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Armored Optical Fiber Cable



凱鴻管材工業股份有限公司
Kaiphone Technology Co.,Ltd.

地址:新北市土城區忠承路99號11樓
11F., No.99, Zhongcheng Rd., Tucheng Dist.,
New Taipei City 236, Taiwan
TEL: +886-2-2267-9769
FAX: +886-2-2267-9779
E-mail: kaiphone@ms4.hinet.net
<http://www.flexible-tube.com>

凱鴻管材工業股份有限公司



鎧裝光纜系列
Armored Optical Fiber Cable

凱鴻管材工業股份有限公司
Kaiphone Technology Co.,Ltd.

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☒ 單芯鎧裝光纖 (Simplex Armored Optical Fiber Cable)



- 產品特點 Characteristics
 - 微小口徑不銹鋼鎧裝保護
Protected by mini diameter stainless steel tube
 - 具備可抵抗不當的扭轉損壞
Avoid improper twisting
 - 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
 - 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
 - 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
 - 通過UL認證，符合RoHS標準
Pass UL Certification and meet ROHS standards

● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ2.0	Φ3.0
光纖尺寸 Cable Dimension(mm)	2.0±0.1	3.0±0.1
光纖重量 Cable Weight(kg/km)	11	17.5
光纖直徑 Fiber Diameter(μm)	250/600	250/600/900

● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰减 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

☒ 雙芯鎧裝光纖 (Duplex Armored Optical Fiber Cable-Round Type)



- 產品特點 Characteristics
 - 微小口徑不銹鋼鎧裝保護
Protected by mini diameter stainless steel tube
 - 具備可抵抗不當的扭轉損壞
Avoid improper twisting
 - 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
 - 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
 - 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
 - 通過UL認證，符合RoHS標準
Pass UL Certification and meet ROHS standards

● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ3.0	Φ3.3
光纖尺寸 Cable Dimension(mm)	3.0±0.1	3.3±0.1
光纖重量 Cable Weight(kg/km)	17.5	22
光纖直徑 Fiber Diameter(μm)	250/600	

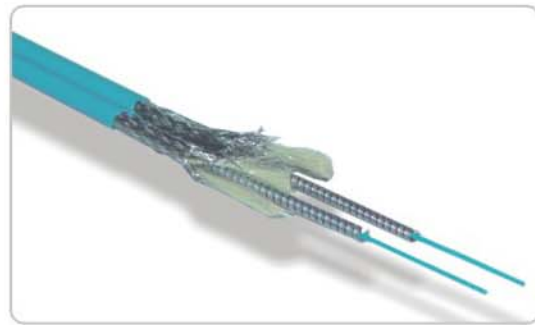
● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 纖芯性能 Fiber Characteristics

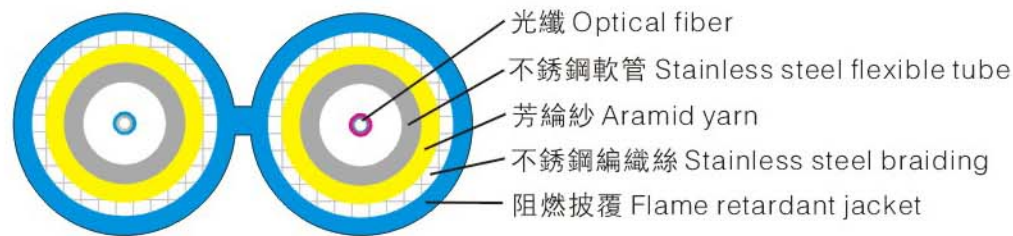
	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰减 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

✦ 8字形鎧裝光纖 (Duplex Armored Optical Fiber Cable–Zipcord Type)



● 產品特點 Characteristics

- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 通過UL認證，符合RoHS標準
Pass UL Certification and meet ROHS standards



● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ2.0*2	Φ3.0*2
光纖尺寸 Cable Dimension(mm)	4.0±0.2	6.0±0.2
光纖重量 Cable Weight(kg/km)	22	35
光纖直徑 Optical Diameter(μm)	250/600	250/600/900

● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

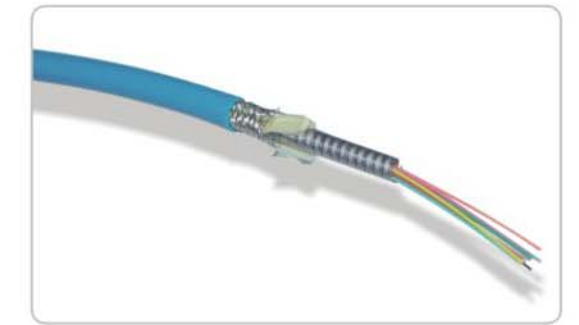
● 纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰减 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

✦ 多芯鎧裝光纖(4~12芯) Multi-fibers Armored Optical Fiber Cable(4~12 fibers)

● 產品特點 Characteristics

- 微小口徑不銹鋼鎧裝保護
Protected by mini diameter stainless steel tube
- 具備可抵抗不當的扭轉損壞
Avoid improper twisting
- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 通過UL認證，符合RoHS標準
Pass UL Certification and meet ROHS standards



● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ4.0		Φ5.0	
光纖尺寸 Cable Dimension(mm)	4.0±0.1		5.0±0.1	
光纖芯數 Fiber Number	4	6	8	12
光纖重量 Cable Weight(kg/km)	24.5	25.2	31.5	32.4
光纖直徑 Fiber Diameter(μm)	250			

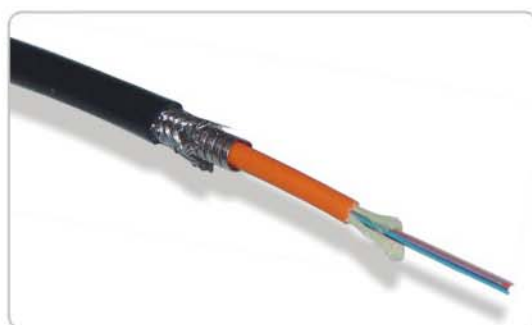
● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 纖芯性能 Fiber Characteristics

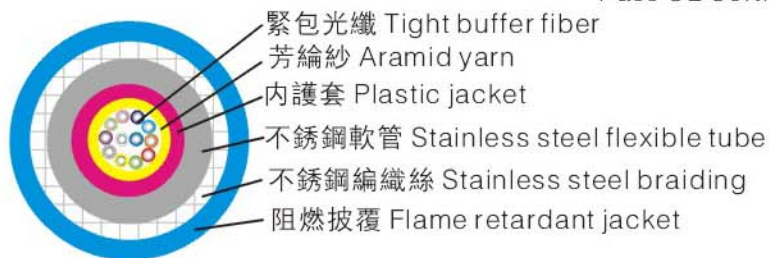
	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰减 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

✦多芯束狀鎧裝光纖(4~12芯) Distribution Armored Optical Fiber Cable(4~12 fibers)



●產品特點 Characteristics

- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 通過UL認證，符合RoHS標準
Pass UL Certification and meet ROHS standards



●幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ7.5	Φ8.0	Φ8.5	Φ9.0
光纖尺寸 Cable Dimension(mm)	7.5±0.1	8.0±0.1	8.5±0.1	9.0±0.1
光纖光纖芯數 Cable Fiber Number	4	6	8	12
緊套光纖直徑 TBF Diameter(μm)	600			

●機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	600
	短期 Short Term	1000
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

●纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

✦束狀鎧裝光纖(16~48芯) Distribution Armored Optical Fiber Cable(16~48 fibers)

●產品特點 Characteristics

- 微小口徑不銹鋼鎧裝保護
Protected by mini diameter stainless steel tube
- 具備可抵抗不當的扭轉損壞
Avoid improper twisting
- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 通過UL認證，符合RoHS標準
Pass UL Certification and meet ROHS standards



●幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ9.0	Φ10.0	Φ11.0
光纖尺寸 Cable Dimension(mm)	9.0±0.2	10.0±0.2	11.0±0.2
光纖光纖芯數 Cable Fiber Number	16	24	36
光纖直徑 Fiber Diameter(μm)	250		

●機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	600
	短期 Short Term	1000
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

●纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

✦ 鎧裝空管 (Stainless Metal Tube)



● 產品特點 Characteristics

- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc
- 適用於各種鎧裝尾纖跳線, 各種細線保護管
Applied in varies of armored patchcord, and protection tube



