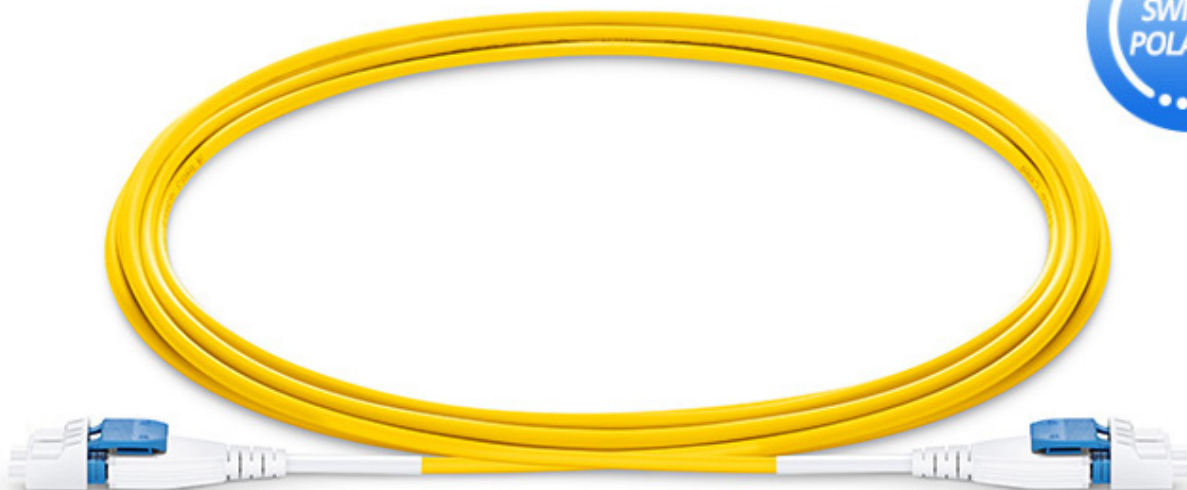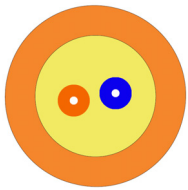# DATA SHEET

Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord

Designed for high-density fiber patching in data centers, LAN, WAN etc. which need space saving.

SWITCH POLARITY

ISO CERTIFIED COMPANY 9001:2015 SGS RoHS

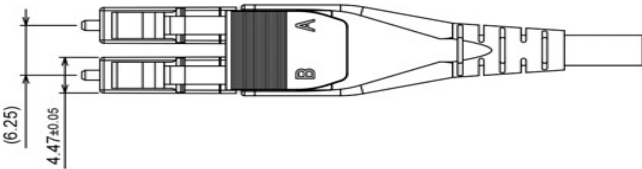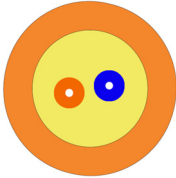
OMC INDUSTRY CO.LIMTED

Description

Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord is assembled with upgraded flat clip uniboot LC connectors for a high density data center environment, like in UHD series products. It has thinner body and can reduce bulk fiber optic cabling by 50% when compared to traditional duplex cables.

The **Polarity Switchable LC uni-boot Patch cable** is a unique design that allows to switch polarity without using any tooling. It is commonly used in data centers where cable counts are high and space limited.

OMC's **integrated reverse-polarity LC uniboot assemblies** meets the ultra high-density space requirements and enables quick and easy polarity management as well. The flat clip connector design makes it easy to engage and disengage from even the most compact panels, while Corning bend insensitive fiber features ultra bendable performance and can greatly reduce outages and degradation in systems caused by severe bending problems.

Products Materials

Meet and Compatible with many International Standard
LC: TIA/EIA, FOCIS10, GR-326 EIA/TIA-604-10, IEC61754-20 and JIS C5973.

Perfect match with Standard LC ferrule, No need to develop special LC ferrule flange, Save cost
High quality SM Ceramic ferrule, Good concentricity<0.5um
High quality MM Ceramic ferrule, Good concentricity<4.0um

G652D,G657A1,G657A2/B2,G657B3,OM1,OM2, OM3, OM4, OM5 Fibers
2.0mm OD Uni-tube cable;
PVC (Riser/OFNR), LSZH, Plenum (OFNP) Jacket materials

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

**Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord**

Optical specification:

Fiber Connector	Flat clip Polarity Switchable Uniboot LC to Flat clip Polarity Switchable Uniboot LC	Fiber Type	SM:Yellow/Blue/White; OM1&OM2: Orange; OM3:Aqua; OM4:Aqua/Violet/ Magenta
Cable OD&Jacket	2.0mm PVC/LSZH	Fiber Counts	2 Fibers
Insertion Loss	**≤0.3dB(IEC Grade C)** **≤0.12dB(IEC Grade B)**	Return Loss	**SM UPC ≥ 50dB(min)** **SM APC ≥ 60dB(min)** **MM PC ≥ 35dB(min)**
Pull-out Force	100N	Durability	500 Cycles
AB Polarity Switchable	Available	Operating Temperature	-40 to + 85°C

