

NeWocom and Tramco Optical Cords (pigtails and Patchcords)



Every connector assembly supplied by NeWocom and Tramco is made using quality parts in a high-quality termination facility, according to recognized and approved international standards. The quality and inspection procedures employed, ensure only high quality, individually inspected and approved pigtails and patch cords are supplied. Therefore, customers can have confidence in knowing that the product supplied will perform reliably to a high standard in the telecommunications and data networks for many years. Each patch cord is individually inspected and tested at the time of production

Features

- Choice of connector types - LC, SC,FC,DIN,MU,MTRJ,E2000
- Various patch cord lengths
- Bend insensitive G657A2 fiber as standard (G657A1 and G652D also available)
- Low loss connectors for high performance and reliability
- Extreme low loss Grade A connector options available
- Multi-fiber patch cord options available
- Duplex uniboot patch cords options available
- Duplex uniboot, push/pull tab patch cords options available
- Duplex uniboot, reversible polarity, pull tab patch cords options available
- Multi Mode Pigtails and Patchcords (OM1,OM2,OM3,OM4 and OM5) in Simplex and Duplex are also available

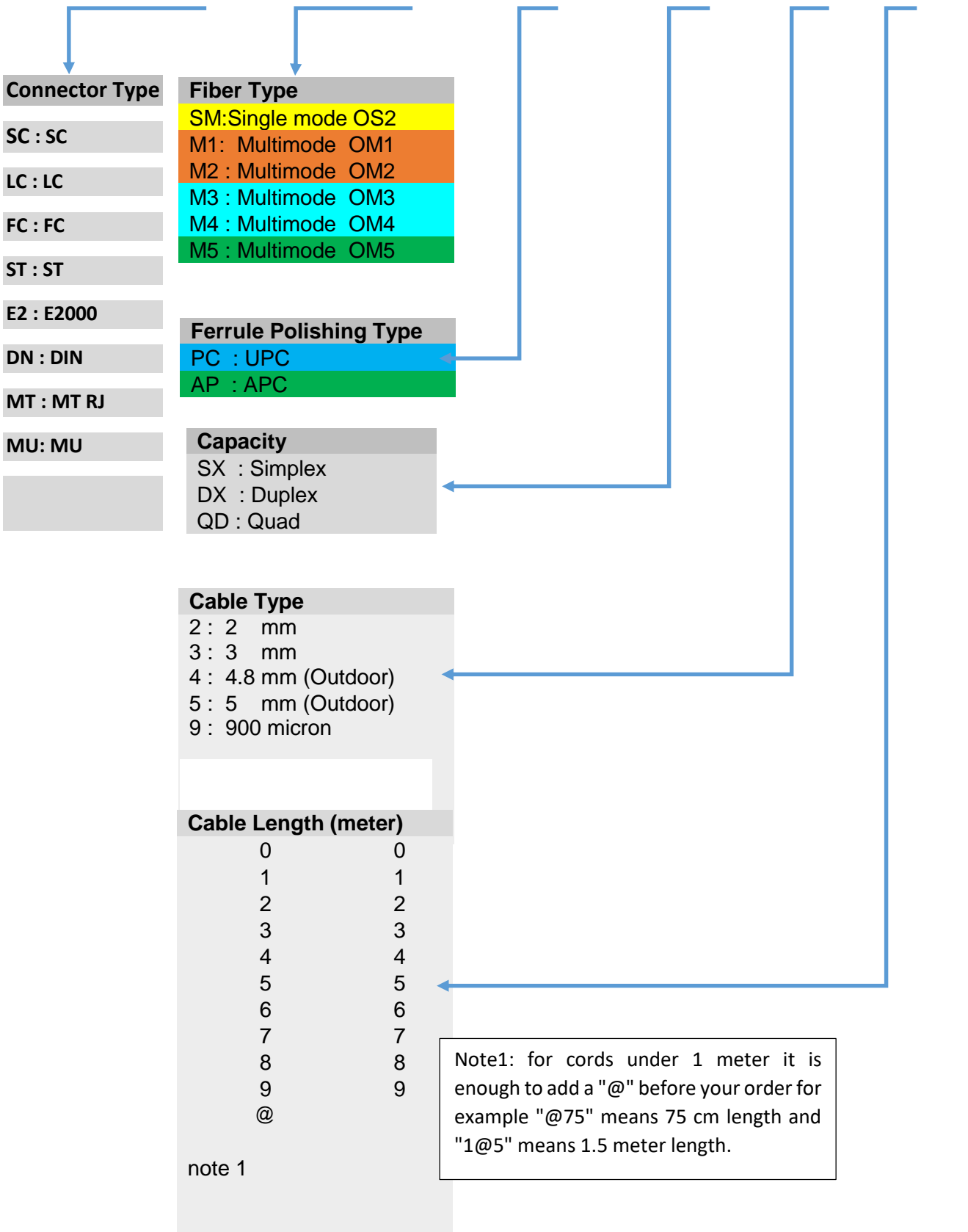
High Quality and Cost-effective 9/125 μ m Single Mode Fiber Optic Cable

