FIBER OPTIC CONNECTIVITY

BROCHURE
SHENZHEN · CHINA
FIBER OPTIC COMPONENTS GLOBAL SUPPLIER

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KOC

Contents

Company Profile

Established in 2001, KOC Group is a state and municipal level Hitech Company, located in Longhua District, Shenzhen, China. KOC started its fiber optic connection trading at its early stage. After more than 10-year's developments, it becomes a professional manufacturer specialized in telecom, fiber optic network connection, passive devices, data center cabling etc.

KOC products are extensively applicable to telecom operators, fiber optic engineering, CCTV, broadband networks, FTTH, data center in more than 80 countries worldwide.

KOC provides reliable products and services to customers under the concept of high quality orientation.

History and Expansions

2020   / Establishment of Sichuan KOC Communication Co., Ltd

2015   / Acquired and integrated companies under KOC, set up ODN/PON , Passivde device and data center divisions. KOC Group established.

2010   / Set up PLC production Lines

2008   / Sub-companies established for adapters, connecters and other components. Moved to Unibuilt.

2006   / Production base relocated in Hitec Cluster - Shenzhen

2004   / Path cord Production base set up in Yintan, Jiangxi Province.

2001   / KOC founded

Fiber Optic Adapter

KOC adapters are manufactured with high-quality sleeves and are available in bulkhead, male-female and also hybrid versions. Metal and plastic housings where suitable and UL94-V0 flame retardant also supplied if required. Bare fiber adapter available.

FEATURES
• Low insertion loss and back reflection loss
• High precision alignment
• Compact design
• With/Without flange
• Shuttered SC
• Choice of housing material and sleeve material
• Telcordia, ANSI, TIA/EIA, NTT and JIS compliance

SPECIFICATIONS

Insertion Loss	< 0.20dB
Durability	< 0.20 dB typical change, 1000 matings
Operating Temperature	-40 to + 80℃

LC SC One Piece Adapter

One Piece adapters with enhanced Rattle Free wings. Available in both flange and flangeless configurations. The One Piece design has proven increased side loading performance over conventional adapters.

FEATURES
• One piece solid body
• Low insertion loss and back reflection loss
• High precision alignment
• Compact design
• With/Without flange
• Shuttered SC
• Choice of housing material and sleeve material
• Telcordia, ANSI, TIA/EIA, NTT and JIS compliance

SPECIFICATIONS

Insertion Loss	< 0.20dB
Durability	< 0.20 dB typical change, 1000 matings
Operating Temperature	-40 to + 80℃

ORDER GUIDE - LC

Type	Color	Sleeve Type	Shutter
Duplex with Flange	Blue	Zirconia	No Shutter
Duplex without Flange	Black	Metal	Internal Shutter
	Green		
	Violet		
	Beige		
	Aqua		

ORDER GUIDE - LC

Flange	Type	Color	Sleeve Type	Hook Matial	Shutter
Flange	Simplex	Blue	Zirconia	High Tg	No Shutter
Flangeless	Duplex	Black	Metal		Internal Shutter
		Green			
		Violet			
		Beige			
		Aqua			

LC Duplex Uniboot Connector
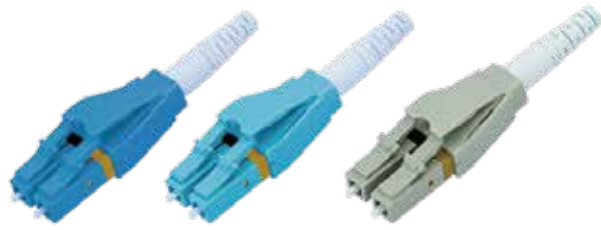
FEATURES
• Have two dismount gap, easy to dismount
• Streamline design, good aesthetic
• Uniboot connector cable management
• Switchable Connector to change polarity
• MINI Boot & Flex angle boot available
• Right Angle Clip good for panel management

APPLICATIONS
• Gigabit Etherne
• Video
• Multimedia
• Active device termination
• Premise installations
• Telecommunication networks

SPECIFICATIONS

Item	Single Mode	Multimode
Insertion Loss	≤ 0.30dB	≤ 0.30dB
Return Loss	≥ 50dB(PC) / ≥ 60dB(APC)	
Durability	< 0.20dB typical change, 10000 matings	
Operating Temperature	-40 to +85 ℃	-40 to +85 ℃
Ferrule Hole Size	125.0+1/-0µm, Concentricity: ≤ 1.0µm	126.0µm, Concentricity: ≤ 3.0µm
	125.5+1/-0µm, Concentricity: ≤ 1.0µm	127.0µm, Concentricity: ≤ 3.0µm
	126.0+1/-0µm, Concentricity: ≤ 1.0µm	128.0µm, Concentricity: ≤ 3.0µm

Fiber Optic Patch Cord

From simple pigtail or patchcord assemblies to larger multi-core projects with pulling protection, KOC is the specialist in this sector. Capacity is 40k terminations / day and quality is excellent and consistent. All terminations and a wide range of cables available.

