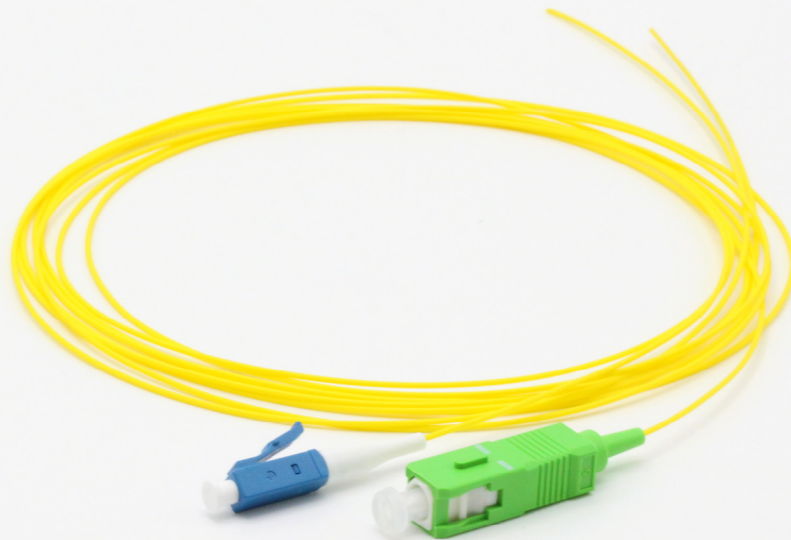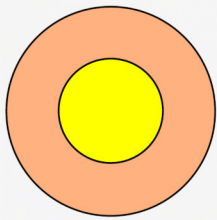# DATASHEET

## Standard  900um Fiber Pigtail

Make High-speed Optical network Racks&equipment
Connections.



**IL<0.3dB Max**
**Color coded fiber**
**Easy to strip Cable**

**OMC INDUSTRY CO.LIMTED**

## Description

The fiber optic pigtail is normally a tight/Tight buffered fiber cable with a connector pre terminated on one end and exposed fiber on the other. The end is stripped and fusion spliced to a single or multi-fiber trunk. When utilized properly, the fiber optic pigtail allows light signal transmission with minimal return loss and low attenuation. Make sure your network is reinforced with OMC's fiber pigtails, as ours are manufactured of superior quality materials.

The Pigtail are available in both single and multimode versions with either APC or UPC polish types. Our fiber pigtails come with a partial outer jacket protecting the Tight/Loose buffers from damage. If installed in a high density application, the outer jacket can be easily removed to accommodate a tighter bend radius for the pigtails.

We offer Individual single pigtails, Discounted 6 packs, or 12 Packs. Also 12 fiber or 6 fiber jacketed pigtails .

## Products Materials
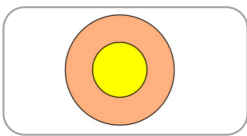
G652D,G657A1,G657A2/B2,G657B3,OM1,OM2, OM3, OM4, OM5 Fibers

900um, 1.2mm,1.6mm,1.7mm,1.8mm,2.0mm,2.4mm,2.6mm,2.8mm OD cable

PVC (Riser/OFNR),  LSZH,  Plenum (OFNP)  Jacket materials

High quality SM Ceramic ferrule, Good concentricity<0.5um

High quality MM Ceramic ferrule, Good concentricity<4.0um

Standard connectors LC, SC, ST, FC, E2000, MU, D4, Din, LX.5, SMA are available

High precious connector guarantee Good Repeatability and Interchangeability

OEM Housing kits Color, OEM boot Colors

## Standard Compliance

- TIA 604 (FOCIS)
- TIA/EIA 492AAAE
- IEC 61754
- IEC 60793-2-10
- IEC61300-3-35
- YD/T1272.1-2003
- RoHS, ISO9001 Compliant

## Features

- High quality zirconia ferrules.
- Good repeatability and interchange.
- Flame-retardant, rugged and durable jacket.
- 100% optically tested for insertion loss to ensure high quality
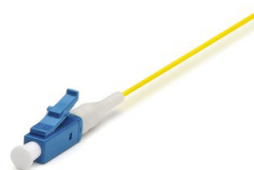
## Application

- Data Center
- Enterprise
- Fiber to the X (FTTX)
- LAN and WAN
- CATV Network
- Telecommunications Network

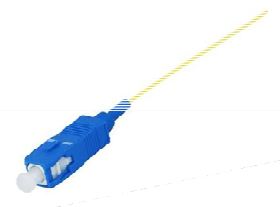## Connector Type

### LC

Standard boot .  Short boot

Typical Applications : High-density

connections, SFP and SFP+ transceivers, XFP transceivers.