The 9/125 μ m single mode fiber optic cable is suitable for enterprise network, telecom room, server farms, cloud storage networks, and any place fiber jumper cables are needed.

This 9/125 OS2 single mode fiber optic cable is ideal for connecting 1G/10G/40G/100G Ethernet connections. It can transport data for up to 10km at 1310nm, or up to 40km at 1550nm.

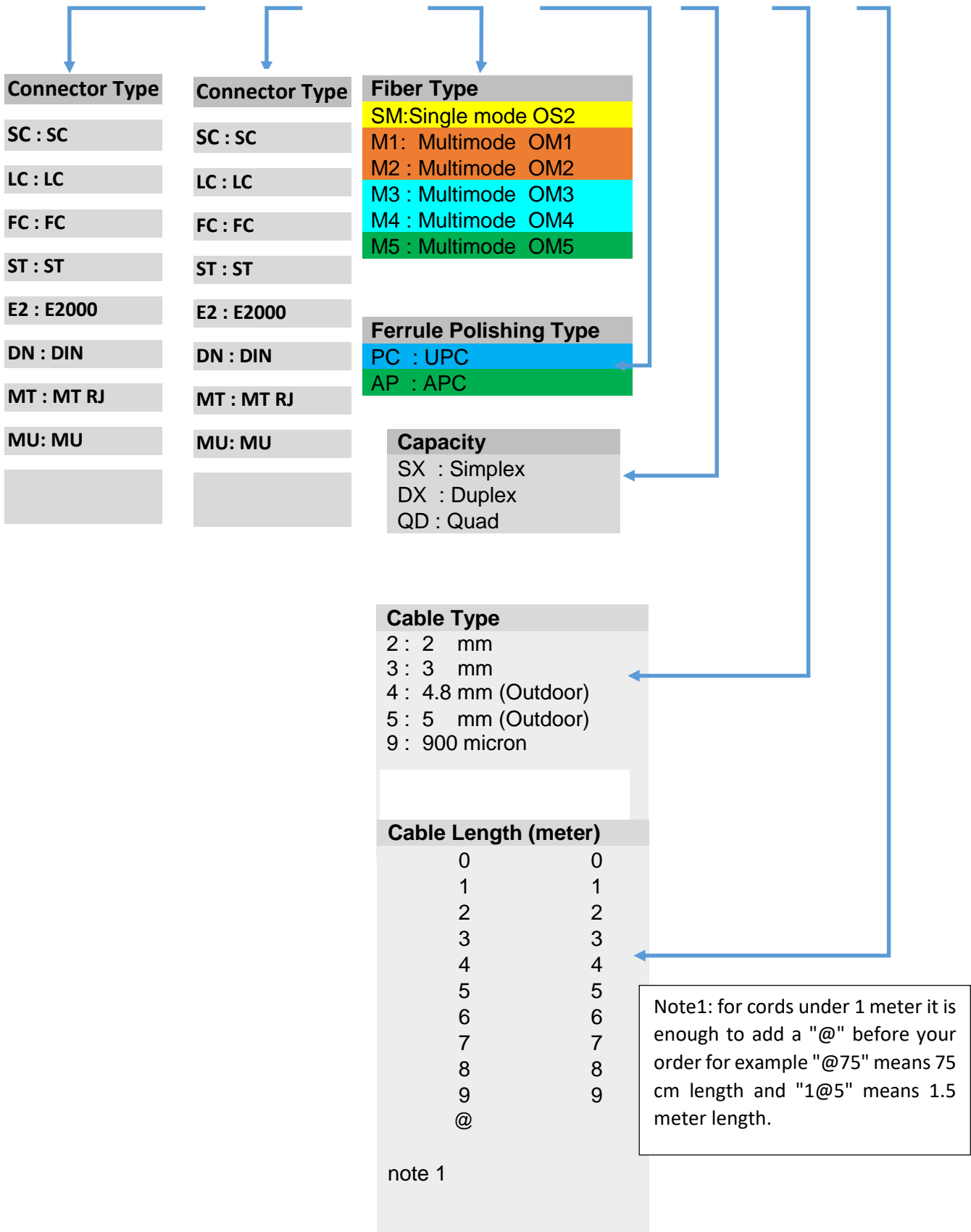
Ordering Guide for NeWocom pigtails

OG - X1 - X2 - X3 - X4 - X5 - X6



Ordering Guide for NeWocom patchcords

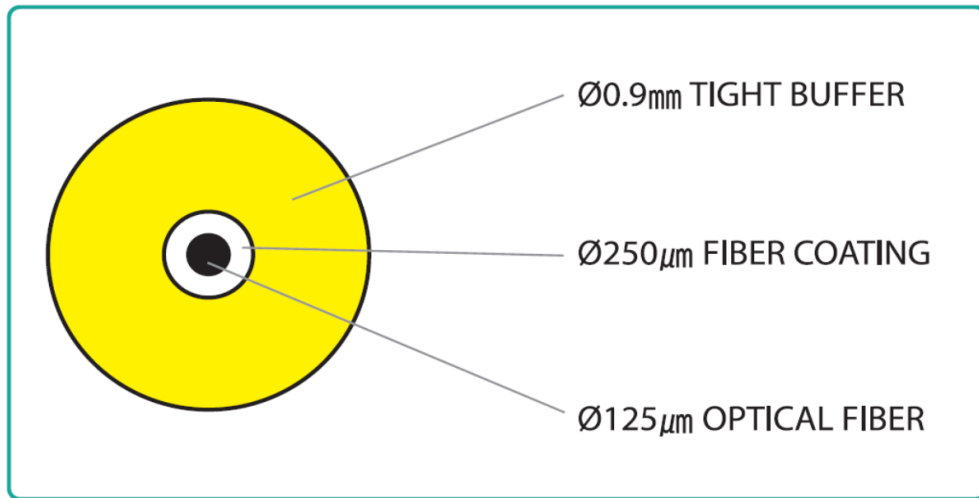
OP - X1 - X2 - X3 - X4 - X5 - X6 - X7



