船用光缆 Marine Fiber Optic cable

AFAI-FL

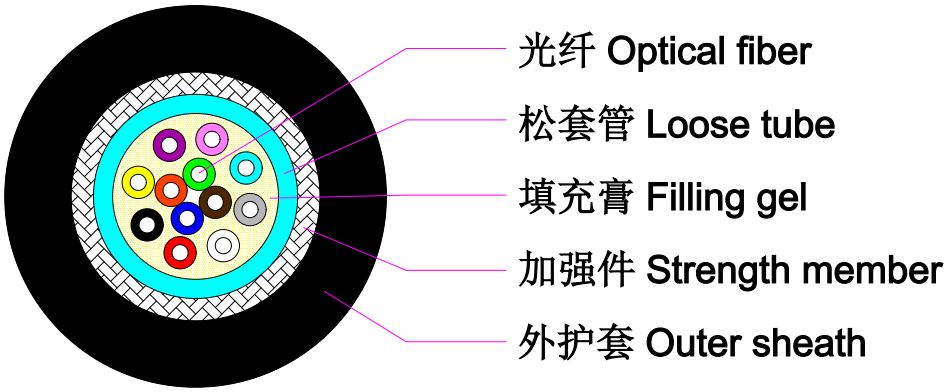
HF Flame Oil Cold UV

应用 Application

本规范涵盖了船舶和移动海上平台通信和设备中使用的阻燃光缆的要求。

This specification covers the requirements for flame retardant optical cables used in communication and equipment of ships and mobile offshore platforms.

结构 Construction



光纤 Optical Fiber	紧套光纤 （OS2、OM1、OM2、OM3、OM4、OM5）	Tight Buffer Glass Fiber
松套管 Loose tube	PBT	PBT
套管内最大芯数 Max. count of fiber in tube	12 芯	12 cores
填充膏 Filling gel	纤膏	Jelly Compound
铠装 Armour	玻璃纱环绕松套管	Glass Yarn around the loose tube
外护套 Outer Sheath	材料：SHF1 最小厚度：1.0mm OD：10.0±1.0 mm 颜色：黑色或定制	Material：SHF1 Min.Thickness：1.0mm OD：10.0±1.0 mm Color：Black or per request
印字 Marking	Hysin□MARINE□Cable□AFAI□FL□（Number of Fibers）□(Fiber type) □IEC60332-3-22□****m□xxxxxx□WW/YY 注：□ 表示空格；****m 表示计米；xxxxxx 表示批号;WW/YY 表示周数/年份 Note：□ means blank；****m means meters；xxxxxx means batch number；WW/YY means week/year	

光纤性能 Optical Characteristics

光纤类型 Fiber Type		SM 9/125 OS2 B1.3	MM 62.5/125 OM 1 A1b	MM 50/125 OM 2 A1a	MM 50/125 OM 3 A1a.2	MM 50/125 OM 4 A1a.3	MM 50/125 OM 5 A1a.4
纤芯直径 Core Diameter(μm)		9.2 ±.0.4	62.5 ± 2.5	50 ± 2.5	50 ± 2.5	50 ± 2.5	50 ± 2.5
衰减系数 Attenuation (dB/km)	@1310 nm	<0.40	-	-	-	-	-
	@1550 nm	<0.30	-	-	-	-	-
	@ 850 nm	-	<3.50	<3.00	<3.00	<3.00	<3.00
	@ 1300 nm	-	<1.00	<1.00	<1.00	<1.00	<0.70
带宽 Bandwidth (MHz*km)	@ 850 nm	-	>200	>500	>1500	>3500	>3500
	@ 1300 nm	-	>500	>500	>500	>500	>500
光纤容量 Fiber capacity 1GBase	SR 1310nm	10000m	-	-	-	-	-
	LX 1550nm	40000m	-	-	-	-	-
	SX 850nm	-	275 m	550 m	1000 m	1100 m	-
光纤容量 Fiber capacity 10GBase	SR 850nm	-	33 m	82 m	300 m	550 m	550 m
光纤容量 Fiber capacity 40GBase	SR 850nm	-	-	-	100 m	150 m	440m
光纤容量 Fiber capacity 100GBase	SR 850nm	-	-	-	-	-	150 m
Proof test(kpsi)		>100	>100	>100	>100	>100	>100

性能 Performances

存储/工作温度	Storage/Operating Temperature	-40℃ to + 85℃
衰减	Attenuation	IEC60793-1-40 & IEC60794-2
机械物理性能	Mechanical and particular characteristic	IEC60092-360
抗拉强度	Tensile strength	IEC60794-1-2 E1
抗压	Crush	IEC60794-1-2 E3
冲击	Impact	IEC60794-1-2 E4
扭转	Torsion	IEC60794-1-2 E7
弯曲	Cable bend	IEC60794-1-2 E11
阻燃性	Flame resistance	IEC 60332-3-22 Cat A
耐油	Oil resistance (SHF1)	IRM902, 70℃×4H
卤酸气体	Acid Gas Release Mounts	≤5mg/g （IEC 60754-1）
燃烧气体 PH 值	Burning Occur Gas Acidity	PH≥4.3 （IEC 60754-2）
燃烧气体导电率	Burning Occur Gas conductivity	<10 μS/mm (IEC 60754-2)
烟密度	Smoke density	≥60%（IEC 61034-2）
抗紫外线	UV resistance	UL1581
抗张强度 长期/短期	Tensile Strength Long/Short Term	600/1500 N
抗压性 长期/短期	Crush Resistance Long/Short Term	1000/3000 N/100mm

光纤套管 Fiber tube

光纤套管材料为 PBT 复合挤出层，套管内填充有阻水填充化合物。

The tube material is PBT compound extrusion layer，The tube are filled with a water-resistant filling compound.

光纤芯数 Fiber cores	2	4	6	8	10	12
光纤颜色 Color of fibers	BL OR	BL/OR GR/BN	BL/OR/GR BN/GY/WH	BL/OR/GR/BN GY/WH/RD/BK	BL/OR/GR/BN GY/WH/RD/BK YL/VI	BL/OR/GR/BN GY/WH/RD/BK YL/VI/RS/AQ

※ The color comply with TIA-568/TIA-598

BL-Blue,OR-Orange,GR-Green,BR-Brown,SL-Slate,WH-White,RD-Red,BK-Black,YL-Yellow,VI-Violet,RS-Rose,AQ-Aqua

※The other color of fiber may be applicable when purchaser required.

技术参数 Technical Parameters

Type 型号	**Max. No. of fiber in tube 套管内光纤最大芯数**	**Bending Radius Static/Dynamic 弯曲半径 静态/动态 (mm)**	**Outer sheath thickness 外护套厚度 （mm）**	**Outer Diameter 外护套外径 （mm）**
AFAI-FL	2~12	10D/20D	≥1.0	10.0±1.0

FL means Flame retardant.