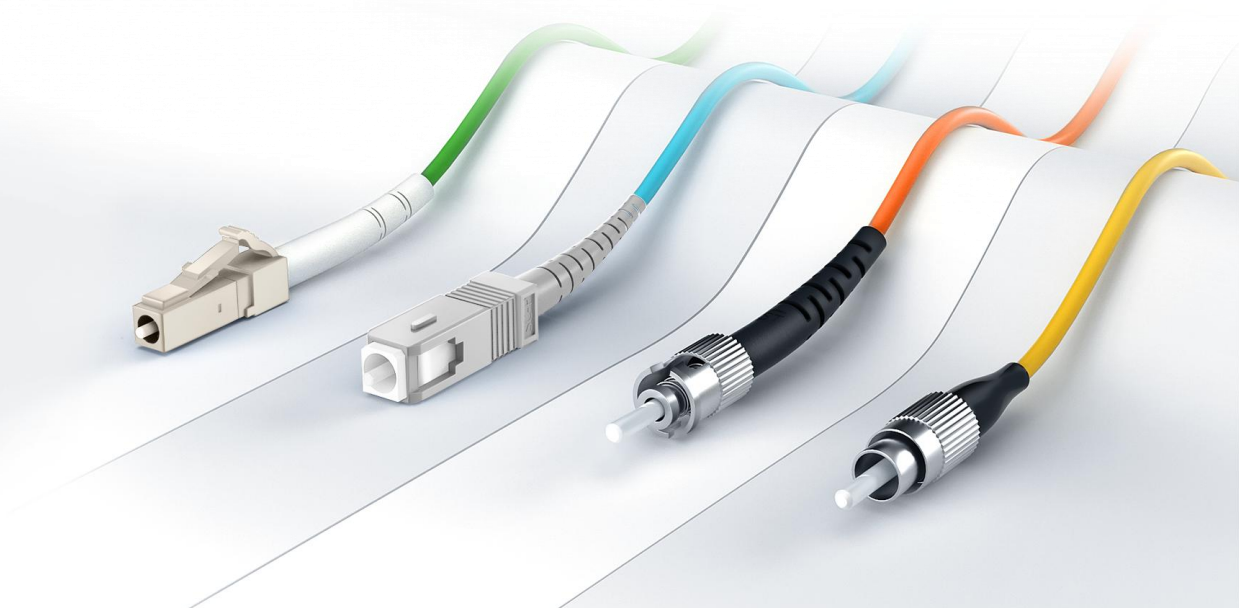


Standard Fiber Patch Cables Datasheet

MAKE HIGH-SPEED ETHERNET NETWORK EQUIPMENT CONNECTIONS

Designed for data center, enterprise, FTTx, LAN and WAN, CATV network, telecom network applications etc. requiring quick infrastructure deployment such as main, horizontal, and zone distribution areas.



Standard Fiber Patch Cables

Fiber optic patch cables are ideal for supporting high speed telecommunication network fiber applications. They are manufactured and tested in compliance with TIA 604 (FOCIS), IEC 61754 and YD/T industry standards. OM1, OM2, OM3, OM4, OM5 or OS2 fiber types are available to meet the demand of Gigabit Ethernet, 10 Gigabit Ethernet and high speed Fiber Channel. Every termination is through rigorous parameter test to ensure the highest network performance.

Standards Compliance

- RoHS, ISO 9001, CE, REACH, WEEE Compliant
- TIA 604 (FOCIS)
- TIA/EIA 492AAAE
- IEC 61754
- IEC 60793-2-10
- IEC 61300-3-35
- YD/T1272.1-2003

Features

- High quality zirconia ferrules.
- Good repeatability and interchangeability.
- LC/SC/ST/FC/E2000/MTRJ/MU connectors with standard boots are available.
- LC/SC connectors with short boots are available.
- Flame-retardant, rugged and durable jacket.
- OS2, OM4, OM3, OM2, OM1, OM5 are available.
- Factory terminated and tested for insertion loss, return loss and end face.

Technical Specification

Physical Characteristics	Description
Connector Types	LC/SC/ST/FC/E2000/MTRJ/MU with Standard Boots; LC/SC with Short Boots
Polish Type	SMF: UPC-UPC; UPC-APC; APC-UPC; APC-APC; MMF: UPC-UPC
Connector Ferrule	Zirconia Ceramic
Cable Outside Diameter	Duplex: 1.2/1.6/2.0/3.0mm, Simplex: 0.9/1.2/1.6/2.0/3.0mm
Interchangeability	≤0.2dB
Vibration	≤0.2dB

Mechanical Characteristics	Description
Fiber Type	OS2/OM5/OM4/OM3/OM2/OM1
Fiber Count	Duplex/Simplex
Cable Jacket	LSZH Flame retardant according to IEC-60332-1
Jacket Color	OM1/OM2: Orange; OM3 Aqua; OM4 Erica-Violet OM5: Lime Green; OS2: Yellow
Fiber Grade	SMF: G.652D or G.657.A1 OM5/OM4/OM3/OM2: Bend Insensitive; OM1: G.651

Minimum Bend Radius		SMF	MMF
Fiber Cable (Dynamic/Static)	OD 2.0/3.0mm	10D/5D	20D/10D
	OD 0.9mm	10mm	OM1: 15mm Others: 7.5mm
Fiber Core	OD 0.9/2.0/3.0mm	10mm	OM1: 15mm Others: 7.5mm