Geometric Specification(if Customer requested)

Items		Parameter	
Polishing		PC	APC
ROC	LC	7~ 25	5 ~ 12
Apex Offset		≤ 50	
Fiber Spherical Height		±100	
Angle		± 0.5	8 ± 0.5

Polishing Method
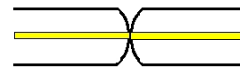
UPC (Ultra-Polished connector)

APC (8 degree Polished connector)

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	
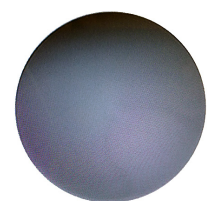
SM UPC   SM APC

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	

MM PC

Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord

Length Tolerance

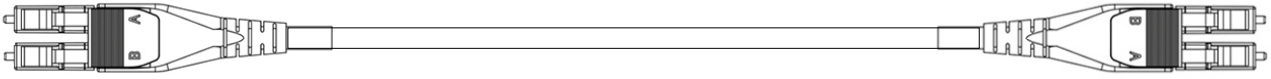| Overall Length(L)(m)	length of tolerance(cm)
0<L<1	+5/-0
1<L<10	+10/-0
10<L<40	+15/-0
40<L	+0.5% x L/-0

Product Highlights

Flat Clip vs. Standard Clip

Flat Clip Design

Ideal for ultra high-density cabling applications and meets the high-density space requirements of UHD series products.
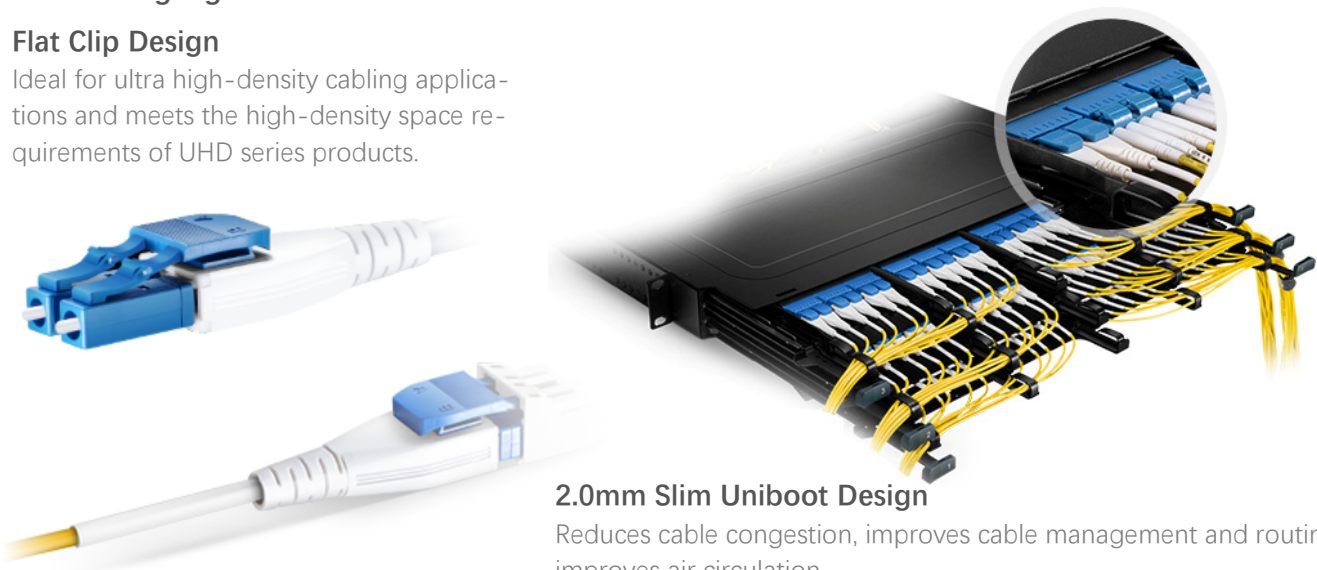
2.0mm Slim Uniboot Design

Reduces cable congestion, improves cable management and routing and improves air circulation.

Quick and Easy Reverse-Polarity Uniboot Patch Cables

The LC duplex uniboot connectors for 2.0mm round cable allow the polarity to be switched from A-B to A-A without exposing the fibers or needing any tools.