● 幾何特性 Geometrical Characteristics

型號 Type	內徑 I.D. (mm)	外徑 O.D. (mm)	編織後外徑 O.D.+Braiding (mm)	編織披覆後外徑 O.D.+Braiding +Sheath (mm)
EA-008020S	Φ 0.8	Φ 1.2	Φ 1.5	Φ 2.0
EA-010025S	Φ 1.0	Φ 1.5	Φ 1.8	Φ 2.5
EA-011030S	Φ 1.1	Φ 1.6	Φ 1.9	Φ 3.0
EA-012030S	Φ 1.2	Φ 1.7	Φ 2.1	Φ 3.0
EA-015033S	Φ 1.5	Φ 2.1	Φ 2.6	Φ 3.3
EA-020040S	Φ 2.0	Φ 2.6	Φ 3.0	Φ 4.0
EA-022045S	Φ 2.2	Φ 3.0	Φ 3.5	Φ 4.5
EA-024050S	Φ 2.4	Φ 2.8	Φ 3.5	Φ 5.0
EA-030060S	Φ 3.0	Φ 3.8	Φ 4.4	Φ 6.0
EA-035052S	Φ 3.5	Φ 4.4	Φ 4.8	Φ 5.2
EA-045078S	Φ 4.5	Φ 5.3	Φ 5.7	Φ 7.8
EA-050084S	Φ 5.0	Φ 5.8	Φ 6.2	Φ 8.4
EA-060096S	Φ 6.0	Φ 6.8	Φ 7.2	Φ 9.6

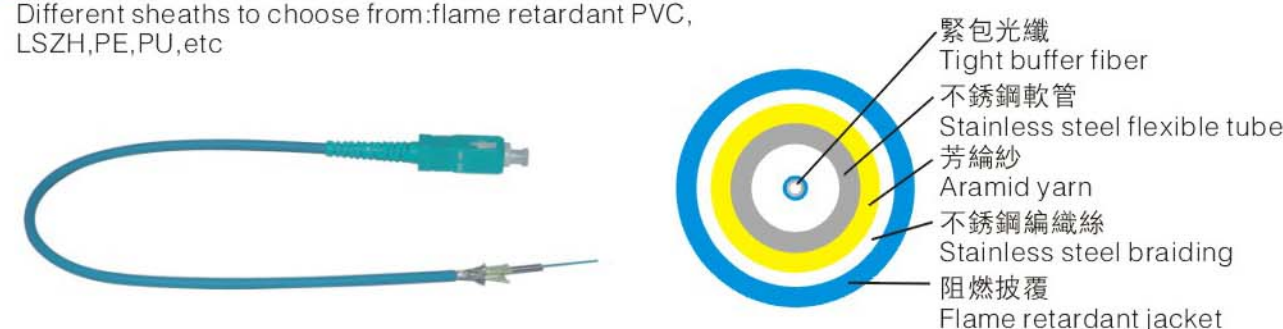
● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile Strength(N)	長期 Long Term	100
	短期 Short Term	200
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

✦ 單芯鎧裝跳線/尾纖(Simplex Armored Optical Fiber Pigtail/Patchcord)

● 產品特點 Characteristics

- 柔軟、靈活、接續方便, 易於布線施工
Flexible, convenient to connection and easy to deploy
- 不銹鋼軟管保護光纖免受損害, 提高整個系統的安全和穩定性
Avoid improper twisting
- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 阻燃PVC/LSZH/PE/PU等多種外護套可選
Different sheaths to choose from: flame retardant PVC, LSZH, PE, PU, etc



● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ 2.0	Φ 2.5	Φ 3.0
光纖尺寸 Cable Dimension(mm)	2.0±0.1	2.5±0.1	3.0±0.1
光纖長度 Cable Length	可依據客戶需求定做/Length available upon request		
接頭類型 Connector Type	FC/LC/SC/ST/MU/MTRJ/E-2000		

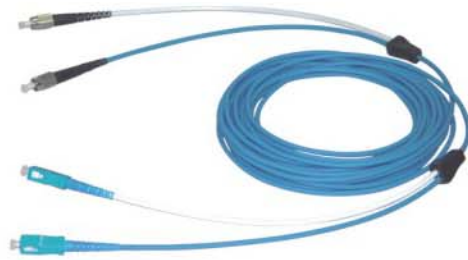
● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 接頭性能 Connector Characteristics