### SC

Standard boot ,  Short boot

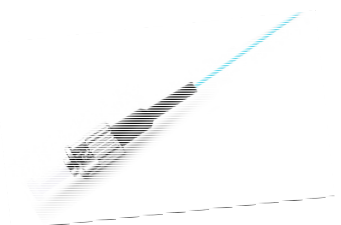Typical Applications : Telecom; GPON; EPON; GBIC.

### FC

Standard boot

Typical Applications : Datacom, Telecom, measurement equipment, single-mode lasers

### ST

Standard boot

Typical Applications : Datacom

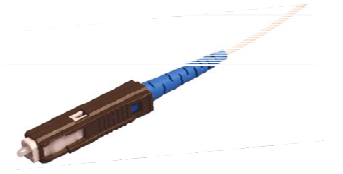# Standard 900um Fiber Pigtail

## Connector Type

**E2000**

Typical Applications : Telecom, DWDM
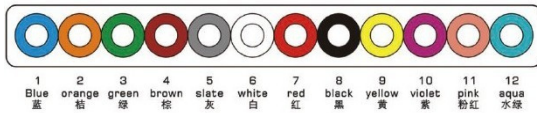
**MU:** Standard boot

Typical Applications: LAN,

Telecommunication Network

**Available for 12 colors,The 900um buffer and fiber same color coded**

**Standard 900um Cable**

**Color-coded 900um Cable**
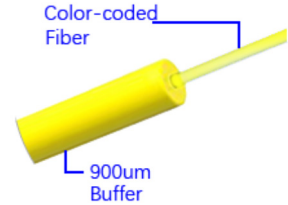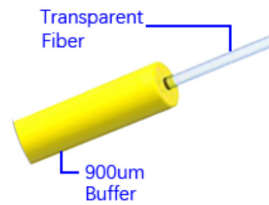
## Connector Standard

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.
E2000: IEC61754-15

## Optical Specifications

| Insertion loss | ≤0.25dB Mean (Standard) | Interchangeability | ≤0.2dB |
|---|---|---|---|
| Return loss | SM UPC≥50dB<br>SM APC≥60dB<br>MM PC≥35dB | Vibration | ≤0.2dB |
| Operating temperature | -40~75°C | Maximum pulling force | 6N(900um cable)<br>70N(2.0mm cable)<br>100N(3.0mm cable) |

## Geometric Specification（ if Customer requested)

| Items | | Parameter | |
|---|---|---|---|
| Polishing | | PC | APC |
| ROC | SC/FC/ST | 10 ~ 25 | 5 ~ 12 |
| | LC/MU | 7~ 25 | 5 ~ 12 |
| Apex Offset | | ≤ 50 | |
| Fiber Spherical Height | | ±100 | |
| Angle | | ± 0.5 | 8 ± 0.5 |

# Standard 900um Fiber Pigtail

## Polishing Method

UPC(Ultra-Polished connector

APC( 8 Angled Polished connector
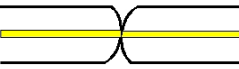
## Polishing End-face

SM UPC
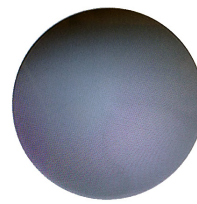
SM APC

MM PC

## End-face Quality (SM)

| Zone | Range (μm) | Scratches | Defects | Reference |
|------|-----------|-----------|---------|-----------|
| A: Core | 0 to 25 | None | None | |
| B: Cladding | 25 to 115 | None | None | IEC 61300-3-35:2015 |
| C: Adhesive | 115 to 135 | None | None | |
| D: Contact | 135 to 250 | None | None | |
| E: Rest of ferrule | | None | None | |

## End-face Quality (MM)

| Zone | Range (μm) | Scratches | Defects | Reference |
|------|-----------|-----------|---------|-----------|
| A: Core | 0 to 65 | None | None | |
| B: Cladding | 65 to 115 | None | None | IEC 61300-3-35:2015 |
| C: Adhesive | 115 to 135 | None | None | |
| D: Contact | 135 to 250 | None | None | |
| E: Rest of ferrule | | None | None | |