Note1: for cords under 1 meter it is enough to add a "@" before your order for example "@75" means 75 cm length and "1@5" means 1.5 meter length.

note 1

Tight Buffered Fiber



Description:

- Single-mode or multi-mode fiber
- Light weight, Easy to Strip, Low attenuation
- Various indoor optical fiber cable
- Excellent mechanical & environmental performance
- Passive / active devices
- Sheath materials : PVC, LSZH, Nylon, Hytrel & etc

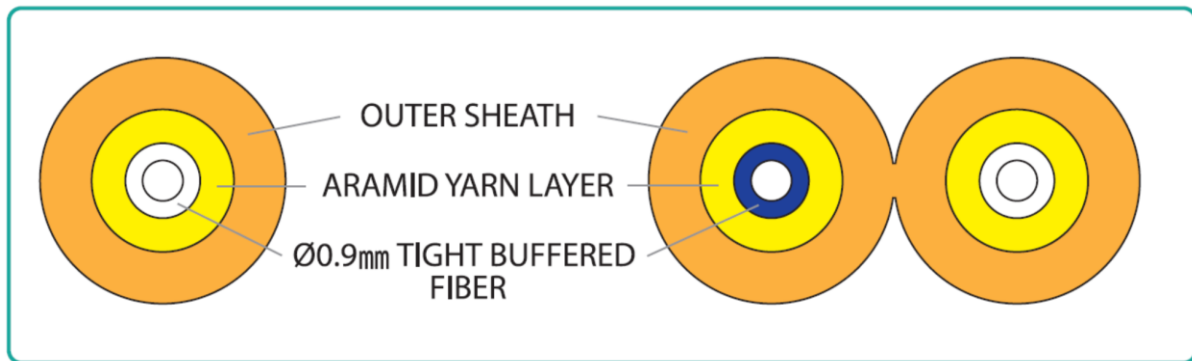
Mechanical Performance

Type	Fiber count	Outer diameter(mm)"D"	Weight(kg/km)	Min. Bending radius(mm)	
				During installation	After installation
900	1	0.9	0.9	D x 20	D x 10

