Dual-ended SC Connector Huawei Self-bonding Invisible Fiber Datasheet

Building an Efficient Fiber Infrastructure.

Overview

The Huawei self-bonding invisible fiber is applicable to indoor corridors and rooms. It can be used in a fiber to the home (FTTH) or fiber to the room (FTTR) network. The self-bonding invisible fiber is attached with adhesive, and can be easily pre-routed on a suitable wall surface after the release film is removed. After pre-routing, use cable supporters or invisible adhesive tape for reinforcement. The fiber can be routed on surfaces of various materials at high efficiency without affecting the residence decoration.

⚠ CAUTION

- It is recommended that the self-bonding invisible fiber be stored in a cool, dry, and ventilated environment. After the self-bonding invisible fiber is stored at a high temperature or for a long time, the release film may be wrinkled. This is a normal phenomenon and does not affect the use of the cable.
- It is recommended that professional installation and maintenance personnel install the self-bonding invisible fiber to avoid misuse, improper installation, or other accidents.
- The self-bonding invisible fiber is a **pre-adhesive cable.** Routing it takes four steps. For details, see the hyperlink Self-Bonding Invisible Fiber Construction Guide. Strictly follow the installation requirements; otherwise, the optical cable may fall off or be broken.

Step 1: Ensure that the bonding interface is within the allowed construction range. Clean the bonding interface according to the planned optical cable route.

Step 2: After confirming that the bonding interface is clean, attach an external corner/internal corner supporter to each external corner along the cable route and attach a plane corner cable supporter to each plane corner in advance to ensure that the bending radius of the optical cable is greater than or equal to 8 mm after deployment.

Step 3: Remove the release film and attach the self-bonding invisible cable to a proper wall surface.

Step 4: Use external corner/internal corner supporter to reinforce the attachment at internal corners and door seams.

cable supporter can also use in straight sections for reinforcement if necessary.

- More detailed construction guidance and videos can be obtained by scanning the code.

Features & Benefits

- The structure of the invisible strength member ensures the tensile resistance and reliability of the optical cable.
- Materials with special elements are added to greatly improve the transparency and flame retardancy of the optical cable. The product has passed the CPR Eca flame retardant certification and meets the fireproof requirements.
- The self-bonding invisible fiber has adhesive and can be directly attached to a wall without laying pipes. The construction efficiency is high.
- Digital management. Supporting AI image identification, which enables long-term ODN resource accuracy.

General Specifications

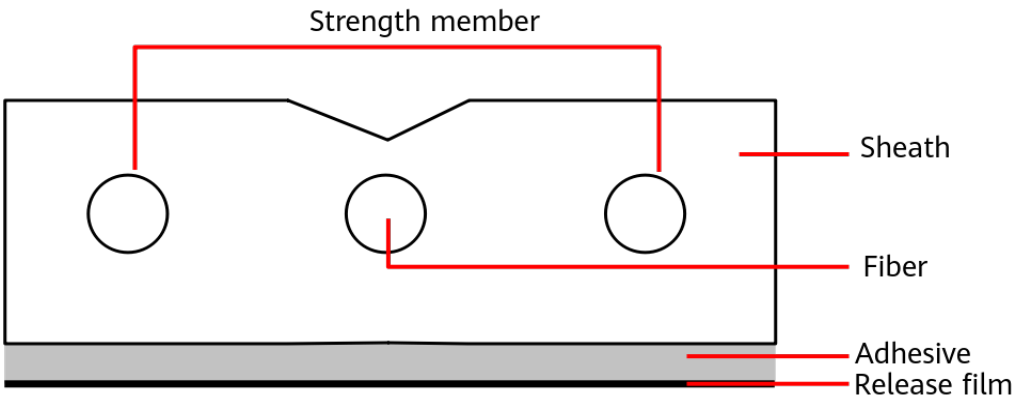
Cable assembly type	Self-bonding invisible fiber
Packaging	Separate packing
Application scenarios	Indoor corridors and rooms
Termination	SC/APC-SC/APC
Working temperature	-10ºC to +60ºC
Working humidity	5% RH to 95% RH (non-condensing)
Installation temperature (bonding interface)	10ºC to 40ºC
Transport temperature	-40ºC to +70ºC
Storage temperature	-40ºC to +70ºC

Structure

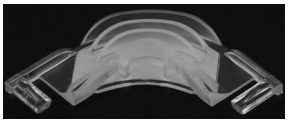


10m 20m 30m 50m 100m

Cross Section



Fittings Bag

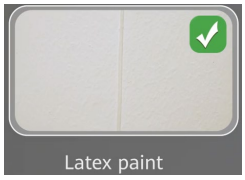
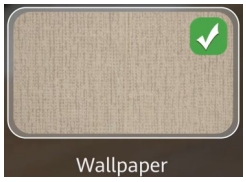
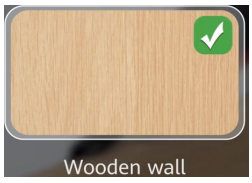
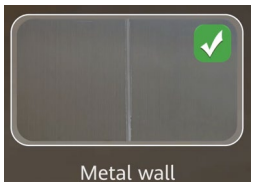
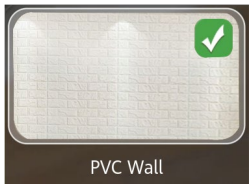
External corner/Internal corner cable supporter	Wall-throughing cable supporter	Plane corner cable supporter
		
For details of fittings bag, see the hyperlink. FWC06 FWC07 FWC08 Optical Cable Supporter Datasheet 01		

NOTICE

To ensure the bonding reliability of the self-bonding invisible cable, use the fittings bag properly during deployment.