1	2	3
Unlock the latch from the back	Rotate the connector to the front	Extract the clip.
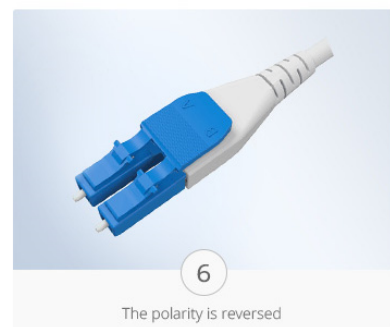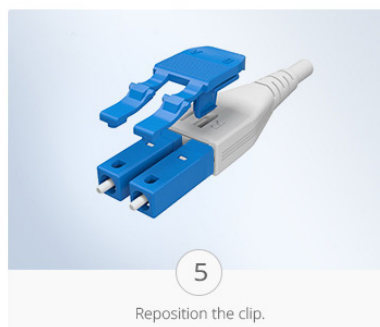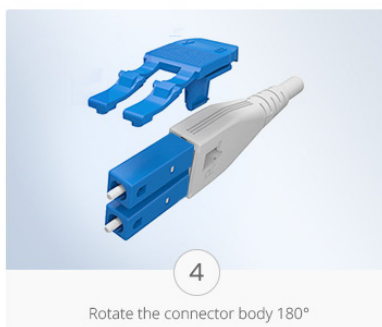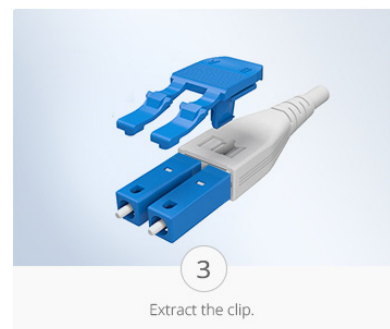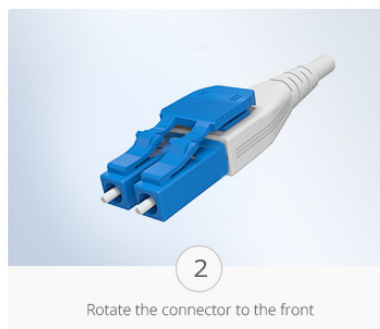
4	5	6
Rotate the connector body 180°	Reposition the clip.	The polarity is reversed

Packaging

This easily taken and well-protected fiber patch 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   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.

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.

3. For OM4 patch cable it is 4700 MHz.km while for OM3 it is 2000 MHz.km.

Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord

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

Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord

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

![OMC FTTH logo] **Polarity Switchable uniboot LC-LC (flat Clip) Fiber patch cord**

Order Instruction

Patch cord	-	Quality level	-	Fiber Mode	-	Connector A	-	Connector B	Cable Size	-	Out jacket	-	Cable color	-	Length
A		R1-Standard Quality,		1-G652D		A-Uniboot LC UPC V1 Connector		A-Uniboot LC UPC V1 Connector	0-1.7/18mm		H-LSZH		A - Blue		1=1m
		No Geometric request		2-G657A1		B-Uniboot LCUPC V2 Connector		B-Uniboot LCUPC V2 Connector	1- 2.0mm		C-PVC		B- Orange		2=2m
				3-G657A2/B2		C-Polarity Switchable Uniboot LC UPC Push-Pull Tab Connector V1		C-Polarity Switchable Uniboot LC UPC Push-Pull Tab Connector V1	2- 3.0mm		R-OFNR		C-Green		
		R2-Standard Quality,,Geometric passed request		4-G657B3		D-Uniboot LC UPC Pull Tab Connector V1		D-Uniboot LC UPC Pull Tab Connector V1	3 - 3.5mm		P-OFNP		D-Brown		
				5-BIF OM1		E-Polarity Switchable Uniboot LC UPC Pull Tab Connector V2		E-Polarity Switchable Uniboot LC UPC Pull Tab Connector V2					E– Grey		
		R3 -IEC Grade B Quality No Geometric request		6-BIF OM2		F-Polarity Switchable uniboot LC UPC with flat Clip Connector		F-Polairty Switchable uniboot LC UPC with flat Clip Connector					F-White		
				7-BIF OM3		1-Uniboot LC APC V1 Connector		1-Uniboot LC APC V1 Connector					G-Red		
				8-BIF OM4		2-Uniboot LCAPC V2 Connector		2-Uniboot LCAPC V2 Connector					H-Black		
		R4 -IEC Grade B,Geometric passed request		9-BIF OM5		3-Polarity Switchable Uniboot LC APC Push-Pull Tab Connector V1		3-Polarity Switchable Uniboot LC APC Push-Pull Tab Connector V1					I-Yellow		
				1-Coring G652D		4-Uniboot LC APC Pull Tab Connector V1		4-Uniboot LC APC Pull Tab Connector V1					J-Purple		
				2-Coring G657A1		5-Polarity Switchable Uniboot LC APC Pull Tab Connector V2		5-Polarity Switchable Uniboot LC APC Pull Tab Connector V2					K-Pink		
				3- Coring G657A2/B2		6-Polairty Switchable uniboot LC APC with flat Clip Connector		6-Polairty Switchable uniboot LC APC with flat Clip Connector					L-Aqua		
				4-Coring G657B3									M-Magenta		
				5-Coring OM1											
				6-Coring OM2											
				7-Coring OM3											
				8-Coring OM4											
				9-Coring OM5											