

Dual-end Indoor Round Patch Cord Datasheet 01

Building an Efficient Fiber Infrastructure.

Overview

Dual-end round patch cord (XC/UPC-SC/UPC) are applicable to indoor FTTR scenarios and provide optical path interconnection.

Features & Benefits

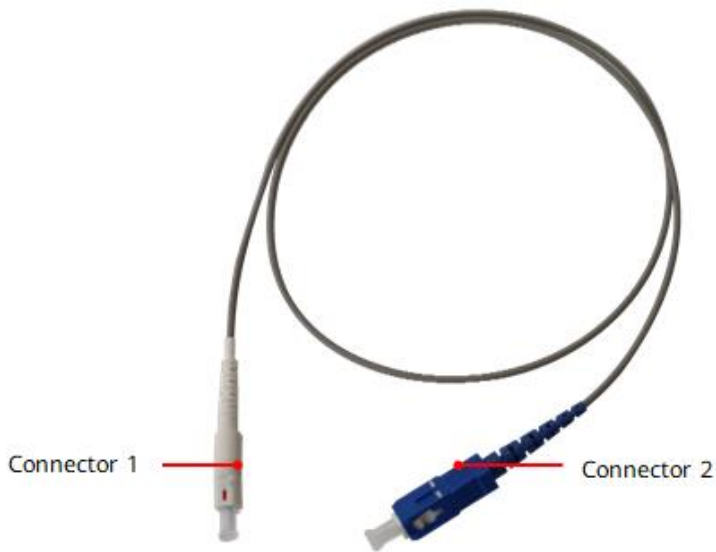
- Converts XC/UPC to SC/UPC.
- Small outer diameter, light weight, and small footprint.
- It has excellent bending performance and good flexibility, low friction coefficient and convenient construction.

General Specifications

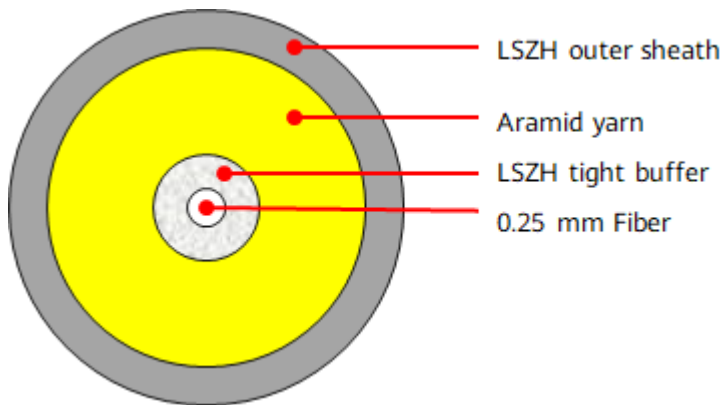
Cable assembly type	Drop cable
Environment	Indoor
Packaging	PE bag packaging
Application	Indoor
Termination	XC/UPC-SC/UPC
Working temperature range	-10°C to +60°C
Working humidity	0% to 95% (+40°C)
Transport temperature range	-20°C to +80°C
Flame retardant rating	UL-V0

Structure

Dual-end round patch cord



Cross section of cable



Specifications

Dimensions and structure of cable

Fiber	Fiber count	1 core
	Fiber type	G.657A2
Tight buffer	Diameter	0.6 mm
	Material	LSZH
	Color	White
Strength member	Material	Aramid yarns
Outer sheath	Material	LSZH (Low friction coefficient)
	Color	Grey
	Thickness	≥ 0.3 mm
Cable diameter		2.0 mm

Cable length	0.5 m
Cable weight	3.3 kg/km
Minimum bending radius	Static: 10D (D indicates the diameter of the optical cable) Dynamic: 20D

