



QFAI UNI type, loose tube, dielectric, SHF1, fire resistant IEC60331, fire retardant IEC60332-3-22 Cat.A



Store at : -40 to +70 °C

Install at : -5 to +50 °C, **Bend minimum :** 15 times O.D.

Operate at : -40 to +70 °C, **Bend minimum :** 10 times O.D.

Pull maximum : 2500N

Crush maximum : 3000N/100mm

Impact maximum : 10J

Design

Bare fiber : 250µm

Buffer : Loose tube (Ø2.8mm up to 12 fibers, Ø3.5mm 16-24) filled with jelly, housing up to 24 fibers

Colour code : See table

Fire protection : mica tape wrapping.

Dielectric armour : anti rodent glass yarns.

Outer sheath : red fire retardant LSZH SHF1 material, typical thickness 1.0mm.

Marking : APS Finland ww/mm – QFAI UNI – FIBER OPTIC CABLE [Fibre type] – IEC 60331-25 [1000°C 90min] – IEC 60332-3-22
– Lot no + meter[A]

Environmental properties and Fire Performances

SHF1 : IEC 60092-360 (359)

Degree of acidity of gases : IEC 60754-1, IEC 60754-2 (pH value $\geq 4,3$ and Conductivity $\leq 10\mu\text{S}/\text{mm}$)

Halogen acid gas : IEC 60754-1, IEC 60754-2 (Halogen acid gas emission $\leq 0.5\%$)

Smoke Emission : IEC 61034-2, EN 50268-2 (Transmittance) $\geq 60\%$

Toxicity of evolved gas : EN 50305 9.2

Flame retardant : IEC 60332-1-2

Fire retardant : IEC 60332-3-22 Cat.A

Fire resistant : IEC 60331-25 (1000°C, 90 minutes)

Oil resistant : intermittent splash – permanent resistance available upon request

Water absorption : IEC60502

Water penetration : IEC 60794-1-2-F5-B (inner core only)

UV resistant : ASTM G 154 IEC 60068-2-5

Ordering and delivery information

Fiber count	Outer diameter (mm)	Weight (kg/km)	P/N	Packaging
2	7.5	60	OQFAI02 ff 1	drum 2000m (+/-5%)
4	7.5	60	OQFAI04 ff 1	drum 2000m (+/-5%)
8	7.5	60	OQFAI08 ff 1	drum 2000m (+/-5%)
12	7.5	60	OQFAI12 ff 1	drum 2000m (+/-5%)
16	8.5	70	OQFAI16 ff 1	drum 2000m (+/-5%)
24	8.5	70	OQFAI24 ff 1	drum 2000m (+/-5%)

ff = S2 for G652D, A1 for G657A1, M1 for OM1, ME for OM1+, M2 for OM2, M3 for OM3, M4 for OM4, M5 for OM5.

Colour code of fibers

1	2	3	4	5	6	7	8	9	10	11	12
Natural	Red	Green	Yellow	Brown	Blue	Violet	Orange	Grey	White	Black	Pink
13	14	15	16	17	18	19	20	21	22	23	24
Turquoise	Red/black	Green/black	Yellow/black	Brown/black	Blue/black	Violet/black	Orange/black	Grey/black	White/black	Pink/black	Turquoise/black

Other standards of reference

IEC 60092-370	Electrical installations in ships: Guidance on the selection of cables for telecommunication and data.
DNV TAP 827.50/1	Type Approval Program - Optical Fibre Cables
ABS SVR	Rules for building and classing. Steel Vessels.
ABS SMR	Rules for building and classing. Steel vessels under 90 meters.
IEC 60793	General specifications for both multimode and single-mode optical fibres
IEC 60794	general specifications for optical fibres cables

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