

DUPLEX FIBRE LEAD SC/APC TO SC/APC, LSZH

Technical Overview

CERTECH OS2 SCA to SCA Duplex Fibre Leads provide a high-performance, individually factory tested patching solution for structured cabling, FTTP, and network backbone applications.

Constructed using G.657.A1 bend-insensitive Singlemode fibre, the cable maintains low attenuation and stable optical performance. The Duplex 2.0mm tight-buffered construction incorporates 900µm buffered fibres and aramid yarn strength members, supporting flexible routing, reliable installation in high-density indoor environments while improving occupancy safety with a Low Smoke, Zero Halogen Sheath (LSZH).

SC/APC connectors ensure consistent end-face geometry, delivering low insertion loss and high return loss for stable optical performance across network links. Duplex configuration supports transmit and receive channels within a single cable, enabling efficient patching and cross-connect applications.

Each lead is factory tested to ensure consistent performance, compliance with relevant industry standards and long-term reliability.

Standards

AS/CA S008	Australian Manufacturing Requirements
AS/CA S009	Installation Requirements for Customer Cabling
AS 11801 Series	Australian Performance Standard
AS/NZS 14763.3	Australian Fibre Testing Standard
IEC 61754 Series	Fibre Connector Interface Geometry
IEC 61300 Series	Fibre Connector Performance Testing
IEC 61753	Fibre Component Performance Standard
ITU-T G.652.D	Singlemode Fibre Manufacturing Performance
ITU-T G.657.A1	Bend Insensitive Fibre Standard



Product

Product Code

- FLSCASCAOS20.5 (0.5m)
- FLSCASCAOS21 (1m)
- FLSCASCAOS21.5 (1.5m)
- FLSCASCAOS22 (2m)
- FLSCASCAOS23 (3m)
- FLSCASCAOS25 (5m)
- FLSCASCAOS27 (7m)
- FLSCASCAOS210 (10m)
- FLSCASCAOS215 (15m)
- FLSCASCAOS220 (20m)
- FLSCASCAOS225 (25m)
- FLSCASCAOS230 (30m)
- FLSCASCAOS235 (35m)
- FLSCASCAOS240 (40m)
- FLSCASCAOS245 (45m)
- FLSCASCAOS250 (50m)
- FLSCASCAOS260 (60m)
- FLSCASCAOS270 (70m)
- FLSCASCAOS280 (80m)
- FLSCASCAOS290 (90m)

Description

Duplex Fibre Lead
SC/APC to SC/APC, LSZH

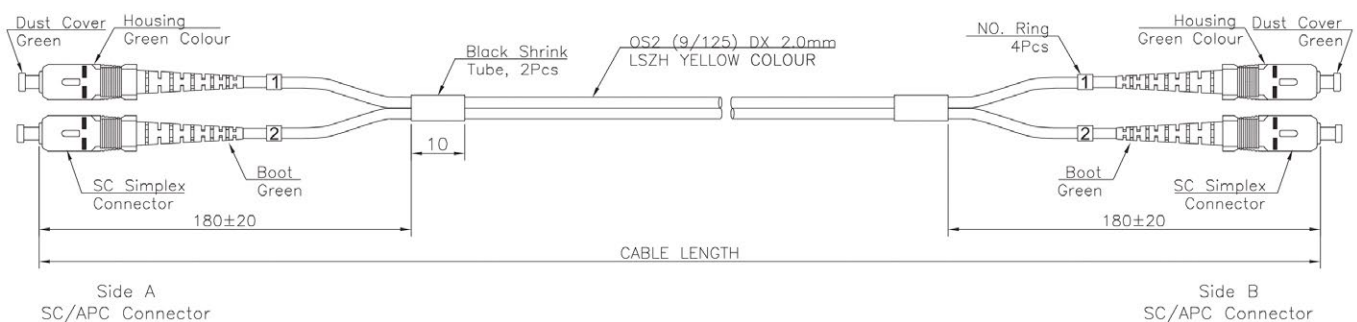


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Features

- ✓ G.657.A1 Bend-insensitive fibre
- ✓ SC/APC connectors for optimum end face mating quality
- ✓ Duplex construction supporting transmit and receive channels
- ✓ 2.0mm Tight-buffered cable for flexible & high-density routing
- ✓ 900µm Buffered fibres with aramid yarn reinforcement
- ✓ LSZH Sheath for occupancy safety
- ✓ Low attenuation for stable optical performance across network links
- ✓ Optimised for O-E-S-C-L band transmission (1260-1625nm)
- ✓ 100% Individually factory tested for performance assurance and reliability
- ✓ APCO aligned recyclable packaging