	單模/Single Mode			多模/Multimode
	PC	UPC	APC	
插入損耗/Insert Loss	≤0.3dB	≤0.3dB	≤0.3dB	≤0.3dB
回波損耗/Return Loss	≥45dB	≥55dB	≥65dB	--
重復性/Repeatability	≤0.1dB	≤0.1dB	≤0.1dB	≤0.1dB
使用溫度/Temperature	-20°C~+70°C			

雙芯鎧裝跳線/尾纖 (Duplex Armored Optical Fiber Pigtail/Patchcord)



產品特點 Characteristics

- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 可以降低布線成本，且簡化機架上方及ODF架內的布線繁瑣
Deploy easily and reduce the cost of wiring, improve the inside situation of the ODF
- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 使數據機房布線井然有序，布線的新增與撤換隨心所欲
The cables in the CO become more orderly. Extending and replacing become easily



主纜 Main Cable



分支管 Branch Cable

幾何特性 Geometrical Characteristics

主光纖尺寸 Main Cable Dimension(mm)	3.3 ± 0.1
分支管尺寸 Branch Cable Dimension(mm)	3.0 ± 0.1
光纖長度/Cable Length	可依客戶需求訂做/Length available upon request
接頭類型 Connector Type	FC/LC/SC/ST/MU/MTRJ/E-2000

機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	100
	短期 Short Term	200
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

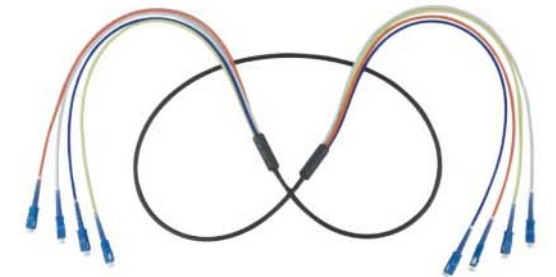
接頭性能 Connector Characteristics

	單模/Single Mode			多模/Multimode
	PC	UPC	APC	
插入損耗/Insert Loss	≤0.3dB	≤0.3dB	≤0.3dB	≤0.3dB
回波損耗/Return Loss	≥45dB	≥55dB	≥65dB	--
重復性/Repeatability	≤0.1dB	≤0.1dB	≤0.1dB	≤0.1dB
使用溫度/Temperature	-20°C~+70°C			

多芯鎧裝跳線/尾纖 (Multi-Fibers Armored Optical Fiber Pigtail/Patchcord)

產品特點 Characteristics

- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 適用於大樓的綜合布線
Satisfy for wiring in building
- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 使數據機房布線井然有序，布線的新增與撤換隨心所欲
The cables in the CO become more orderly. Extending and replacing become easily



主纜 Main Cable



分支管 Branch Cable

幾何特性 Geometrical Characteristics

主光纖尺寸 Main Cable Dimension(mm)	5.0 ± 0.1	6.0 ± 0.1	6.6 ± 0.1	10.0 ± 0.1	11.0 ± 0.1
分支管尺寸 Branch Cable Dimension(mm)	2.5 ± 0.1				
光纖芯數/Fiber Counts	4/6	8/12	24	36	48
光纖長度/Cable Length	可依客戶需求訂做/Length available upon request				
接頭類型 Connector Type	FC/LC/SC/ST/MU/MTRJ/E-2000				

機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	600
	短期 Short Term	1000
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

接頭性能 Connector Characteristics

	單模/Single Mode			多模/Multimode
	PC	UPC	APC	
插入損耗/Insert Loss	≤0.3dB	≤0.3dB	≤0.3dB	≤0.3dB
回波損耗/Return Loss	≥45dB	≥55dB	≥65dB	--
重復性/Repeatability	≤0.1dB	≤0.1dB	≤0.1dB	≤0.1dB
使用溫度/Temperature	-20°C~+70°C			

鎧裝調纖 (Multi-Fibers Armored Optical Fiber Patchcord With Trolley For Test)

● 類型 I Type I



● 產品特點 Characteristics

- 柔軟、靈活、接續方便，易於布線施工
Flexible, convenient to connection and easy to deploy
- 耐側壓、耐彎折、防蟻、防鼠咬
High tensile resistance, pressure resistance, anti-mouse and ant-bite
- 強固的收線架上配有可隨意滾動的收放線盤及可隨意移動的着地滑輪，使施工更加方便，迅速，確保工作安全及施工效率
Armored patchcord + spool + trolley frame makes connection quick and convenient, shortening a critical moment