Optical Performance:

	9/125 μ m (1310/1550 nm)	50/125 μ m Standard (850/1300 nm)	50/125 μ m Gigabit (850/1300 nm)	50/125 μ m 10Gigabit (850/1300 nm)	62.5/125 μ m Standard (850/1300 nm)	62.5/125 μ m Gigabit (850/1300 nm)
Attenuation(dB/km) Typical values	0.5/0.4	3.0/1.0	3.0/1.0	3.0/1.0	3.5/1.0	3.5/1.0
Minimum Band width (MHz·km)	-	500/500	500/500	1500/500	200/500	200/500
Ethernet Link Distance(m)	10Gbps	-	-	300	-	-
	1Gbps	-	-	550/550	-	250/550

Jumper Cord

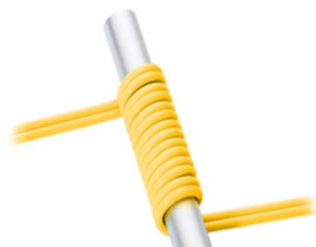


Description

- Single-mode or multi-mode fiber
- Light weight, Easy to Strip, Low attenuation
- High strength aramid yarn, high tensile strength long term stable transmission
- Pigtail and jumper cord with connector
- Indoor cable network, Horizontal cabling inside building, Ethernet, FDDI LAN
- ITU-T G.657A / B
- Sheath materials : PVC, LSZH & etc

Cable Specification

Item	Simplex				Duplex				
	600um	900um			600um	900um			
Cable Diameter (mm)	1,6	2	2,4	3	1,6x3,7	2,0x4,1	2,4x4,9	3,0x5,9	
Cable Weight (kg/km)	2,4	3,6	5,3	8,6	4,8	7,2	10,6	16,2	
Tensile Load (N)	Short Term	80	180	220	320	160	360	440	640
	Long Term	40	90	100	160	80	160	200	320



10mm Minimum Bend Radius

The bend performance improves duct utilization, enabling smaller enclosures.



G.657.A1/A2 Bend Insensitive Fiber

BIF Cable can be stapled and bent around corners without sacrificing performance.

Connectors



Features

- Comply with : JIS C-5973, IEC, Telcordia
- High stable mating and de-mating characteristics
- Optimum optical performance through high quality ferrule
- Designed for variable cable dia.
- Available long flange for ferrule and Angled ferrule
- Widely used for LD/PD modules

General information about fiber optic connectors

In the current fiber connector market, there are a total of close to 100 types of fiber optic cable connectors. The most commonly used fiber connector types include LC, SC, MU, ST, FC, MTRJ, NID, E2000 and MTP / MPO connectors. However, regardless of the types of fiber connectors, they have the same function and similar basic components: the ferrule, the connector body and the coupling device. These fiber connectors are widely used to terminate optical fibers such as fiber optic pigtails. Now let's tell you about some of common optical cable connectors which we use them for producing NeWocom and Tramco Pigtails and Patchcords;



LC Fiber Connector (Lucent connector)

The LC fiber optic connector developed by Lucent Technologies has become the ubiquitous fiber connector for today's optical telecom applications, especially for connections with SFP and SFP + fiber transceivers. As a popular SFF (small form factor) connector, the LC fiber connector has a 1.25 mm ferrule, making it perfect for high-density cabling. Single mode LC fiber connector and multimode LC fiber connector. Depending on the connector structure, the LC connector can also be divided into LC duplex and simplex connector.