## Length Tolerance

| Overall Length(L)(m) | length of tolerance(cm) |
|----------------------|--------------------------|
| 0<L<1 | +5/-0 |
| 1<L<10 | +10/-0 |
| 10<L<40 | +15/-0 |
| 40<L | +0.5% x L/-0 |

LC Connector  Ø0.9mm  L

SC Connector  Ø0.9mm  L

FC Connector  Ø0.9mm  L

ST Connector  Ø0.9mm  L

# Standard 900um Fiber Pigtail
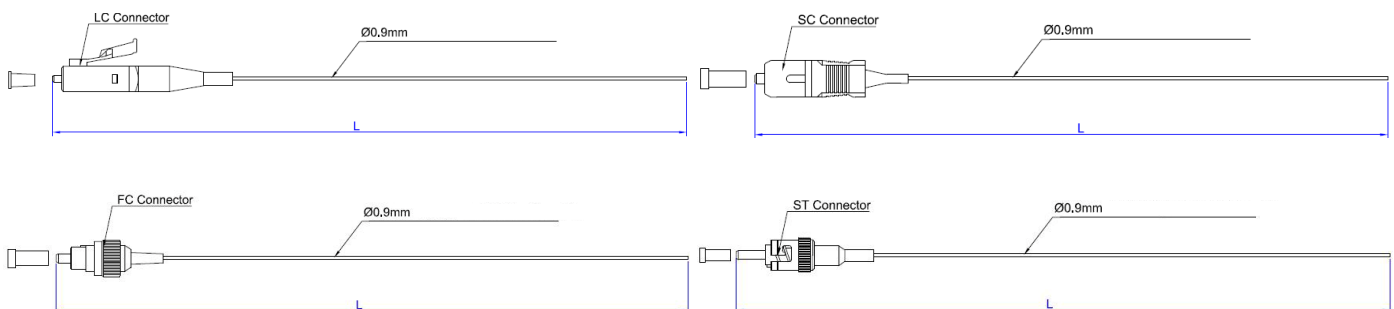
## Packaging

This easily taken and well-protected fiber optical cable package has been labelled and marked by OMC as default .Standard carton size : 34*22*15 cm; 44*34*24 cm ; 54*39*34 cm . Which carton to be used depends on goods Qty . Packing can be customized.



1,Self-seal PE Bag + Bubble Bag



2, Paperboard+bubble bag



3, Blister box



4, Paper Carton



5,fumig-free freight tray

**OME Service**
- Cable color, material of cable jacket, connector's color
- OEM Label&Box, Identify ring, cable's label, box, shipping marks
- Different quality Level.

## Order Instruction

| Pigtail | Fiber count | Fiber Grade | Connector | | Cable OD | Out jacket | Buffer | Fiber color | Cable Color | | - | length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E | S1 - Simplex Standard Quality, No Geometric request | 1 - G652D | A | LC UPC | 1 - 0.6mm | H- LSZH | 1-Tight | 1-colored | A | Blue | | 1=1m |
| | | 2 - G657A1 | B | SC UPC | 2 - 0.9mm | C - PVC | 2-Loose | 2-transparent | B | Orange | | ... |
| | | 3 - G657A2/B2 | C | FC UPC | 3 - 1.2mm | R - OFNR | 3-Simi-tight | | C | Green | | |
| | | 4 - G657B3 | D | ST UPC | 4 - 1.6mm | P - OFNP | | | D | Brown | | |
| | S2 - Simplex Standard Quality,Geometric passed request | 5 - OM1 | E | LC APC | 5 - 1.7mm | | | | E | Grey | | |
| | | 6 - OM2 | F | SC APC | 6 - 2.0mm | | | | F | White | | |
| | | 7 - OM3 | G | FC APC | 7 - 2.4mm | | | | G | Red | | |
| | | 8 - OM4 | H | ST APC | 8 - 2.6mm | | | | H | Black | | |
| | | 9 - OM5 | I | E2000 UPC | 9 - 2.8(3.0)mm | | | | I | Yellow | | |
| | | | J | E2000 APC | | | | | J | Purple | | |
| | | | L | DIN UPC | | | | | K | Pink | | |
| | | | M | DIN APC | | | | | L | aqua | | |
| | | | N | D4 | | | | | M | Magenta | | |
| | | | O | MU UPC | | | | | X- | other | | |
| | | | P | MU APC | | | | | | | | |
| | | | R | LX.5 UPC | | | | | | | | |
| | | | S | LX.5 APC | | | | | | | | |