主纜 Main Cable

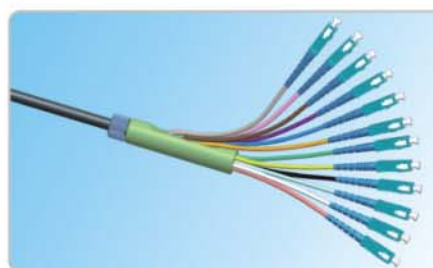


分支管 Branch Cable

● 類型 II Type II



帶適配器
With Adapter



鎧裝調纖 (Multi-Fibers Armored Optical Fiber Patchcord With Trolley For Test)

● 類型 III Type III



金屬收線架
Metal-Spool
Trolley

● 類型 IV Type IV



塑膠收線架
Plastic-Spool
Trolley

● 幾何特性 Geometrical Characteristics

主光纖尺寸 Main Cable Branch Cord(mm)	6.0 ± 0.1	6.9 ± 0.1
分支管尺寸 Branch Cord Dimension(mm)	2.5 ± 0.1	3.0 ± 0.1
光纖長度/Cable Length	可依客戶需求訂做/Length available upon request	
接頭類型 Connector Type	FC/LC/SC/ST/MU/MTRJ/E-2000	
光纖芯數/Core Count	1/4/6/8/12/16/24/36/48	

● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 接頭性能 Connector Characteristics

	單模/Single Mode			多模/Multimode
	PC	UPC	APC	
插入損耗/Insert Loss	≤0.3dB	≤0.3dB	≤0.3dB	≤0.3dB
回波損耗/Return Loss	≥45dB	≥55dB	≥65dB	--
重複性/Repeatability	≤0.1dB	≤0.1dB	≤0.1dB	≤0.1dB
使用溫度/Temperature	-20°C ~ +70°C			

温度感測鎧裝光纖 (Fire Detection Armored Optical Fiber Cable)



產品描述

温度感測鎧裝光纖是一種分布式測溫系統 (DTS) 通用型探測光纖，可以適用絕大多數的DTS測溫環境。光纖採用高強度的鎧裝設計，具有很好的抗拉、抗壓等機械性能。這種光纖廣泛用於隧道消防測溫，石化、鋼鐵、煤礦等大型工業企業消防測溫，橋梁、倉庫等大型建築健康檢查等。

Description

Fire Detection Armored FO Sensing Cable is a sensor cable of DTS (distributed temperature sensing system). This kind of cable is strengthened by SUS spring tube and SUS braiding and has very good mechanical performance of tensile resistance and pressure resistance. The cable is widely used in tunnel, building, oil and chemical factory area.



幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ3.0
光纖尺寸 Cable Dimension(mm)	3.0±0.1
緊套光纖直徑 TBF Dimension(μm)	250/600/900

機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

鐵氟龍鎧裝光纖 (Teflon Jacketed Armored Optical Fiber Cable)

產品特點 Characteristics

- 耐高溫，在150°C的環境下正常工作，不影響傳輸
Functions normally under extreme environmental conditions with temperatures over 150°C;
- 絕緣電阻高，根據外護套厚度，最高可達10KV/mm絕緣比；
High insulated resistance to 10KV/mm according to the thickness of the outer jacket;
- 耐磨擦、耐腐蝕、不親水、不親油，可在強化學環境中長期使用；
Attrition resistance, corrosion resistance, non-hydrophilic, non-oleophilic, using for long term in the harsh chemical environment;
- 高機械強度，抗壓扁能力達4000N/100mm,抗拉達400N
High mechanical strength, anti-pressing to 4000N/100mm, and high-tensile strength to 400N;



幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ3.0	Φ4.0	Φ5.0
光纖尺寸 Cable Dimension(mm)	3.0±0.1	4.0±0.1	5.0±0.1
光纖直徑 Fiber Dimension(μm)	145		
光纖芯數 Fiber Counts	1~2	4~6	8~12

機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.60/0.50	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-40°C~+200°C		

✦ 無縫管鎧裝光纖 (Seamless Tube Armored Optical Fiber Cable)



