DATASHEET

4-144F mini breakout 900um Pre-terminated patch cable

Make High-speed Optical network Racks&equipment Connections.

OMC INDUSTRY CO.LIMTED

2018|En version1.0

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4-144F Pre-terminated patch cable-fanout 900um cable

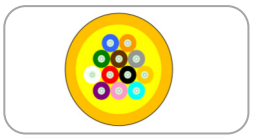
Description

Pre-terminated Patch cable also be called Bunch/Distribution patch cable or Mini breakout patch cable. It's a installation cables that are suitable for laying in buildings, primarily in cable conduits and cable trays. They are designed for direct connector assembly with no need for splice connectors.

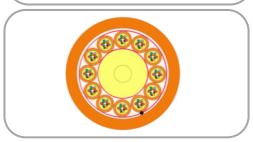
OMC's Patch cables are manufactured and tested in compliance with TIA 604 (FOCIS), IEC 61754 and YD/T industry standards. OM1, OM2, OM3, OM4, OM5 or OS2 fiber types to meet the demand of Gigabit Ethernet, 10 Gigabit Ethernet and high speed Fiber Channel Perfect for fiber optic installations within a building or between two buildings.

All of OMC pigtails are factory inspected and tested, with available interferometer data upon request.

Products Materials



- Cable Structure: Unit-tube type
- Cable OD: 4F-5.0mm;6F-5.3mmOD;8F-5.6mm;12F-6.3mm;24F-8.3mm;48F-10.5mm
- Jacket: PVC (Riser/OFNR), LSZH, Plenum (OFNP)



- Cable Structure: Multi-tube type
- Cable OD: 24F(4tubes)-15.5mm;36F(6tubes)-18.8mm;48F(4tubes)-17mm; 48F(6tubes)-20mm; 72F(6tubes)-21mm; 96F(8tubes)-25.8mm; 144F(12tubes)-28.2mm;

- 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
- 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

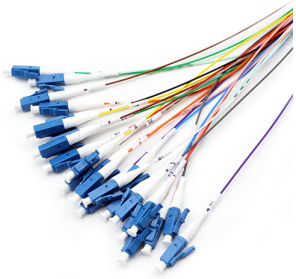
- High quality zirconia ferrules.
- Good repeatability and interchange.
- Flame-retardant, rugged and durable jacket.

Application

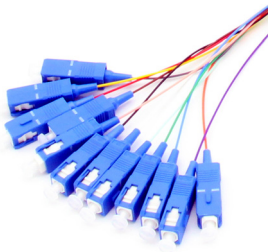
- Data Center
- Enterprise
- Fiber to the X (FTTX)
- LAN and WAN
- CATV Network

Connector Type

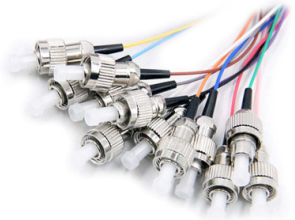
LC
Standard ,Uniboot .
Typical Applications : High-density connections, SFP and SFP+ transceivers, XFP transceivers.



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



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



ST
Standard boot
Typical Applications :
Datacom

4-144F Pre-terminated patch cable-fanout 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.
MTRJ: TIA/EIA, FOCIS12, GR-326. IEC and JIS C5973.
DIN: IEC61754-3

Optical Specifications-Standard quality

Insertion loss	≤0.25dB Mean (Standard)	Interchangeability	≤0.2dB
Return loss	SM UPC≥50dB SM APC≥60dB MM PC≥35dB	Vibration	≤0.2dB
Polarity	A(Tx) to B(Rx)	Maximum pulling force	660N(<12 cores) 1320N(>12 cores)

Optical Specifications-IEC Grade B quality

Insertion loss	≤0.12dB mean, ≤0.25dB max. for >97% of sample	Interchangeability	≤0.2dB
Return loss	SM UPC≥50dB SM APC≥60dB MM PC≥35dB	Vibration	≤0.2dB
Polarity	A(Tx) to B(Rx)	Maximum pulling force	660N(<12 cores) 1320N(>12 cores)

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

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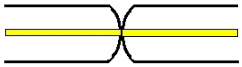
Polishing Method

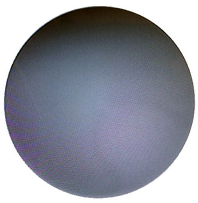
UPC(Ultra-Polished connector



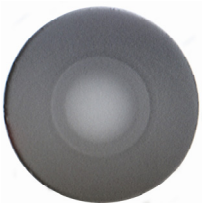
APC(8 Angled Polished connector

Polishing End-face

SM UPC



SM APC



MM PC

End-face Quality (SM)