Simplex LC type



Duplex LC type

Item		Content	
Fiber Type		Single Mode	Multi Mode
		SM10/125	G50/125
		DSM8/125	G62.5/125
Insertion Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
	Angled PC polish (APC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	-
	Angled PC polish (APC)	≥ 60 dB	-
Suitable Cord Type		φ 2 cord, φ 3 cord, φ 0.9 fiber	
Conformity Standard		TIA/EIA-604-10, IEC61754-20	

(※) Available for "premium grade" with excellent insertion loss and return loss.

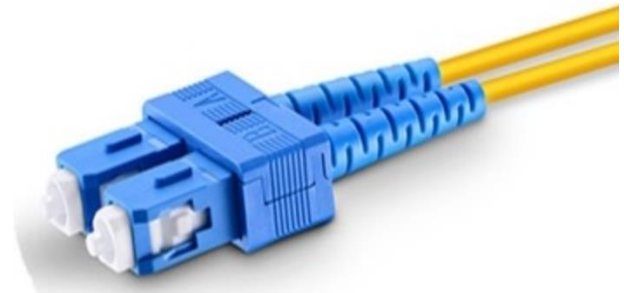
(※) Please enquire on the return loss for multi-mode fiber if required.

SC Connector

Difference between LC connector and SC fiber connector; SC fiber connectors use a round 2.5mm ring to hold a single-mode fiber (SMF). It is also different in appearance from LC because it has a “square-shaped connector body, the source of the name “square connector ”. Due to its excellent performance, the fiber optic SC connector is the second most widely used connector for polarization protection applications. The SC fiber connector is used in many areas and is ideal for data, IP camera fiber transmissions and telecom applications, including the most point-to-point and passive optical network.



Simplex SC type



Duplex SC type

Item		Content	
Fiber Type		Single Mode	Multi Mode
		SM10/125	G50/125
		DSM8/125	G62.5/125
Insertion Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
	Angled PC polish (APC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	-
	Angled PC polish (APC)	≥ 60 dB	-
Suitable Cord Type		φ 2 cord, φ 3 cord, φ 0.9 fiber	
Conformity Standard		IEC61754-4	

(※) Available for "premium grade" with excellent insertion loss and return loss.

(※) Please enquire on the return loss for multi-mode fiber if required.

FC Connector

The FC fiber cable connector is the first fiber optic connector to use a ceramic ferrule. However, unlike the plastic body SC and LC connector, it is still more robust because a round-screw fitting made of nickel-plated or stainless steel is used. The end face of the FC fiber connector relies on an alignment wrench for proper placement and is then compressed into the adapter / jack using a threaded set. You can simulate this to the old type BNC connector. In terms of cost, despite the additional complexity in manufacturing and installation, the FC connector is still the preferred connector for single-mode fiber as well as precision measuring equipment such as OTDRs. This is often used in more professional areas. SC and LC are still preferred in small and medium sized enterprises.



Item		Content	
Fiber Type		Single Mode	Multi Mode
		SM10/125	G50/125
		DSM8/125	G62.5/125
Insertion Loss (with master cord)	PC polish	Typical 0.2 dB	≤ 0.3dB
	Ultra PC polish (UPC)		-
	Angled PC polish (APC)		-
Return Loss	Ultra PC polish (UPC)	Typical 55 dB	-
	Angled PC polish (APC)	≥ 60 dB	-
Suitable Cord Type		φ 2 cord, φ 3 cord, φ 0.9 fiber	
Conformity Standard		JIS C5970(F01), IEC61754-13	