Tensile Strength (Long Term/Short Term)	Duplex	Simplex
OD 3.0mm	120N/225N	80N/150N
OD 2.0mm	90N/150N	60N/100N
OD 0.9mm	--	3N/6N

Random Mating IL Performance Grades

	Connector Grade	Master Cord ¹	Random Mating Average	Random Mating for 97% ²
Grade According to IEC 61753-1	Grade A	≤0.12dB	≤0.07dB	≤0.15dB
	Grade B	≤0.2dB	≤0.12dB	≤0.25dB
	Grade C	≤0.3dB	≤0.25dB	≤0.5dB
	Grade D	≤0.3dB	≤0.5dB	≤1.0dB

Notes:

1. A master cord is a perfect cord that has absolute low loss and is used as a base to measure and define the IL of the tested cord.
2. For Maximum IL, 97% to meet the specification.

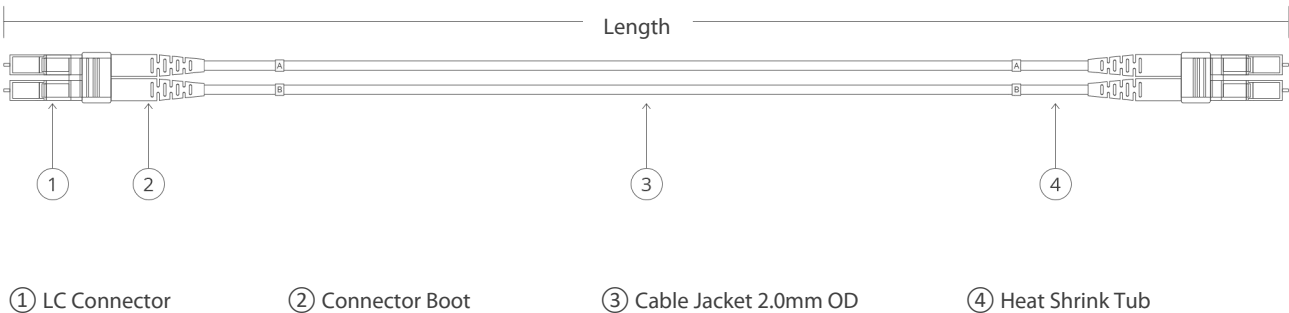
Optical Characteristics	Description
Connector Return Loss	SMF: UPC≥50dB, APC≥60dB (LC/SC/ST/FC/MU/MTRJ), UPC≥55dB, APC≥75dB (E2000) MMF: UPC≥30dB (LC/SC/ST/FC/LSH/MU), UPC≥35dB (MTRJ)
Attenuation at 1310nm	0.36dB/km
Attenuation at 1550nm	0.22dB/km
Attenuation at 850nm	3.0dB/km
Attenuation at 1300nm	1.0dB/km

Environmental Characteristics	Description
Operating Temperature	-20~70°C
Storage Temperature	-40~80°C

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
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

Technical Drawing



* The total length of this cable is the distance from the connector ferrule at one end to the ferrule at the other end.

Cable Length Tolerances

Cable Length	Duplex/Simplex
$L \leq 0.5m$	+5cm/-0cm
$0.5m < L \leq 5m$	+10cm/-0cm
$5m < L \leq 10m$	+15cm/-0cm
$10m < L \leq 30m$	+20cm/-0cm
$30m < L \leq 100$	+1%/-0cm

Fiber Optic Connectors Guidance

The pictures below shows the Single Mode UPC types as example.
Connector in colour of category, SM (Blue,Green) MM (orange,aqua, erica-violet or lime green)

1. LC



Long Form

- Lucent Connector/Little Connector/Local Connector

Typical Applications

- High-density connections, SFP and SFP+ transceivers, XFP transceivers

2. SC



Long Form

- Subscriber Connector/Square Connector/Standard Connector

Typical Applications

- Datacom and telecom; GPON; EPON; GBIC

3. FC



Long Form

- Ferrule Connector or Fiber Channel

Typical Applications

- Datacom, telecom, measurement equipment, single mode lasers

4. ST



Long Form

- Straight Tip

Typical Applications

- Datacom

5.E2000



Typical Applications

- Telecom, DWDM systems

6. MU



Long Form

- Miniature Unit

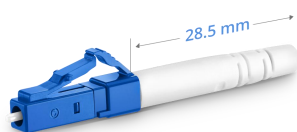
Typical Applications

- LANs and telecommunication networks

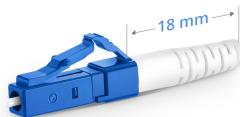
Connectors Boot Type Introduction

The pictures below shows the Single Mode UPC types as example.

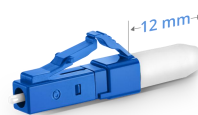
1. LC Boot Type



- Standard Boot (28.5mm)

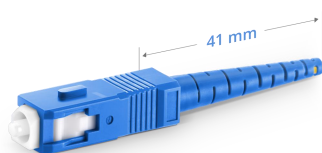


- Short Boot (18mm)

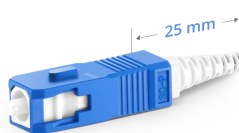


- Short Boot (12mm)

2. SC Boot Type



- Standard Boot (41mm)



- Short Boot (25mm)

* There may be an error of 1-2 mm between the actual value and the measured value.