

# Flat-Type (V-Groove) Optical Fiber Patch Cord Specification

## 1. Scope

This specification applies to optical fiber patch cords assembled by combining the optical fiber cords defined herein with optical connectors.

## 2. Product Code Description

Example: TFC-2C-SM-SC-SC-\*m-H

Product Code	Item	Specification	
TFC		TFC	
2C	Cable Type	2C	Flat cable (2-core)
SM	Fiber Type	SM	Single-mode fiber
		OM1	Multi-mode fiber OM1 (62.5/125)
		OM2	Multi-mode fiber OM2 (50/125)
		OM3	Multi-mode fiber OM3
		OM4	Multi-mode fiber OM4
		OM5	Multi-mode fiber OM5
SC	Connector Type	SC	SC Connector
		LC	LC Connector
		ST	ST Connector
		FC	FC Connector
		MU	MU Connector
		SMA	SMA905 Connector
		OPEN	Unterminated
*m	Length		*m: Total length in meters (customer specified)
H		H	Flat cable

## 3. Specifications (For specifications other than the standard specifications, please contact us.)

End-face polish	SM (Single-mode)	SPC	≥40dB
		UPC	≥50dB (Standard)
		APC	≥60dB
	MM (Multi-mode)	PC	≥25dB (Standard)
Cable Jacket	Color	SM	Yellow (Standard)
		OM1	Orange (Standard)
		OM2	Lime Green (Standard)
		OM3	Aqua (Standard)

		OM4	Aqua (Standard)
		OM5	Lime Green (Standard)
			Specified color
	Material	Flame-retardant PVC *UL1666 (OFNR) (Standard)	
		LSZH	
Branch Length		0.5m (standard)	
		Specified length	
Strength Member		Metallic strength member (standard)	
		FRP strength member	

#### 4. Structure and Optical Fiber Specifications

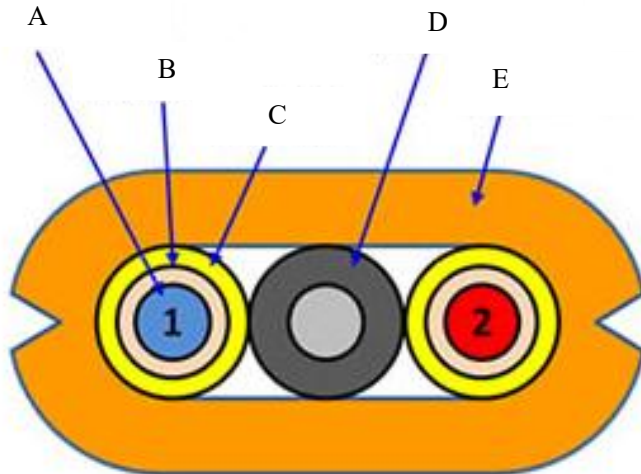
	SM		OM1		OM2		OM3		OM4		OM5		
Operating Wavelength (nm)	1310	1550	850	1300	850	1300	850	1300	850	1300	850	953	1300
Attenuation (dB/km, max.)	0.32	0.18	2.9	0.6	2.3	0.6	2.3	0.6	2.3	0.6	2.3	1.7	0.6
Bandwidth (MHz·km)	-		200	500	700	500	1500	500	3500	500	3500	1850	500
Mode Field Diameter (μm)	9.2 ±0.4	10.4 ±0.5	-										
Core Diameter (μm)	-		62.5±2.5		50±2.5								
Cladding Diameter (μm)	125±0.7		125±1.0										
Primary Coating Diameter	Material		UV-cured resin										
	Diameter (μm)		245±5										
Secondary Coating Diameter	Material		PVC/LSZH										
	Diameter (μm)		900±1										
Allowable Bending Radius (mm)	15mm/10turns ≤0.05dB @1310nm/1550 nm		75mm/100turns ≤0.5dB @850nm/1300n m		15mm/2 turns ≤ 0.1dB@850nm@953nm ≤ 0.3dB@1300nm								
					7.5mm/2 turns ≤ 0.2dB@850nm@953nm ≤ 0.5dB@1300nm								

\* SM, OM2, OM3, OM4, and OM5: R15 compliant.

\* OM5 supports 953 nm wavelength.

5. Flat Cable Specifications

		SM	OM1	OM2	OM3	OM4	OM5
Optical Fiber		Refer to Section 4					
Internal Cable	Strength Member	Aramid yarn					
	Outer Jacket	Material	Flame-retardant PVC *UL1666 (OFNR)				
		Color	Yellow	Orange	Light green	Aqua	Aqua
	Outer Diameter (mm)	Approx. $\phi 2.0$ mm					
Strength Member Material	Steel wire / FRP						
Outer Jacket	Material	Flame-retardant PVC *UL1666 (OFNR)					
	Color	Yellow	Orange	Light green	Aqua	Aqua	Lime Green
Outer Diameter (mm)	Approx. $4.0 \times 7.0$						
Maximum Allowable Tensile Load (N)	$\leq 350$						
Allowable Bending Radius (mm)	$\leq 50$ 以上						
Operating Temperature	$-20 \sim +70$ °C						
Storage Temperature	$-40 \sim +80$ °C						
Humidity	$\leq 95\%$ RH (non-condensing)						



- A: Optical Fiber Core
- B: Reinforcement Layer
- C: Protective Layer
- D: Strength Member
- E: Flame-Retardant Sheath

## 6. Packaging and Labeling

Each optical cable shall be individually packed in a plastic bag suitable for transportation and storage.

The following information shall be indicated on the plastic bag:

- Product name
- Manufacturing number
- Quantity, etc.

Attachments:

- Inspection data

## 7. Warranty

The warranty period for this product shall be one (1) year from the date of delivery.

In the event that a failure is found during normal use and is determined to be clearly attributable to a structural defect or manufacturing defect for which the manufacturer is responsible, the manufacturer shall replace the defective products free of charge, limited to the quantity of defective items and the sales amount thereof.

The warranty does not cover any indirect, incidental, or consequential damages arising from product removal, replacement, or use.

## 8. Specifications and configurations are subject to change without notice for performance improvement.