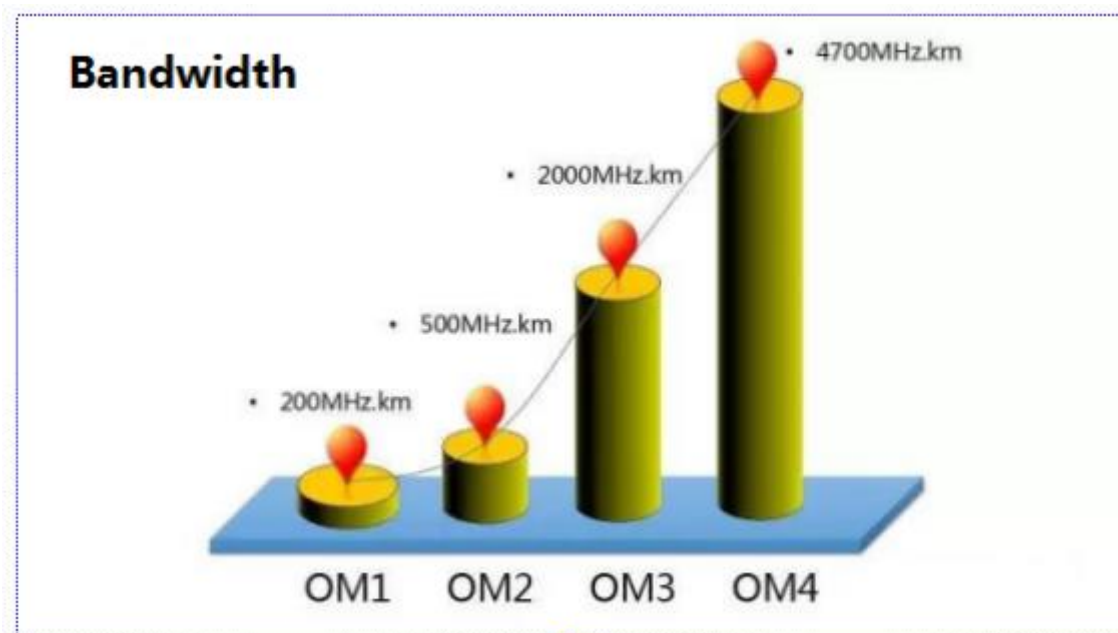
(※) Available for "premium grade" with excellent insertion loss and return loss.

(※) Please enquire on the return loss for multi-mode fiber if required.

Multimode Fiber Optic Pigtails and patchcords, OM1 62.5/125, OM2 50/125, OM3 50/125, OM4 50/125 with OFNR Zipcord Jacket



NeWocom OM family Multimode fiber optic cables are constructed of the highest quality components and are covered by a one-year warranty. These fiber optic patch cables feature OFNR (Riser rated) jackets along with FC, SC and LC style connectors. Our fiber optic cables are functionally tested to guarantee top performance upon delivery. By utilizing NeWocom fiber optic patch cables, critical network uptime is assured. Custom lengths, connector combinations and polishes are available. Contact us today for details.



62.5/125 Multi-Mode Fiber Patch Cable Description

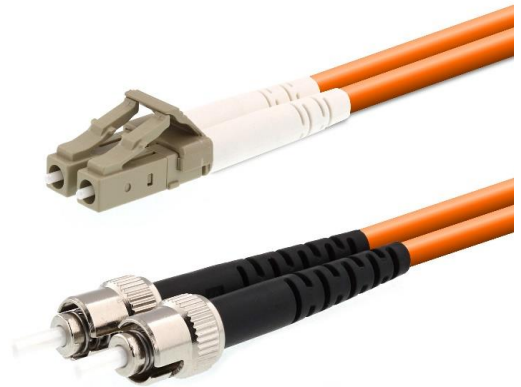
This fiber optic cable is a OM1 multimode simplex or duplex 62.5 micron plenum zip cord 2mm jacket OFNP. This cable is primarily used in the assembly of simplex or duplex fiber patch cords to provide links for such protocols as FDDI, 10 Gigabit Ethernet, ATM, and Fiber Channel. It is sold in custom order (per meter).

Features

- Easy strip option allows removal of up to 1 meter of 900 micron material without stripping the fibers 250 micron coating.
- Connectorized patch cords for interconnect and cross-connect applications.
- Tested to meet or exceed EIA/TIA 568-133 and Telcordia GR-409-CORE.
- RoHS/REACH Compliant. This cable is primarily used in the assembly of simplex or duplex fiber patch cords.

