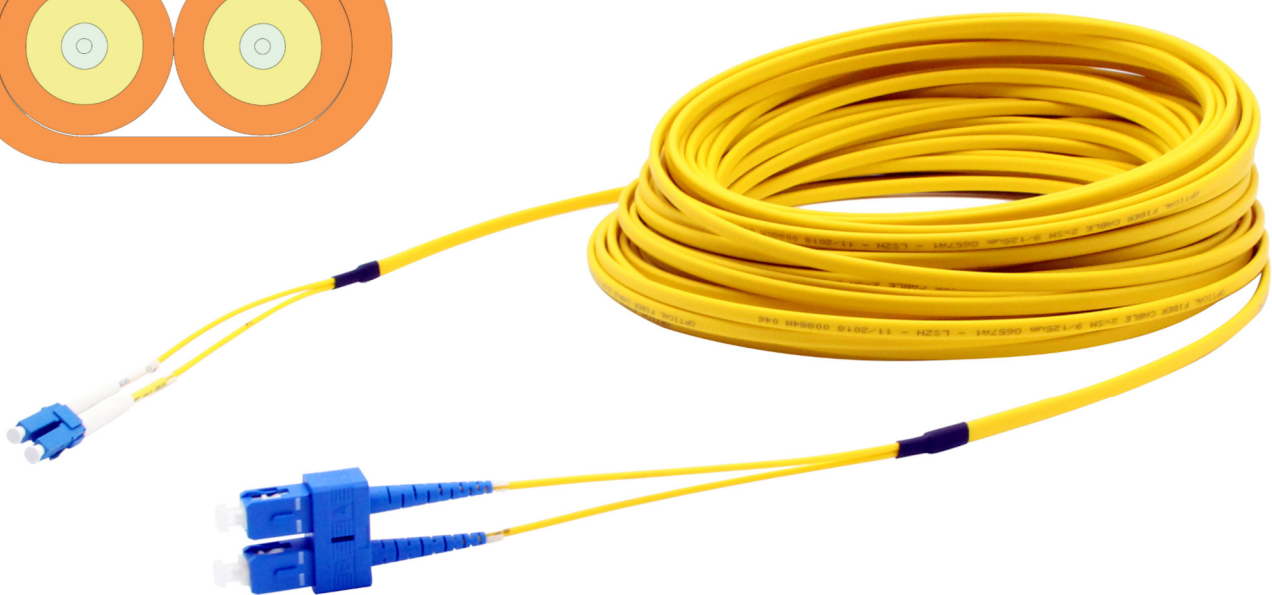
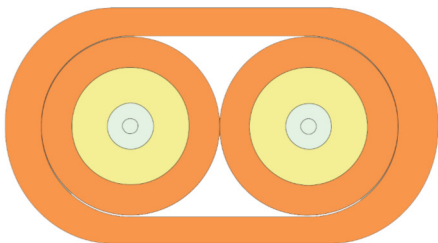


DATASHEET

Grade B BIF Flat Duplex Fiber Patch Cables

Premium Low IL for High Speed Data Transmission Connections.



IL<0.12dB,IEC Grade B SM Connector
Bend Insensitive Fiber Cable



RoHS



OMC INDUSTRY CO.LIMITED



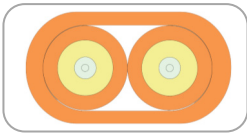
IEC Grade B BIF Flat Duplex Fiber Patch Cables

Description

IEC Grade B is based on IEC 61753-1, which is stable with excellent random mating performance between each grade B connector. Max. insertion loss of random mating of grade B patch cable is $\leq 0.25\text{dB}$, however, random mating of standard patch cable will be over 0.5dB, even over 1.0dB especially for APC connector.

Bend insensitive fiber ensures less attenuation when bent or twisted compared with traditional fiber cables and this will make the installation and maintenance of the fiber optic cables more efficient. It also can save more space for high density cabling.

Products Materials



Bend insensitive G652Dm G657A1,G657A2/B2,G657B3 Fibers
OD 3.0x5.0mm, unit 2.0mm Flat Duplex; OD 4.0x7.0mm unit 2.8mm Flat Duplex
 PVC (Riser/OFNR), LSZH, Plenum (OFNP) Jacket materials



High quality SM Ceramic ferrule, Good concentricity $<0.3\mu\text{m}$
 High quality MM Ceramic ferrule, Good concentricity $<4.0\mu\text{m}$



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
 Customized Design for special demand

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

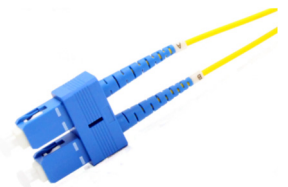
LC

Standard ,Uniboot .
 Typical Applications :
 High-density connections, SFP and SFP+ transceivers, XFP transceivers.