● 產品特點 Characteristics

- 結構簡單，體積小，有良好的機械性能，傳輸性能
Simple structure, small size, good mechanical and transmission performance
- 密封設計，耐電化學腐蝕，阻水阻油，適用於各種惡劣環境
Hermetic design, resistance to electrochemical corrosion, blocking oil and water, apply to a variety of harsh environments
- 耐高溫，抗電磁幹擾性強
Resistance to high temperature, strong anti-electromagnetic interference



● 幾何特性 Geometrical Characteristics

無縫管外徑/Seamless tube OD(mm)	Φ2.1	Φ2.4
無縫管壁厚/Wall thickness(mm)	0.2	0.2
光纖外徑/Cable OD(mm)	3.5~4.0	3.5~4.0

● 技術參數 Specifications

抗拉力/Tensile strength(N)	≥800
抗壓力/Crush Resistance(N/100m)	≥3000
抗衝擊強度/impact resistance(J)	0.75
老化實驗/Aging Experiment	在85°C±2°C條件下持續168h / 85°C±2°C for 168h 單模的衰減增加≤0.2dB/km / Attenuation increase SM≤0.2dB/km 多模的衰減增加≤0.3dB/km / Attenuation increase MM≤0.3dB/km
振動實驗/Shake Experiment	頻率10Hz, 振幅5mm, 1000000次 10 Hz, Swing 5mm, 1000000 times 光纖衰減變化應≤0.2dB/km / Attenuation increase≤0.2dB/km

● 纖芯性能 Fiber Characteristics

	單模 (SM)		多模 (MM)	
	9/125	50/125	62.5/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C			

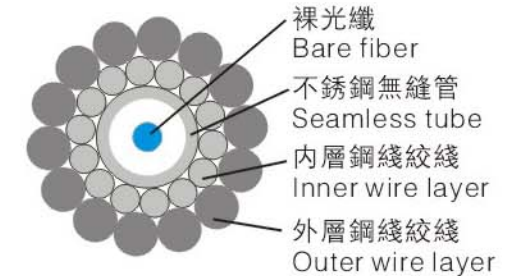
✦ 油田鎧裝感測光纖 (Oil Field Armored Optical Fiber Cable)

● 產品描述

油田鎧裝感測光纖內層不銹鋼無縫管保護，並在裸光纖與無縫管之間填充阻水油膏，外層雙層鋼絲絞合。可應用於石油平臺，輸油管道，礦井，化工等行業，進行溫度感測或應力應變

● Description

Oil field armored cable was constructed of the inner stainless steel seamless tube, filled with water-blocking gel between the bare fiber and the seamless tube, and strand with outer wire layer. Apply to the temperature sensor or the stress-strain in oil platform, pipeline, mine area, etc.



● 產品特點 Characteristics

- 精度高，靈敏度好，可靠性高
High precision, sensitivity, reliability
- 密封設計，耐電化學腐蝕，阻水阻油，適用於各種惡劣環境
Hermetic design, resistance to electrochemical corrosion, blocking oil and water, apply to a variety of harsh environments

● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ6.2	
光纖尺寸 Cable Dimension(mm)	6.2±0.2	
不銹鋼無縫管尺寸 Seamless Tube Dimension(mm)	內徑 ID(mm)	1.9±0.1
	外徑 OD(mm)	2.5±0.1
鍍鋅鋼絲直徑 Galvanized Wire Dimension(mm)	內層 Inner	0.7(14股)/14units
	外層 Outer	1.0(14股)/14units

● 機械性能 Mechanical Characteristics

抗拉強度/Tensile Resistance(N)	≥1960
抗壓力/Crush Resistance(N/100m)	≥3000
抗衝擊強度/impact resistance(J)	0.75

● 纖芯性能 Fiber Characteristics

	單模 (SM)		多模 (MM)	
	9/125	50/125	62.5/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.10/1.2	≤3.5/1.5	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500	≥160/500
工作溫度 Operating Temperature(°C)	-40°C~+200°C			

矽膠耐高溫感測光纖 (Silicone Jacketed Tube)



● 產品描述

矽膠耐高溫感測光纖是采用耐高溫及高電壓的材料將光纖保護起來，最後使用整個光纖達到耐高溫、耐高電壓的性能，可以在更高溫度的環境下正常工作，不影響光纖傳輸性能。

● Description

High temperature and voltage resistant material are used to protect fiber and permits a high temperature and voltage resistance. It can work under high temperature without interfering transmission.