Physical Characteristics

Color	Orange
Fiber Optic Type	OM1 Plenum Zipcord 2.0 Multimode Duplex 62.5/125 micron
Fiber Core Diameter	62.5 micron \pm 2.0 micron
Nominal Diameter	2.0mm x 4.0mm
Tension(Installation)	22 lbs
Tension(Long Term)	7 lbs
Bending Radius(Installation)	2.0cm
Bending Radius(Long Term)	1.2cm
Operating Temperature	0 deg C ~ +70 deg C
Storage Temperature	-40 deg C ~ +75 deg C
Attenuation Range	@850nm 3.5dB/km @1300nm 1.2dB/km
Bandwidth Range	@850nm > 200 MHz/km @1300nm > 600 MHz/km
Gigabit Ethernet Min. Link Distance	850nm = 300 1300nm = 550
10 Gigabit Ethernet Min. Link Distance	850nm = 32
Fire Rating	OFNP



OM2 50/125 Multi-Mode Fiber Patch Cable

Features

- Connectors utilize a PC or APC polish
- OFNR (Riser rated) jacket complies with stringent building codes
- Used to connect patch panels and/or network devices that utilize FC, SC or LC style connectors and require OM2 50/125 multimode cabling
- In case of Duplex order ,A/B Markers are included for each fiber which identify transmit and receive ports ensuring correct system connectorization
- Ceramic ferrules provide precise alignment



Application

- FTTX
- Industrial Networks
- 100Base-FX
- 802.3u
- 802.3z

Physical Characteristics

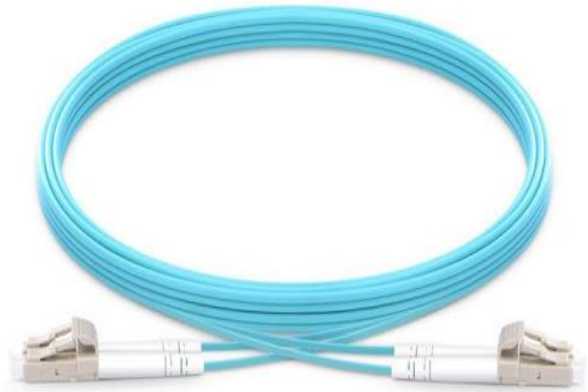
Color	Orange
Polarity	Type A to B Crossover (Most Common for Duplex Patch Cords)
Safety Certifications	Class 1 Laser, LN #50 7/2001, TUV, UL / FDA, 21CFR 1040.10
Attenuation	850 nm: 3.5 dB/km or at 1300 nm: 1.0 dB/km
Standards	Attenuation tested in accordance with ANSI/TIA/EIA-455-171-A- 2001
Length (Meters)	1,2,3,5,10,15,20 m (Custom)
Compliance	RoHS / ELV
Fiber Type	Duplex
Cable Diameter	1.8mm/3mm
Environment	Operating Temperature: -20°C to +70°C
Connectors	LC , SC,FC,MU
Fiber Core	OM2 50/125 Multimode
Jacketing	Riser Rated (OFNR)

OM3 50/125 Multi-Mode Fiber Patch Cable

This fiber optic cable is a OM3 multimode 50 micron zip cord 2mm jacket LSZH. This cable is primarily used in the assembly of fiber patch cords to provide links for such protocols as FDDI, 10 Gigabit Ethernet, ATM, and Fiber Channel.

Features

- Easy strip option allows removal of up to 1 meter of 900 micron material without stripping the fibers 250 micron coating.
- Connectorized patch cords for interconnect and cross-connect applications.
- Tested to meet or exceed EIA/TIA 568-133 and Telcordia GR-409-CORE.
- RoHS/REACH Compliant. This cable is primarily used in the assembly of fiber patch cords.

