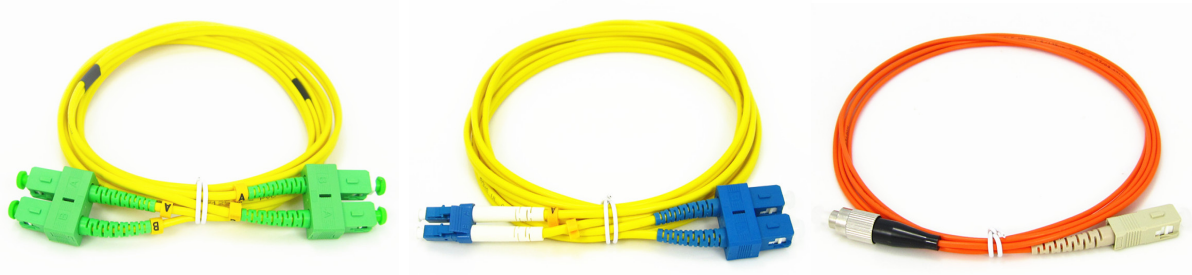
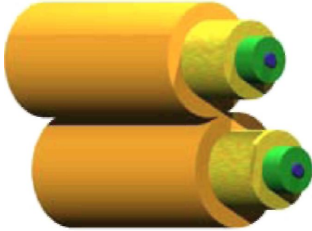


# PATCH CORD&PIGTAIL SPECIFICATION.



## Material:

### 1) Cable



**Cable type:** G652D, G655, G657A, OM1, OM2, OM3, OM4

**Fiber brand:** YOFC or Corning or others

**Cable structure:** Simplex, Duplex, break out, Fan-out, Ribbon etc

**Cable OD:** 0.9mm, 1.6mm, 2.0mm, 3.0mm, .....

**Cable color:** SM-Yellow, MM-Orange, OM3-Aqua, or others.

**Coating Material:** PVC, OFNR, OFNP, LSZH, LSOH

**Certifications:** 100% ROHS and UL-91V0

### 2) connector housing Kits



**Connector type:** SC, LC, FC, ST, MU, MTRJ, E2000, MPO

**Connector structure:** Simplex, Duplex,

**Boot size:** 0.9mm, 2.0mm, 3.0mm, .....

**Certifications:** 100% ROHS and UL-91V0

**Boot color:** normal or customer demand.

SC: TIA/EIA, FOCIS3, GR-326. NTT-SC IEC61754-4 and JIS C5973.

LC: TIA/EIA, FOCIS10, GR-326 EIA/TIA-604-10, IEC61754-20 and JIS C5973.

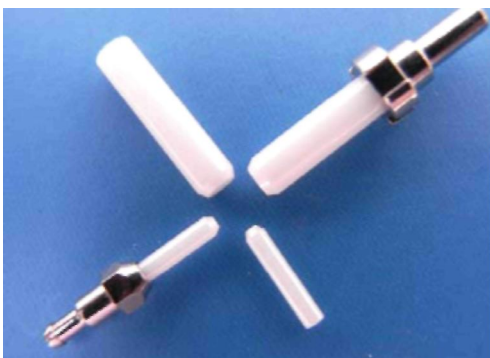
FC: EIA /TIA-604-04, FOCIS4, NTT-FC, GR-326. IEC61754-13 and JIS C5973

ST: TIA/EIA, FOCIS2, GR-326. IEC61754-2 and JIS C5973 Etc.

MU: TIA/EIA-604-3A, GR-326. NTT-MU, JIS and IEC.

MTRJ: TIA/EIA, FOCIS12, GR-326. IEC and JIS C5973.

### 3) Ferrule



**Ferrule type:** SC/SM, LC/SM, SC/MM, LC/MM, SC/APC, MU/SM

**Certifications:** 100% ROHS

**Ferrule concentricity:** SM < 1.0um; MM < 4.0mm

**flange material:** Nickel-plated brass

#### 4) Accessory.

PE bags: Good quality with great appearance

Paper carton: Strange enough to make sure the freight is ok all the time.

#### Incoming Quality inspection

1. Once the raw materials received, we will check the qty & spec. by warehouse workers before sending to IQC dept.;
2. IQC inspect the raw materials according to SOP/samples/drawing etc.;
3. If the materials pass the inspection, we will have a PASS label on the original packaging, and return goods back to warehouse together with a QC report;
4. If the quality is not good, notice the related dept. in written, and follow up how to solve.