Technical Specifications



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Construction

1. Optical Fibre: 900um OS2 9/125 G.657.A1
2. Aramid Yarn
3. Out Jacket: LSZH Sheath Thickness: 0.35±0.05mm Diameter: (1.9±0.05)*(3.9±0.1)mm Colour: Yellow, PMS 122C
4. Cable Mark: Fibre Optical Cable SM 9/125 OS2 G.657.A1 2.0mm - LSZH - MM/YY *****M

Parameters of Fibre

Optical Fibre Type	Unit	OS2-G657.A1
Waveband	nm	1310/1550
Attenuation	dB/Km	0.4/0.3

Product Parameters

Performance	Long-Term	Short-Term
Max. Tension (N)	120	225
Max. Crush Resistance (N/100mm)	100	500
Min. Bend Radius	30D (Dynamic)	15D (Static)
Storage and Operating Temperature	-10°C ~ +60°C	

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Optical Characteristics

Parameter	Conditions	Value	Units
Attenuation	1310 nm	≤0.35	dB/km
	1383 nm (after H ₂ -aging)	≤0.35	dB/km
	1460 nm	≤0.25	dB/km
	1550 nm	≤0.21	dB/km
	1625 nm	≤0.23	dB/km
Attenuation vs Wavelength (Max. Δ)	1285-1330 nm	≤0.03	dB/km
	1525-1575 nm	≤0.02	dB/km
Dispersion Coefficient	1285-1340 nm	-3.0 to +3.0	ps/(nm·km)
	1550 nm	≤18	ps/(nm·km)
	1625 nm	≤22	ps/(nm·km)
Zero Dispersion Wavelength	—	1312 ± 10	nm
Zero Dispersion Slope	—	≤0.090	ps/(nm ² ·km)
Zero Dispersion Slope (Typical)	—	0.086	ps/(nm ² ·km)
PMD (Maximum Individual Fibre)	—	≤0.2	ps/√km
PMD (Link Design Value)	M=20, Q=0.01%	≤0.1	ps/√km
PMD (Typical)	—	0.04	ps/√km
Cable Cut-off Wavelength	—	≤1260	nm
Mode Field Diameter	1310 nm	9.0 ± 0.4	μm
	1550 nm	10.1 ± 0.5	μm
Effective Group Index	1310 nm	1.466	—
	1550 nm	1.467	—
Point Discontinuities	1310 nm	≤0.05	dB
	1550 nm	≤0.05	dB

Environmental Characteristics (1310, 1550 & 1625 nm)

Parameter	Conditions	Value	Units
Temperature Dependence	-60°C to +85°C	≤0.05	dB/km
Temperature & Humidity Cycling	-10°C to +85°C, 98% RH	≤0.05	dB/km
Water Soak Dependence	23°C, 30 days	≤0.05	dB/km
Damp Heat Dependence	85°C, 85% RH, 30 days	≤0.05	dB/km
Dry Heat Aging	85°C	≤0.05	dB/km

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Geometrical Characteristics

Parameter	Conditions	Value	Units
Cladding Diameter	—	124.8 ± 0.7	µm
Cladding Non-Circularity	—	≤0.7	%
Coating Diameter	—	245 ± 5	µm
Coating-Cladding Concentricity Error	—	≤12.0	µm
Coating Non-Circularity	—	≤6.0	%
Core-Cladding Concentricity Error	—	≤0.5	µm
Curl (Radius)	—	≥4	m
Delivery Length	—	2.1 to 50.4	km/reel

Mechanical Characteristics

Parameter	Conditions	Value	Units
Proof Test	—	≥9.0	N
Proof Test	—	≥1.0	%
Proof Test	—	≥100	kpsi

Macro-bend Induced Attenuation

Parameter	Conditions	Value	Units
Macro-bend Loss	100 turns, 50 mm mandrel (1550 & 1625 nm)	≤0.05	dB
	10 turns, 30 mm mandrel (1550 nm)	≤0.1	dB
	10 turns, 30 mm mandrel (1625 nm)	≤0.3	dB
	1 turn, 20 mm mandrel (1550 nm)	≤0.1	dB
	1 turn, 20 mm mandrel (1625 nm)	≤0.5	dB

Mechanical Performance

Parameter	Conditions	Value	Units
Coating Strip Force (Typical)	—	1.7	N
Coating Strip Force (Peak)	—	1.3 – 8.9	N
Dynamic Stress Corrosion Parameter (nd)	—	≥20	—