AlAl

Fiberoptisk kabel med tett kledning
Armering av glassgarn
Uten metall,vanntett
Opptil 12 fibre
SHF1
DNV

Bruksområde

AlAl er nøytral overfor elektromagnetiske eller elektriske forstyrrelser, den er mekanisk sterk og vanntett. Kabelen er ideell for kommunikasjon og dataoverføring i tøffe miljøer som installasjoner ombord i offshore, nær elektriske maskiner og kraftledninger. Kabelen kan også produseres med SHF2 MUD-resistent ytterkappe, AlAU.

Konstruksjon Fiber

Fibertype	Tight buffer 0,9 mm
Fargekode fiber	1 - Blue 7 - Red 2 - Orange 8 - Black 3 - Green 9 - Yellow 4 - Brown 10 - Violet 5 - Grey 11 - Pink 6 - White 12 - Turquoise
Fuktsperre	Glassgarn
Innerkappe	Sort SHF1
Armering	Aramid garn
Kappe	Sort SHF1 UV-bestandig Black SHF1, UV-resistant. Also available with SHF2 MUD, other colours on request
Diameter	See table
Vekt	See table

Tekniske data

Dempning	See separate table for fibres

Tekniske data fiber

Fiber type	Tight buffer 0,9 mm
Dempning	Se tabell
Temperaturområde	-40 – 70 [°C] SHF1 -40 – 90 [°C] SHF2 MUD
Strekkstyrke	2000 [N] Δα reversible (IEC 60794-1-2-E1) [N] Δα reversibel (IEC 60794-1-2-E1)
Bruddlast	2000 [N/100mm] (IEC 60794-1-2-E3) [N/10cm] (IEC 60794-1-2-E3)
Slagfast	20 [J] Δα reversible (IEC 60794-1-2-E4) [J] Δα reversibel (IEC 60794-1-2-E4)
Vanninntrenging	No water penetration (IEC 60794-1-2-F5)
Bøyeradius fleksibel	15 [x ytre diam.]
Bøyeradius fast inst.	10 [x ytre diam.]

Normer

Halogenfri, max korrosive og giftige gasser	IEC 60754-1 & IEC 60754- 2
Materialegenskaper, isolasjon og kappe	IEC 60092-360 (359)
Flammehemmet buntet kabel	IEC 60332-3-22
Flammehemmet enkeltkabel	IEC 60332-1
Værbestandig	(IEC 60794-1-2-F5)
Røykutvikling	IEC 61034-1 & IEC 61034-2
UV-bestandig	ASTM G 154
Sertifisering	DNV

RoHS

ABS certificated can be prodced if required.

Fiber data

Egenskaper	MM 62.5 OM1	MM 50 OM2	MM 50 OM3	MM 50 OM4
Core Diameter	62.5 ± 2.5 µm	50 ± 2.5 µm	50 ± 2.5 µm	50 ± 2.5 µm
Core non-circularity	< 5%	< 5%	< 5%	< 5%
Cladding diameter	125 ± 1.0 µm	125 ± 1.0 µm	125 ± 1.0 µm	125 ± 1.0 µm
Coating diameter	242 ± 5 µm	242 ± 5 µm	242 ± 5 µm	242 ± 5 µm
Cladding non-circularity	<0.7%	<0.7%	<0.7%	<0.7%
Core/Cladding concentricity error	<1 µm	<1 µm	<1 µm	<1 µm
Coating/cladding concentricity error	<10 µm	<6 µm	<6 µm	<6 µm
Numerical Aperture	0.275 ± 0.015 µm	0.200 ± 0.015 µm	0.200 ± 0.015 µm	0.200 ± 0.015 µm
Attenuation @ 850 nm	<3.50 db/km	<2.89 dB/km	<2.89 dB/km	<2.89 dB/km
Attenuation @1300 nm	<1.00 dB/km	<0.80 dB/km	<0.80 dB/km	<0.80 dB/km
Bandwidth @ 850 nm	>200 MHz*km	>500 MHz*km	>1500 MHz*km	>3500 MHz*km
Bandwidth @ 1300 nm	>500 MHz*km	>500 MHz*km	>500 MHz*km	>500 MHz*km
Effective Modal Bandwidth (EMB)@ 850 nm	-	-	>2000 MHz*km	>4700 MHz*km
Fibre capacity 10GBase-SR	33 m	83 m	300 m	550 m
Fibre capacity 10GBase-LX4	274 m	600 m	1000 m	1100 m
Fibre cap. 40GBase-SR4/100Base-RS10	-	-	140 m	170 m
Proof test	>100kpsi	>100kpsi	>100kpsi	>100kpsi