● 產品特點 Characteristics

- 在250°C的工作環境下正常工作，不影響光纖傳輸

Does not interfere with transmission at temperature of 250°C

- 可以在6KV的高壓環境下正常工作，不影響光纖傳輸

Does not interfere with transmission at voltage under 6KV



● 幾何特性 Geometrical Characteristics

鐵氟龍/Teflon	Kevlar股數	矽膠壁厚 Wall thickness of Silicone	成品外徑 Outer diameter(mm)
φ 0.46~0.96	8 × 1580(1.8mm)	0.6	φ 3.3
φ 0.96~1.46	8 × 1580(2.4mm)	0.6	φ 3.3

● 技術參數/Specifications:

屬性/Property	材料/Material	矽膠/Silicone	鐵氟龍管/Teflon Tube
耐高壓/Voltage (KV)		≥2.5~3.5	≥2.5~3.5
耐高溫/Temperature(°C)		≥200~250	≥230~250

鎧裝礦用光纖 (Armored Optical Fiber Cable For Mine)

● 產品描述

本產品已通過礦用阻燃光纖認證，認證編號：MA090054。鎧裝礦用光纖不僅具有鎧裝光纖的全部優點，還為滿足煤礦行業的特殊要求而增設了許多特殊性能。可滿足煤礦、金礦、鐵礦等礦井的特殊要求，並確保意外發生時仍然保證通訊暢通。



● Description

This armored optical fiber cable got the certificate for mineral application and the certificate number is MA-090054. This cable has armored optical cable advantages---flexible, rigid and anti-mouse bite, also has good anti-flammable characteristic and this make it satisfiable for mineral area telecommunication



● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ6.0	Φ6.9	Φ8.0	Φ8.5	Φ9.0
光纖尺寸 Cable Dimension(mm)	6.0±0.1	6.9±0.1	8.0±0.1	8.5±0.1	9.0±0.1
光纖芯數 Fiber Number	2/4/6	8/12	4/6	8	12
光纖直徑 Fiber Dimension(um)	250	250	600	600	600
阻燃性能 Flame Retard capability	達到MT-386-1995規定的單根垂直燃燒試驗和成束燃燒試驗要求 Meet MT-386-1995 or vertically-mounted bunched wires or cables. single wire, cable vertical specimen flame test specification				

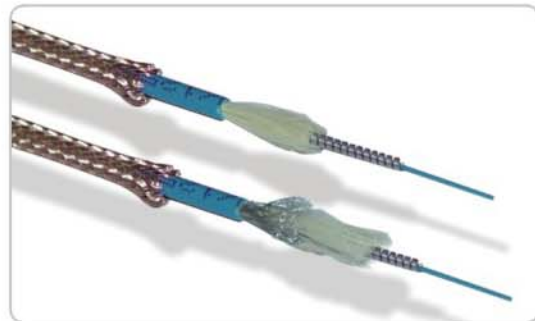
● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	600
	短期 Short Term	1000
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125 1310/1550(nm)	50/125 850/1300(nm)	62.5/125 850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

銅絲編織鎧裝光纖 (Copper Braid Armored Optical Fiber Cable)



產品描述

銅網編織鎧裝光纖在鎧裝光纖外採用銅網紡織層將鎧裝光纖包裝覆蓋，防止外界電磁場對內部的侵入，使用光信號的傳輸得以恢復如初，在保持光纖堅固的傳輸性能的同時，採用銅網紡織，可以阻止外界電磁場、電磁波對光傳輸的干擾，使之正常運行，使光纖可以在強化學環境中長期使用，是石化領域傳感專用的光纖。

Description

Armored optical fiber cable can be used directly in electric power area which reduces the interference of electromagnetic waves. Copper braid is used to wrap armored fiber optical cable, which can prevent the outer electromagnetic field from interfering the inner part.

幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ3.0
光纖尺寸 Cable Dimension(mm)	3.0±0.1
緊套光纖直徑 TBF Dimension(um)	600/900

機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	3000
	短期 Short Term	5000
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

PBT充油感測鎧裝光纖 (PBT Tube Optical Fiber Cable)

產品描述

PBT充油感測鎧裝光纖用於溫度和壓力感測，結構為裸光纖+油膏+PBT充油管+芳綸紗+護套，此結構感測光纖具有高强度，重量輕，阻水性好。

Description

PBT tube optic fiber cable is used for temperature and pressure inspection, structure of which is bare fiber+oil+PBT tube+aramid yarn+jacket. This structure performs high tensile strength, light weight and waterproof.