Mechanical specifications of cable

Test item	Test method	Test condition	Test result
Tensile strength	IEC 60794-1-2 E1	Tensile force: 150 N for 1 min	<ol style="list-style-type: none"> 1. Before and after the test strain of the fiber must be $\leq 0.6\%$, and reversible. 2. Variation of attenuation must be ≤ 0.1 dB.
Crush	IEC 60794-1-2 E3	<ul style="list-style-type: none"> • Long term crush force: 100 N for 1 min • Short term crush force: 150 N for 1 min • Test length: 500 mm • Number of test: no less than 3 piece of the sample 	<ol style="list-style-type: none"> 1. Maximum increase in attenuation ≤ 0.1 dB under short term load. 2. No change in attenuation under long term load. 3. No change in attenuation after the test. 4. There shall be no damage to the cable elements under visual inspection.
Impact	IEC 60794-1-2 E4	<ul style="list-style-type: none"> • Striking surface Radius: 12.5 mm • Impact energy: 1 N.m • Number of impacts: at least 3, each separated at least 500 mm • Height: 1 m 	<ol style="list-style-type: none"> 1. No change in attenuation after test. 2. No damage to the cable elements under visual inspection. 3. Fiber additional attenuation absolute value should be ≤ 0.1 dB at 1550 nm.
Torsion	IEC 60794-1-2 E7	Number of cycles: 20 Distance between fixed and rotation clamp: 250 mm Tension load: 20 N Torsion angle: $\pm 180^\circ$	<ol style="list-style-type: none"> 1. In attenuation at 1550nm, ≤ 0.1dB change during and no change in attenuation after the test. 2. There shall be no damage to the cable elements under visual inspection.
Bend	IEC 60794-1-2 E11A	Mandrel diameter: 10D Number of cycles: 10 Number of turns: 6	<ol style="list-style-type: none"> 1. In attenuation at 1550 nm, ≤ 0.1dB change during and no change in attenuation after the test. 2. There shall be no damage to the cable elements under visual inspection.
Abrasion resistance of sheath markings	IEC 60794-1-21-E2B	Load: 5 N Number of cycles: 100	The marking shall be legible after test.

Mechanical environmental specifications of the connector

Test item	Test method	Test condition	Test result
Vibration	IEC 61300-3-28	Test wavelength: 1550 nm Number of axes: three orthogonal Number of sweeps (10-55-10 Hz) per axis: 15 Vibration amplitude: 0.75 mm	Initial test IL ≤ 0.5 dB During test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Cold	IEC61300-2-17	Test wavelength: 1550 nm Temperature: -10°C Duration of exposure: 96h	Initial test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
High temperature endurance	IEC61300-2-18	Test wavelength: 1550 nm Temperature: 75°C Duration of exposure: 96h	Initial test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Change of temperature	IEC61300-2-22	Test wavelength: 1550 nm Temperature: -10°C to +70°C Duration of extreme temperatures: 1h Temperature rate of change: 1°C/min Number of cycles: 9 Duration of exposure: 6 days	Initial test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Connector pull	IEC61300-2-4	Test wavelength: 1550 nm Load: 70 N at 5N/s Duration: 60s	Initial test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Impact	IEC61300-2-12	Test wavelength: 1550 nm Drop height: 1.5 m Number of drops: 5 for each plug	Initial test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Tensile strength of coupling mechanism	IEC61300-2-6	Test wavelength: 1550 nm Load: 40 N Duration: 60s	Initial test IL ≤ 0.5 dB During test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Static side load	IEC61300-2-42	Test wavelength: 1550 nm Load: 1 N Duration: 1h Angle: 90°	Initial test IL ≤ 0.5 dB During test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB
Torsion	IEC61300-2-5	Test wavelength: 1550 nm Tensile load: 5N at a speed of 1 N/s Point of application of tensile load: 0.25 m from the end face of the connector Duration of the test: 10 cycles, ± 180°	Initial test IL ≤ 0.5 dB During test IL ≤ 0.5 dB After test IL ≤ 0.4 dB RL ≥ 50 dB

Connector optical specifications

Item	Connector 1	Connector 2
Connector type	XC/UPC	SC/UPC
Dimensions (H x W x D, unit mm)	6.5 x 6 x 44.5	8.9 x 7.2 x 57
Connector insertion loss (IEC 61300-3-4, dB)	Max ≤ 0.50	
Connector return loss (IEC 61300-3-6, dB)	≥ 50	

Remark: The IL in the table is only refer to the IL (connector). The product IL must contain the connector IL and fiber cable IL, IL all =2 x IL (connector) + IL (1km cable IL)/1000 x L (cable length).

Fiber specifications

Fiber mode	Single mode
Fiber type	ITU G.657A2
Maximum attenuation	1310 nm: 0.35 dB/km 1550 nm: 0.21 dB/km
Color	Transparent


Standard

Optical standard	<ul style="list-style-type: none">IEC 60794, ITU G.657
Flame retardant rating	<ul style="list-style-type: none">IEC 60332-1
RoHS 2.0	Compliant

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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base Bantian,
Longgang Shenzhen 518129 People's
Republic of China

Website: www.huawei.com