Egenskaper	SMR ITU-T G652D	SMR ITU-T G657A	SMR ITU-T G657B / -B2	SMR NZD ITU-T G655.E
Mode field Diameter @ 1310 nm	9,0±0,4 µm	9,0±0,4 µm	9,0±0,4 µm	-
Mode field Diameter @ 1550 nm	10,1±0,5µm	10,1±0,5µm	9,9±0,5µm	9,2±0,5µm
Cladding diameter	125±0,7µm	125±0,7µm	125±0,7µm	125±1,0µm
Coating diameter	242±7 µm	242±7 µm	242±7 µm	242±7 µm
Cladding non-circularity	≤ 0,7 %	≤ 0,7 %	≤ 0,7 %	≤ 0,7 %
Core/Cladding concentricity error	≤ 0,5 µm	≤ 0,5 µm	≤ 0,5 µm	≤ 0,5 µm
Coating/cladding concentricity error	≤ 12 µm	≤ 12 µm	≤ 12 µm	≤ 12 µm
Cable Cut off wavelength	≤ 1260 nm	≤ 1260 nm	≤ 1260 nm	≤ 1300 nm
Zero dispersion wavelength (λ_0)	1300-1322 µm	1300-1322 µm	1300-1324 µm	1440 µm
Dispersion slope (S_0) @ (λ_0)	≤ 0,090 ps/(nm² * km)	≤ 0,090 ps/(nm² * km)	≤ 0,092 ps/(nm² * km)	-
Chromatic dispersion @ 1285-1330 nm	≤ 3,5 ps/(nm * km)	≤ 3,5 ps/(nm * km)	-	-
Chromatic dispersion @ 1550 nm	≤ 18 ps /(nm * km)	≤ 18 ps /(nm * km)	-	-
Chromatic dispersion @ 1625 nm	≤ 22 ps/(nm * km)	≤ 22 ps/(nm * km)	-	-
Chromatic dispersion @ 1530-1565 nm	-	-	-	5,5 - 10 ps/(nm * km)
Chromatic dispersion @ 1565-1625 nm	-	-	-	5,5 - 10 ps/(nm * km)
PMD @ 1550 nm	≤ 0,1 ps/√ km	≤ 0,1 ps/√ km	≤ 0,1 ps/√ km	≤ 0,2 ps/√ km
Attenuation @ 1310 nm	≤ 0,35 dB/km	≤ 0,35 dB/km	≤ 0,35 dB/km	≤ 0,40 dB/km
Attenuation @ 1383nm	≤ 0,35 dB/km	≤ 0,35 dB/km	≤ 0,35 dB/km	≤ 0,40 dB/km
Attenuation @ 1550 nm	≤ 0,25 dB/km	≤ 0,25 dB/km	≤ 0,25 dB/km	≤ 0,25 dB/km
Attenuation @ 1625 nm	≤ 0,28 dB/km	≤ 0,28 dB/km	≤ 0,28 dB/km	≤ 0,28 dB/km
Attenuation with bending:	-	≤ 0,25 dB	≤ 0,03 dB	-
Mandreal Radius 15mm @1550 10 turns	-	≤ 0,25 dB	≤ 0,03 dB	-
Mandreal Radius 15mm @1625 10 turns	-|	≤ 1,0 dB	≤ 1,0 dB	-
Mandreal Radius 10mm @1550 1 turn	-	≤ 0,75 dB	≤ 0,1 dB	-
Mandreal Radius 10mm @1625 1 turn	-	≤ 1,5 dB	≤ 0,2 dB	-
Mandreal Radius 7,5mm @1550 1 turn	-	-	≤ 0,5 dB	-
Mandreal Radius 7,5mm @1625 1 turn	-	-	≤ 1,0 dB	-
Proof test	≥ 100 kpsi	≥ 100 kpsi	≥ 100 kpsi	≥ 100 kpsi

Ant. fiber	Diam. innerkappe [mm]	Diam. ytre kappe [mm]	Vekt [kg/km]
4	5,2	8,5	90
8	6,0	9,4	100
12	6,7	10,3	115

Versjon

Dato	Rev.	Beskrivelse
10.04.2019	1	Properties