**Cable check points:** Specifications, the optical test, color, Appearance, Label, Qty

**Connector housing kits check points:** Specifications(model,size etc), color, appearance, label, Qty, Every parts.

**Ferrule check points:** Specifications(OD,Length,front angle), concentricity test, Appearance, flange material,Label, Qty

#### Processing

1. Cutting the cable: leave 7cm longer than requested when cable length  $\leq 0.5M$ ; leave 10cm longer than requested when cable length is  $0.5M < L \leq 20M$ ; when cable length  $> 20M$ , cut it 20m. Then, roll the cable as dia.15cm cycles;
2. housing kits assembly(part of them)
3. Strip cable and fiber
4. Glueing( making epoxy)
5. Injection epoxy &Fiber insertion
6. Solidify: Control the temperature:  $110^{\circ}C-120^{\circ}C$ ,time: 20-25 minutes
7. First raw polishing by hand
8. End-face polishing by polishing machines
9. End-face Inspection
10. Crimping joint &Assembly(rest parts)
11. Optical performance test (IL&RL)
12. End-face final test
13. 3D testing(sample inspection)
14. Labeling and Packing

#### Optical Performance:

SC,LC,FC,MT,MU, MTRJ	SM/UPC	MM/PC	SM/APC
Insertion loss(typical)	<0.30dB	<0.30dB	<0.30dB
Return loss(typical)	$\geq 50$ dB	$\geq 35$ dB	$\geq 60$ dB
3D interferometers	typical Rate: 70%		
MPO	SM/PC	MM/PC	
Insertion loss(typical)	<0.5dB	<0.75dB	
Return loss(typical)	$\geq 40$ dB	$\geq 20$ dB	
Available Wavelength	SM	1310 & 1550nm	
	MM	850nm	

### Mechanical Performance:

Tensile strength	1-10kg
Durability	<0.20 dB typical change, 1000 Matings
Repeatability	<0.1db

### Environmental Performance:

Storage temperature [°c]	-40~+80
operating temperature [°c]	-20~+70

### Geometry Performance :

Length(typical)	0~1M	+5cm/-0cm, ferrule end to ferrule end
	>1M	+10cm/-0cm, ferrule end to ferrule end
End Face Geometry	GR 326 Compliant	

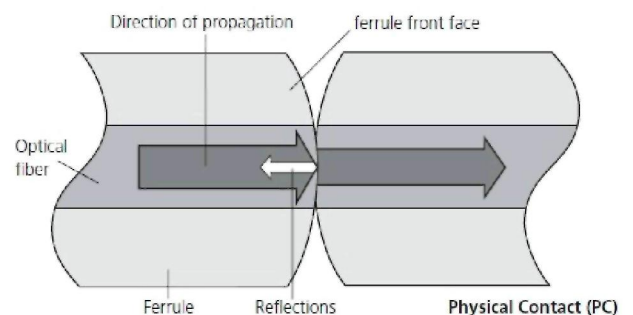
### Packing information

Model	N.W. (kgs)	G.W. (kgs)	Standalone Size(cm)	Pcs/ Carton	CartonDimension(cm)
FHC96XX	16	17	/	500	55*38*26cm