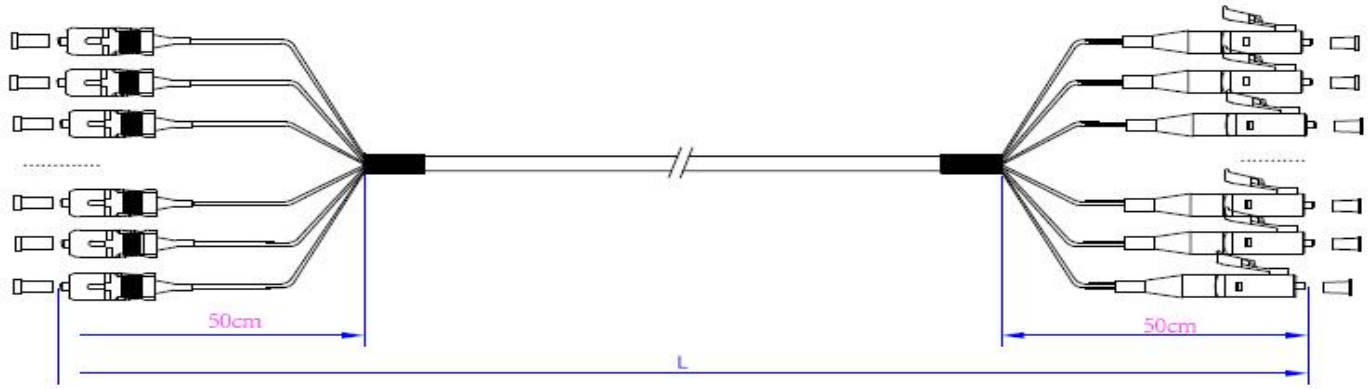
Zone	Range (μm)	Scratches	Defects	Reference
A: Core	0 to 25	None	None	IEC 61300-3-35:2015
B: Cladding	25 to 115	None	None	
C: Adhesive	115 to 135	None	None	
D: Contact	135 to 250	None	None	
E: Rest of ferrule		None	None	

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

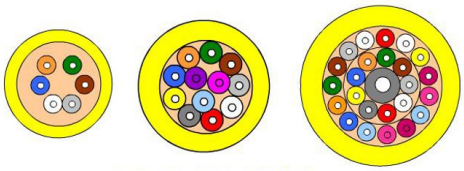
Overall Length(L)(m)	length of tolerance(cm)
0<L<1	+5/-0
1<L<10	+10/-0
10<L<40	+15/-0
40<L	+0.5% x L/-0

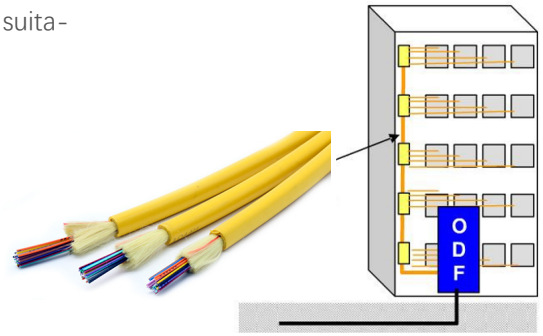


4-144F Pre-terminated patch cable-fanout 900um cable

Application

The ideal cable for vertical wiring in the building, Especially suitable for the application of dispersion spectrometer in shaft





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,PE Wrapped

2, Paper Carton

3,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	Out jacket	Cable Color	-	length
A	Standard Quality M1- 4cores M2- 6cores M3- 8cores M4- 12cores M5- 16cores M6- 24cores M7- 48cores IEC Grade B Quality N1- 4cores N2- 6cores N3- 8cores N4- 12cores N5- 16cores N6- 24cores N7- 48cores	1 - G652D 2 - G657A1 3 - G657A2/B2 4 - G657B3 5 - OM1 6 - OM2 7 - OM3 8 - OM4 9 - OM5	A LC UPC B SC UPC C FC UPC D ST UPC E LC APC F SC APC G FC APC H ST APC I E2000 UPC J E2000 APC L DIN UPC M DIN APC N D4 O MU UPC P MU APC R LX.5 UPC S LX.5 APC	A LC UPC B SC UPC C FC UPC D ST UPC E LC APC F SC APC G FC APC H ST APC I E2000 UPC J E2000 APC L DIN UPC M DIN APC N D4 O MU UPC P MU APC R LX.5 UPC S LX.5 APC	H- LSZH C - PVC R - OFNR P - OFNP	A Blue B Orange C Green D Brown E Grey F White G Red H Black I Yellow J Purple K Pink L aqua M Magenta X- other		1=1m ...

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

4-144F Pre-terminated patch cable-fanout 900um cable

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-	2000 Meters	550 Meters	550 Meters	82 Meters	Not sup-	Not sup-
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.