Halogen acid gas, degree of acidity of gases: IEC 60754-1/2
Jacket, insulation material: IEC 60092-360
Smoke emission: IEC 61034-1/2
Flame retardant: IEC 60332-3-22
Oil resistance: IEC 60811
Mud resistance: NEK 606
Fire resistant: IEC 60331-25
UV-resistant: UL 1581

Mechanical environmental performance

Bending radius (N/10cm)-Long-term: 20D, 25D (Corrugated armor)
Bending radius (N/10cm)-Short-term: 15D, 15D (Corrugated armor)
Temperature (°C)-Operation: -40°C~70°C (SHF1)
Temperature (°C)-Installation: -40°C~80°C (SHF2, SHF2 MUD)
UV-resistant: -10°C~60°C

Mechanical Property

No. of fiber	No. of tubes x fibers per tube +Fillers	Inner sheath OD (mm)	Outer sheath OD (mm)	Tensile (N)	Crush (N/10 cm)	Cable weight (kg.km)
4	2x2+2	10.1 ± 0.5	13.5 ± 0.5	2000	3000	260
8	2x4+4					
12	3x4+3					
24	4x6+2					
48	4x12+2					

Transmission Property

Standard Designation				Maximum Attenuation (dB/km)					Fiber Diameter (µm)	OFL Bandwidth		EMB at 850 nm (MHz·km)
IEC 60793-2-50	IEC 60793-2-10	IEC 11801	ITU-T	850 nm	1300 nm	1310 nm	1550 nm	1625 nm		850 nm (MHz·km)	1350 nm (MHz·km)	
B1.3	—	OS2	G652D	—	—	0.4	0.3	0.25	8.6-9.5	—	—	—
B6_a1	—	—	G657A1	—	—	0.4	0.3	0.25	8.6-9.5	—	—	—
B6_a2	—	—	G657A2	—	—	0.35	0.25	0.25	8.2-9.0	—	—	—
B6_b3	—	—	G657B3	—	—	0.35	0.25	0.35	8.0-8.8	—	—	—
—	A1a.3	OM4	—	3.2	1.2	—	—	—	50±2.5	≥3500	≥500	500
—	A1a.2	OM3	—	3	1	—	—	—	50±2.5	≥1500	≥500	2000
—	A1a.1	OM2	—	3	1	—	—	—	50±2.5	≥500	≥500	4700
—	A1b	OM1	—	3.2	1.2	—	—	—	62.5±2.5	≥200	≥500	200

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