# Standard 900um Fiber Pigtail

## Transmission Distance Comparison

| Data Rate | Interface Type | Fiber Mode | Wavelength | Maximum Distance |
|---|---|---|---|---|
| 1G | 1000BASE-LX | OM5 | 850nm | 550m |
| | | OM4 | 1300nm | 550m |
| | | OM3 | 1300nm | 550m |
| | | OM2 | 1300nm | 550m |
| | | OM1 | 1300nm | 550m |
| | | SMF | 1310nm | 10km |
| | 1000BASE-SX | OM4 | 850nm | 550m |
| | | OM3 | 850nm | 550m |
| | | OM2 | 850nm | 550m |
| | | OM1 | 850nm | 275m |
| 10G | 10GBASE-SR | OM4 | 850nm | 400m |
| | | OM3 | 850nm | 300m |
| | | OM2 | 850nm | 82m |
| | | OM1 | 850nm | 33m |
| | 10GBASE-LRM | OM5 | 850nm | 220m |
| | | OM3 | 1300nm | 220m |
| | | OM2 | 1300nm | 220m |
| | | OM1 | 1300nm | 220m |
| | 10GBASE-LR | SMF | 1310nm | 10km |
| | 10GBASE-ER | SMF | 1550nm | 30-40km |
| | 10GBASE-ZR | SMF | 1550nm | 80-100km |
| 40G | 40G-BIDI | OM5 | 850nm | 200m |
| | | OM4 | 850nm | 150m |
| | | OM3 | 850nm | 100m |
| | 40GBASE-SR4 | OM5 | 850nm | 150m |
| | | OM4 | 850nm | 150m |
| | | OM3 | 850nm | 100m |
| | 40G-SWDM4 | OM5 | 850nm | 440m |
| | | OM4 | 850nm | 350m |
| | | OM3 | 850nm | 240m |
| | 40GBASE-LR4 | SMF | 1310nm | 10km |

# Standard 900um Fiber Pigtail

## Transmission Distance Comparison

| Data Rate | Interface Type | Fiber Mode | Wavelength | Maximum Distance |
|-----------|----------------|------------|------------|------------------|
| 100G | 100GBASE-SR4 | OM5 | 850nm | 100m |
| | | OM4 | 850nm | 100m |
| | | OM3 | 850nm | 70m |
| | 100G-SWDM4 | OM5 | 850nm | 150m |
| | | OM4 | 850nm | 100m |
| | | OM3 | 850nm | 75m |
| | 100GBASE-SR10 | OM4 | 850nm | 125m |
| | | OM3 | 850nm | 100m |
| | 100GBASE-LR4 | SMF | 1310nm | 10km |
| | 100GBASE-ER4 | SMF | 1310nm | 40km |

## How to Choose The Right Fiber Optic Cable Type?

| Designation | Fiber Dia. (µm) | Type | Fast Ethernet 100BASE-FX | 1 Gigabit Ethernet 1000BASE-SX | 1 Gigabit Ethernet 1000BASE-LX | 10Gbps Ethernet 10GBASE | 40Gbps Ethernet 40GBASE SR4 | 100Gbps Ethernet 100GBASE SR4 |
|-------------|------|------|------|------|------|------|------|------|
| OM1 | 62.5/125 | Multi-mode | 2000 Meters | 275 Meters | 550 Meters | 33 Meters | Not supported | Not supported |
| OM2 | 50/125 | Multi-mode | 2000 Meters | 550 Meters | 550 Meters | 82 Meters | Not supported | Not supported |
| OM3(Laser Optimized) | 50/125 | Multi-mode | 2000 Meters | 550 Meters | 550 Meters | 300 Meters | 100 Meters(SR4) | 100 Meters (SR4) |
| OM4(Laser Optimized) | 50/125 | Multi-mode | 2000 Meters | 550 Meters | 550 Meters | 400 Meters | 150 Meters(SR4) | 150 Meters (SR4) |
| Singlemode | 9/125 | Single-mode | 2000 Meters | 5km at 1310nm | 5km at 1310nm | 10km at 1310nm | N/A | N/A |

PS: The difference of OM4 and OM3 fiber mode as the following

1. OM4 was developed specifically for VSCEL laser transmission and allows 10 Gig / second link distances of up to 550 Meters (compared to 300M with OM3).

2. The effective modal bandwidth for OM4 is more than double that of OM3.