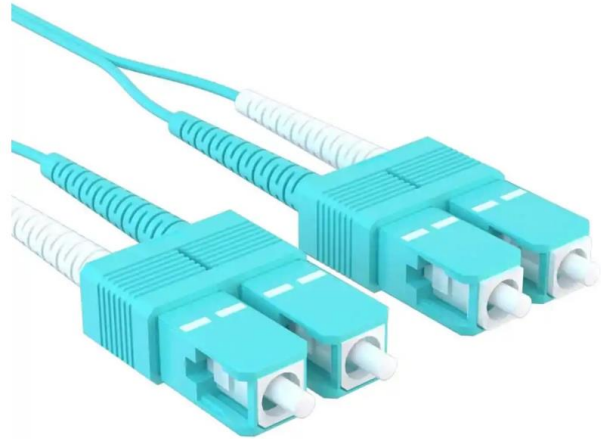


Physical Characteristics

Color	Aqua
Fiber Optic Type	Zipcord 2.0 Multimode 50/125um
Fiber Core Diameter	50.0 micron \pm 3.0 micron
Bandwidth Range	@850 (High Performance EMB) > 1500 MHz/km @1310 > 500 MHz/km
Attenuation Range	@850nm 2.3dB/km @1310nm 0.6dB/km
Maximum Tensile Load	Short Term, N 450 Long Term, N 200
Minimum Bending Radius	Load 40mm Unload 20mm
Fiber Count	2C
Tight Buffer Diameter	0.9 micron \pm 0.05
Cable Diameter	2mm
Fire Rating	LSZH/OFNR
Uniformly Distributed	Aramid Yarn
Operating Temperature	-40~+75

OM4 50/125 Multi-Mode Fiber Patch Cable

The 50/125 μ m OM4 multimode bend insensitive fiber optic cable is less attenuation when bent or twisted compared with traditional optical fiber cables and this will make the installation and maintenance of the fiber optic cables more efficient. It can also save more space for your high density cabling in data centers, enterprise networks, telecom room, server farms, cloud storage networks, and any places fiber patch cables are needed.



This 50/125 OM4 multimode fiber optic cable is ideal for connecting 40G BIDI SR, 10G SR, QSFP+, SFP+ transceivers etc. for 10G/40G/100G Ethernet connections and is the preferred fiber specification for 40G/100G applications.

Product Specification

Connector Type	LC/SC UPC to LC/SC UPC	Fiber Grade	Bend Insensitive
Fiber Mode	OM4 50/125 μ m	Wavelength	850/1300nm
40G Ethernet Distance	150m at 850nm	100G Ethernet Distance	100m at 850nm
Insertion Loss	≤ 0.3 dB	Return Loss	≥ 30 dB
Min. Bend Radius (Fiber Core)	7.5mm	Min. Bend Radius (Fiber Cable)	20D/10D (Dynamic/Static)
Attenuation at 850nm	3.0 dB/km	Attenuation at 1300nm	1.0 dB/km
Fiber Count	Simplex/Duplex	Cable Diameter	2.0mm
Cable Jacket	PVC/LSZH	Polarity	A(Tx) to B(Rx)
Operating Temperature	-20~70°C	Storage Temperature	-40~80°C

OM5 50/125 Multi-Mode Fiber Patch Cable

OM5 wideband multimode bend insensitive fiber optimized for multi-wavelengths transmission systems operating in the range of 850-950,1300nm, enabling optimal support of emerging Shortwave Wavelength Division Multiplexing (SWDM) applications that reduce parallel fiber count by at least a factor of four to allow continued use of just two fibers (rather than eight) for transmitting 40 Gb/s and 100 Gb/s and reduced fiber counts for higher speeds.



OM5 meets TIA-492AAAE and draft IEC 60793-2-10 A1a.4 requirements while completely backward compatible with existing OM4 networks and applications. It meets RoHS compliant and the fiber patch cord is optically tested for insertion loss to ensure high quality.

Features

- OM5 Multimode performance, WBMMF
- Standard or custom assemblies
- Precision ferrule endface geometry
- Controlled Fiber protrusion
- Factory polished, tested and serialized
- The bend performance improves duct utilization, enabling smaller enclosures.



Product Specification

Connector Type	LC UPC to LC UPC	Fiber Grade	Bend Insensitive
Fiber Mode	OM5 50/125 μ m	Wavelength	850/1300nm
40G Ethernet Distance	440m at 850nm	100G Ethernet Distance	150m at 850nm
Insertion Loss	≤ 0.3 dB	Return Loss	≥ 30 dB

Min. Bend Radius (Fiber Core)	7.5mm	Min. Bend Radius (Fiber Cable)	20D/10D (Dynamic/Static)
Attenuation at 850nm	3.0 dB/km	Attenuation at 1300nm	1.0 dB/km
Effective Modal Bandwidth (at 850nm)	≥4700 MHz·km	Effective Modal Bandwidth (at 953nm)	≥2470 MHz·km
Fiber Count	Simplex/Duplex	Cable Diameter	2.0mm
Cable Jacket	PVC/LSZH	Polarity	A(Tx) to B(Rx)
Operating Temperature	-20~70°C	Storage Temperature	-40~80°C