產品特點 Characteristics

- 非金屬結構，良好的傳輸性能和環境性能
Non-metallic structure, good mechanical, transmission and environmental property;
- 採用PBT管保護，重量輕，外徑小，强度高，阻水性好；
PBT tube protects fibers inside, small diameter and high strength mechanical property



幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ4.0
光纖尺寸 Cable Dimension(mm)	4.0±0.1
PBT管外徑 PBT Tube O.D	Φ2.0

機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	200
	短期 Short Term	400
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	800
	短期 Short Term	1500
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

☒ 鎧裝光電混合纜 (Optic-Electrical Hybrid Cable)



● 產品特點 Characteristics

- 由光纖和電纜為基本單位，同時可傳輸光信號及電
This Optic-Electrical hybrid cable was composed of optical cables and electrical wires. It can transmit the optical signals and electricity at the same time.
- 堅固，柔軟，輕巧，便於施工安裝
Rugged, flexible, small size, light weight and easy installation.
- 可用於高清電視攝影機，攝像監控與戶外大型顯示器
Can be used in HDTV camera systems, video monitoring and outdoor display systems.

● 幾何特性 Geometrical Characteristics

光電纜尺寸 Cable Dimension(mm)	8.0±0.3	注：光纖和電纜數量可依照客戶需求 Note: No. of electrical wires and optical fibers can be adjusted according to customer's demand
光纖數量 Number of Optical Fibers	2	
電纜數量 Number of Electrical Wires	4	

● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	100
	短期 Short Term	200
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	100
	短期 Short Term	200
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)

● 電線性能 Electrical Wire Characteristics

電線材料 Electrical Wire Conductor Material	鍍錫銅線 Tinned copper
電線大小 Electrical Wire Size	4/0.15
絕緣材料 Insulation Material	PVC
電線強度 Electrical Wire Resistance(MΩ/KM)	≥1000

● 纖芯性能 Fiber Characteristics

	單模 (SM)	多模 (MM)	
	9/125	50/125	62.5/125
	1310/1550(nm)	850/1300(nm)	850/1300(nm)
最大衰減 Max. Attenuation(dB/km)	≤0.40/0.30	≤3.5/1.5	≤3.5/1.5
最小帶寬 Min. Bandwidth(MHZ-KM)	---	≥400/400	≥160/500
工作溫度 Operating Temperature(°C)	-20°C~+70°C		

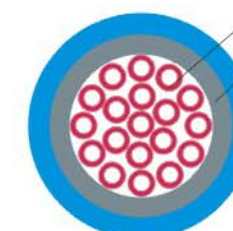
☒ 鎧裝氣吹光纖 (Armored Air-blown Cable)

● 產品特點 Characteristics

- 敷設過程簡化，敷設光纖速度快
Simple and fast for optical fiber installation
- 一次敷設距離長，減少接頭數，降低衰減
Long installation distance and reduce the connection points and attenuation
- 敷設作業使用的人力較少
Less workers compared with other installation
- 金屬鎧裝保護，防鼠咬
Metal tube protected, anti-mouse and ant-bite



5管 5 Tube



19管 19 Tube

鬆套管 Loose tube

阻水層 Water blocking layer

護套 (LSZH/PVC/PE/PU)
Jacket (LSZH/PVC/PE/PU)

● 幾何特性 Geometrical Characteristics

光纖類型 Cable Type	Φ32.0	
光纖尺寸 Cable Dimension(mm)	32.0±0.5	
微束管 Micro duct	5.0*19(外徑*管數 O.D*Tube)	10.0*5(外徑*管數 O.D*Tube)

● 機械性能 Mechanical Characteristics

抗拉力 (N) Tensile strength(N)	長期 Long Term	600
	短期 Short Term	1000
抗壓力 (N/100mm) Crush Resistance(N/100mm)	長期 Long Term	800
	短期 Short Term	1500
彎曲半徑(MM) Bending Radius(MM)	動態 Dynamic	20*D(D:光纖直徑) (D:Cable Diameter)
	靜態 Static	10*D(D:光纖直徑) (D:Cable Diameter)