SC

Standard boot , Short boot
 Typical Applications :
 Telecom; GPON; EPON; GBIC.



FC

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



ST

Standard boot
 Typical Applications : Datacom



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.

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

DIN: IEC61754-3

Optical Specifications

Insertion loss	$\leq 0.12\text{dB}$ mean, $\leq 0.25\text{dB}$ max. for >97% of sample	Interchangeability	$\leq 0.2\text{dB}$
Return loss	SM UPC $\geq 50\text{dB}$ SM APC $\geq 60\text{dB}$ MM PC $\geq 35\text{dB}$	Vibration	$\leq 0.2\text{dB}$
Operating temperature	-40~75°C	Maximum pulling force	70N(2.0mm cable) 100N(3.0mm cable)
Polarity	A(Tx) to B(Rx)		

Random Mating IL Performance Grades

	Connector Grade	Master Cord 1	Random Mating Average	Random Mating for 97%
Grade According to IEC 61753-1	Grade A	Not Defined Yet	Not Defined Yet	Not Defined Yet
	Grade B	$\leq 0.2\text{dB}$	$\leq 0.12\text{dB}$	$\leq 0.25\text{dB}$
	Grade C	$\leq 0.3\text{dB}$	$\leq 0.25\text{dB}$	$\leq 0.5\text{dB}$
	Grade D	$\leq 0.3\text{dB}$	$\leq 0.5\text{dB}$	$\leq 1.0\text{dB}$

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 insertion loss of the tested cord.

2 For Maximum IL, 97% to meet the specification.

3 For Random mating Grade A, specification is not determined yet.

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

Polishing Method

UPC(Ultra-Polished connector)



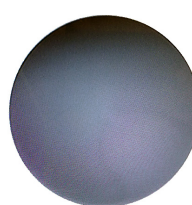
APC(8 Angled Polished connector)



Polishing End-face



SM UPC



SM APC



MM PC

End-face Quality (SM)

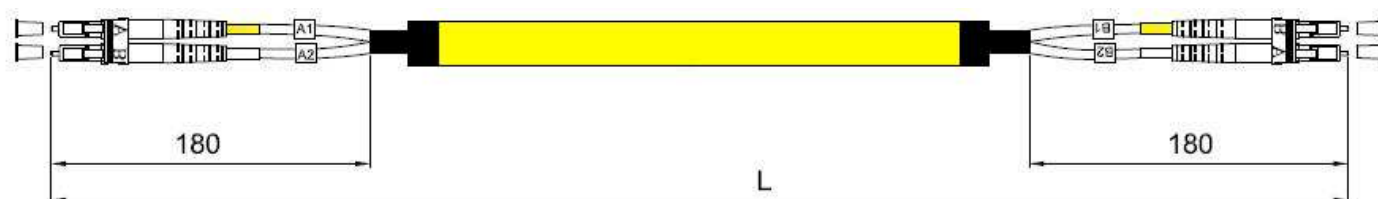
Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 25	None	None	IEC 61300-3-35:2015
B: Cladding	25 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

End-face Quality (MM)

Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 65	None	None	IEC 61300-3-35:2015
B: Cladding	65 to 115	None	None	
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



Packaging

This easily taken and well-protected fiber patch cable package has been labelled and marked by OMC as de-fault .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



2 Bubble Bag



3, Paper Carton



4, fumig-free Pallet

- OME service** {
1. Cable color, printing word, material of cable jacket, connector's color
 2. OEM Label, Identify ring, cable's label, box, shipping marks
 3. Different quality Level.

Order Instruction

Patch cord	Fiber count	Fiber Grade	Connector A	Connector B	Cable OD	Out jacket	Cable Color	length
A	F3 -Flat Duplex IEC Grade B, No Geometric request	1 - G652D	A LC UPC	A LC UPC	3 - 1.2mm	H- LSZH	A Blue	1=1m ...
		2 - G657A1	B SC UPC	B SC UPC	4 - 1.6mm	C - PVC	B Orange	
		3 - G657A2/B2	C FC UPC	C FC UPC	5 - 1.7mm	R - OFNR	C Green	
		4 - G657B3	D ST UPC	D ST UPC	6 - 2.0mm	P - OFNP	D Brown	
	F4 -Flat Duplex IEC Grade B, Geometric passed request		E LC APC	E LC APC	7 - 2.4mm		E Grey	
			F SC APC	F SC APC	8 - 2.6mm		F White	
			G FC APC	G FC APC	9 - 2.8(3.0)mm		G Red	
			H ST APC	H ST APC			H Black	
							I Yellow	
							J Purple	
							K Pink	
							L aqua	
							M Magenta	
							X- other	

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

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	50/125	Multi-	2000 Meters	550 Meters	550 Meters	400 Meters	150 Me-	150 Meters
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 VCSEL 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.