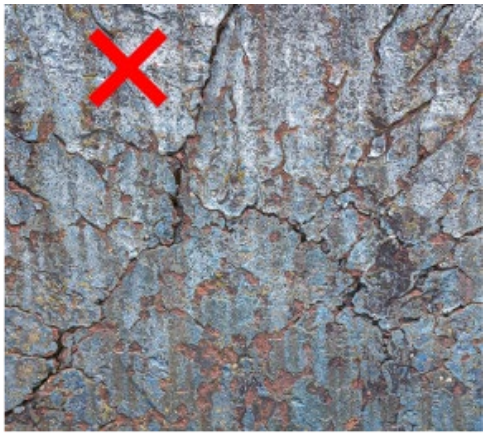
Scan the QR code to obtain detailed construction guides and videos.

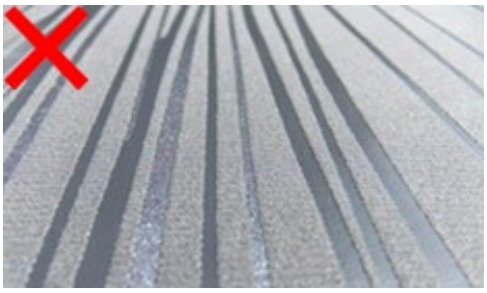
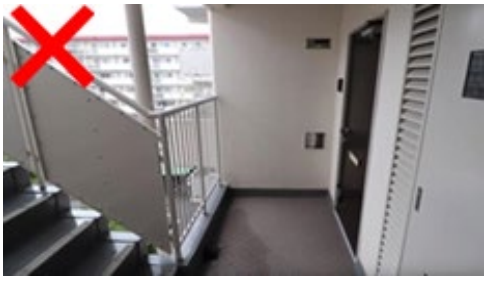
Wall Surfaces Recommended for Construction

Scenario	Picture	Scenario	Picture
Latex paint		Wallpaper	
Wooden wall		Metal wall	
PVC wall			

Not allowed construction

Scenario	Description	Picture
Stone wall surface	Do not deploy the optical cable on a stone wall surface which is uneven and cannot attach the optical cable securely.	
Concrete wall surface	Do not deploy the optical cable on a concrete wall which is course and flaky and cannot attach the optical cable securely.	
Organic resin base material wall	Organic resin base material walls (also called imitation marble plates), including epoxy resin base material wall, epoxy floor paint, and unsaturated resin base material wall	
Weak attaching scenario	If the surface is made of smooth materials such as glass cement, glass, and glazed marble, the adhesive cannot be attached to the background. Therefore, it is not recommended that the invisible optical cable be routed on such surfaces.	
Passing through the upper side of a multi-layer door frame	If there is no seam or space for routing the optical cable on the top of a door frame, do not route invisible optical cables there.	

Scenario	Description	Picture
Aluminum alloy door frame	An aluminum alloy door frame with a sliding door will definitely break the optical cable. Therefore, do not route invisible optical cables there.	
Dusty and low-adhesion surface	For dirty walls that cannot be cleaned, coarse diatom mud walls, granular walls, and other walls with rough surfaces, adhesive may not be able to attach the optical cable. Therefore, do not route invisible optical cables there.	
Flaky wall surface	If a wall may become moist due to seasonal changes, the wall surface may flake off. Therefore, do not route invisible optical cables there.	 
Rusty and corroded wall	A rusty metal surface is easy to flake off and not suitable for cable routing.	

Scenario	Description	Picture
Moist wall surface	A moist wall surface has a weak adhesion and is not suitable for cable routing.	
Loose porous and water-absorbing planks	Do not route the cable on the surfaces of loose porous and water-absorbing planks.	
Dusty latex paint wall surface	Do not route the cable on a flaky and dusty latex paint wall surface.	
Furry wallpaper	Do not route the cable on furry wallpaper surfaces.	
Non-indoor scenario	Self-bonding invisible cable cannot be routed outdoors, Semi-outdoors, through pipes, or vertically.	

NOTICE

- Considering the diversity of materials and techniques of home decoration, construction personnel need to further judge whether the construction can continue based on the actual state and adhesion effect of the construction surface.
- In a case that is not listed in the preceding table, handle it by referring to Self-bonding Invisible Cable Construction Guide.

Specifications

Dimensions and Descriptions of Cable Constructions

Cable diameter (mm)	3 x 1.4
Cable length (m)	10, 20, 30, 50, 100
Cable weight (g/m)	Approx. 4.3
Flammability	CPR Eca

Mechanical Performance of Cable

Maximum tensile (N)	50
Crush (short-term, N/100 mm)	500
Pre-adhesive force (N/standard steel medium, 90-degree peeling force)	≥ 2.5
Bending radius of the cable (mm)	≥ 8

NOTICE

In the pre-adhesive force test, the steel plate complies with GB/T-2792-2014. The test time is 24 hours after the optical cable is routed.

Connector Specifications

Connector type	SC/APC
Insertion loss (dB)	≤ 0.3
Return loss (dB)	≥ 60
Pull (N)	≤ 20

NOTE

- The preceding data is the results of tests carried under 1310/1550 nm wavelength and room temperature.
- The insertion loss in the table refers only to the insertion loss of connectors. The insertion loss of a product must include the insertion loss of connectors and optical cables.
- The end face of connector must be cleaned before the test.

Fiber Specifications

Fiber mode	Single mode
Fiber type	G.657B3

Fiber count	1
Color	Transparent

Standards

Test standard	ITU-T G.657, IEC 60794-2-50, IEC 60332-1, IEC 61754-4, IEC 61755-3-2, IEC61753-1, IEC61753-021-3, EN 50399, YD/T 1258.2, YD/T 1272.3, GB/T-2792-2014
RoHS 2.0	Compliant

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