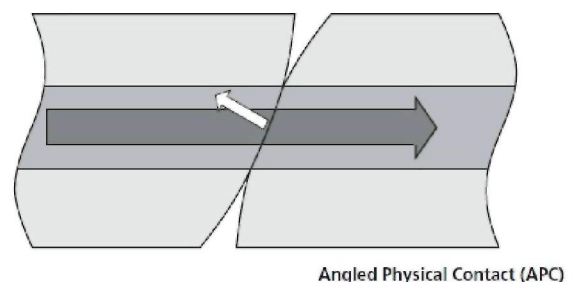
### Ordering information

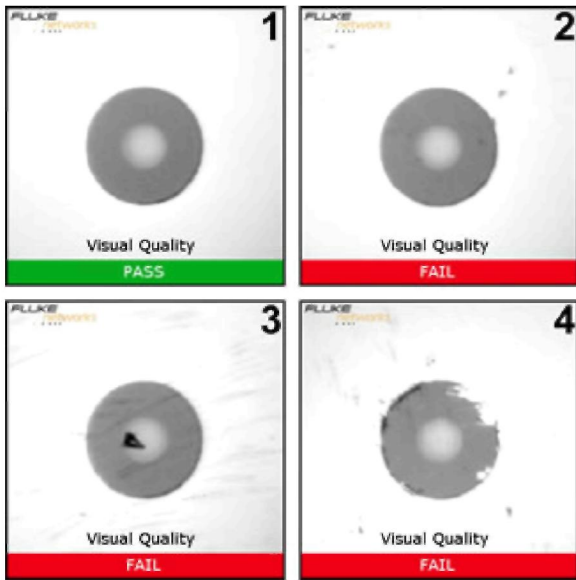
Name	Model	Details
Optic patch cord	FHM-96XX	SC,FC,LC,ST,E200,Ect connector fiber optic patch cord

In order to produce high quality, reliable cable assemblies, there are a number of physical characteristics that must be addressed. Many of these issues have been thoroughly outlined in IEC, EIA/TIA, JIS and Telcordia standards. They include acceptable parameters for intermateability, insertion loss, return loss, radius of curvature, apex offset and fiber height. Other issues that attribute to long term reliability are ferrule/fiber fit, ferrule concentricity, and ferrule surface defects. The following diagrams illustrate some critical components of a fiber optic cable assembly.



**Misalignment** - Fiber core alignment is critical to a cable assembly's ability to transmit light. Main causes of misalignment are typical mechanical issues associated with low quality connectors or fiber: ferrule concentricity, hole tolerances, fiber concentricity, and variations in core diameter.





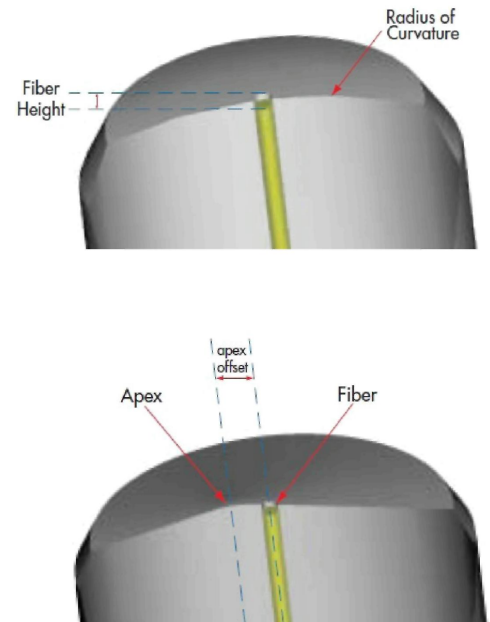
**End-face Defects** - Visual defects are one of the most common causes of latent failures. Scratches, pits, and hips in the ferrule end-face can change over time, becoming more pronounced and migrating to critical areas of the fiber core, thus affecting Performance. They are also a prime source for deposits of dust, moisture, and other contaminants.

### 3D Interferometers

**Radius of Curvature** - The end-face of the connector is given a specific radius during the polishing process. This radius provides the basis for ensuring that both fibers make contact. Both the apex offset and fiber heights are dependent on the radius of curvature being within the predetermined parameters.

**Fiber Height** - Physical contact of the fiber is necessary for proper light transfer. The end-face geometry has strict fiber protrusion limits, as well as fiber undercut limits. These limits are based exclusively on a mathematical calculation of the radius of curvature. If the fiber is too high, damage to the end-face may occur. If the fiber is too low, the physical contact may never occur, causing increased attenuation and reflectance.

**Apex Offset** - Physical contact connectors feature a radius on the end-face. The peak of the radius is known as the apex. The relationship from the apex to the 'perfect' center of the ferrule is known as the apex offset. Strict control of this specification is mandatory in order to precisely control the distance of each fiber from the surface of the connector and to ensure physical contact upon mating.



### Quality Guarantee:

**Stable and long term suppliers keep the quality is unchanged**

**100% raw material incoming testing controls the risk in source.**

**Follow the manufacture work flow by skilled workers guarantee every step is the best.**

**100% tested during in manufacture and before ship out make the products is always qualified.**