FEATURES
• Low insertion loss and back reflection loss
• High exchangeability
• High Durability
• High temperature stability
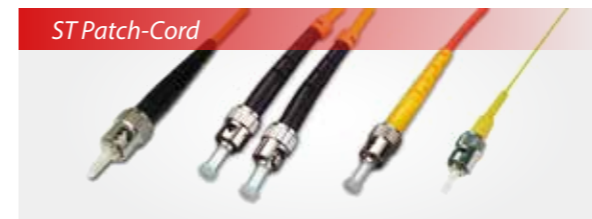• Standard: Telcordia GR-326-CORE

LC Patch-Cord

SC Patch-Cord

ST Patch-Cord

FC Patch-Cord

MPO Patch-Cord

MTRJ Patch-Cord

E2000 Patch-Cord

MU Patch-Cord

DIN Patch-Cord

D4 Patch-Cord

ESCON

MTP/MPO - LC Fan-out Patch Cord

The fan-out is applied to connect 12-core MTP / MPO connector to the LC connectors on the trunk cable. KOC provides both standard and customized branch lengths. When the network equipment is close to MTP patch panel frames, the length of fan-out patch cords are minimized. For the hardware and equipment in the same cabinet, the longer patch cords can provide flexibility at any location, and the branch cables can be winded into the vertical cable organizer.

FEATURES
• Array connectors with high precision low loss MTP / MPO connectors
• Smooth upgrading to next generation data center for 40GbE and 100GbE
• Outer jacket material option: PVC, LSZH and other selected materials
• Cable flammability rating: OFNR, OFNP, LSZH

Item	Single mode		Multimode	
	MTP / MPO	LC	MTP / MPO	LC
Insertion Loss	Low loss ≤0.35 dB	≤0.3 dB	Low loss ≤0.35 dB	≤0.3 dB
	Standard Loss ≤ 0.7 dB	/	Standard Loss ≤0.5 dB	/
Return Loss	≥60 dB	≥50 dB	≥30 dB	≥50 dB
Durability	<0.2typical change, 500 matings			
Operating Temperature	-40 to +85℃			

Switchable Duplex LC Uniboot Fiber Optic Patch Cord

Duplex Uniboot connector patch cord is designed by KOC. This highly flexible duplex cable reduces cabling congestion and improves patch cord management and installation, it improves cabling space.

FEATURES
• Fiber polarity A -> A or A -> B can be switched by installer
• Thin round cable
• Duplex connectors with single boot which is highly integrated and easy for installation
• Standard compatible, simplex / duplex LC connectors. Other options: SC / FC
• High performance, 100% tested
• Fiber type: OFNR, OFNP
• Customized patch cord length
• Two notches on the connectors for easy for installation and uninstallation
• Mini and flexible boot is available. Boot can be turned to any angle
• Quick deployment reduces installation time
• Fast upgrading supports parallel transmission system
• Outer jacket material, PVC, LSZH and other materials selection

Item	Single mode	Multimode
Insertion Loss	≤0.30 dB	≤0.30 dB
Return Loss	≥50 dB (PC) , ≥60 dB (APC)	/
Durability	<0.20 dB typical change, 1000 matings	/
Operating Temperature	-40 to +85℃	-40 to +85℃

MTP/MPO Trunk Fiber Optic Cable Patch Cord

Pre-terminated trunk cable can be from 4 to 144 cores with 8/12-pin MTP connector at both ends. High-quality cable and MPO kits guarantee low insertion loss and high return loss for high-speed network. Its efficient plug-and-play structure greatly reduces the initial installation and routine maintenance costs. Pre-terminated trunk cables can also be used with plugand- play modules or MTP / MPO connector panels to achieve multi-level connection of the extension of the preterminated trunk cable can also be extended by MTP/MPO panel with plug-and play module. The extended trunk cable is to be connected with another panel or fan-out patch cords.

FEATURES
• Array of connectors with high precision low loss MTP / MPO connectors
• MTP/MPO connectors has been assembled at both ends of the cable. The optical performance is 100% tested
• A B C three polarity wiring options can be chosen from sufficient capacity can provide 4-144 cores fiber connections
• Cable flammability rating: OFNR, OFNP, LSZH
• The length of customized cable, trunk cable, extension cable, branch cable can be accurate
• Traction tube is the optional for easy on-site installation
• Minimize failures and reduces cabling space and installation time
• Smooth upgrading to next generation data center for 40GbE and 100GbE
• Outer jacket material option: PVC, LSZH and other selected materials

Item	Single mode	Multimode
Insertion Loss	Low loss ≤0.35 dB	Low loss ≤0.35 dB
	Standard Loss ≤0.7 dB	Standard Loss ≤0.5 dB
Return Loss	≥60 dB	≥30 dB
Durability	<0.2 typical change, 500 matings	
Operating Temperature	Operating Temperature -40 to +85℃	
40G	8 Fiber	
100G	20 Fiber	

High Density LC Duplex Uni-boot Patch Cord

This High Density LC Duplex Uni-boot Patch Cord is available for high-density fiber patch panels. The highly flexible duplex cable reduces cable congestion and can be plug in and out of the panel easily and quickly so that it improves management and installation convenience.

FEATURES
• Thin round cable
• Duplex LC with latched uniboot, easy for plug in and out among panels
• Standard compatible, duplex LC connectors;
• High transmission, 100% tested under IEC standards
• Quick deployment reduces installation time
• Fast upgrading supports parallel transmission system
• Outer jacket material, PVC, LSZH and other materials selection
• Fiber type: ODNR, OFNP
• Customized patch cord length

Item	Single mode	Multimode
Insertion Loss	≤0.30 dB	≤0.30 dB
Return Loss	≥50 dB (PC) , ≥60 dB (APC)	/
Durability	<0.20 dB typical change, 1000 matings	/
Operating Temperature	-40 to +85℃	-40 to +85℃

MPO Polarity Changeable Patch Cord

The MPO Switchable Connector is a unique design that allows the use ofround style. The housing of the MPO Switchable Connector can be Polarity change in the field without any tool, and simple gender change without taking off the housing. This connector allows the fiber polarity to be switched at the time of cable assembly installation without having to reterminate the connectors. This design is commonly used in data centers.
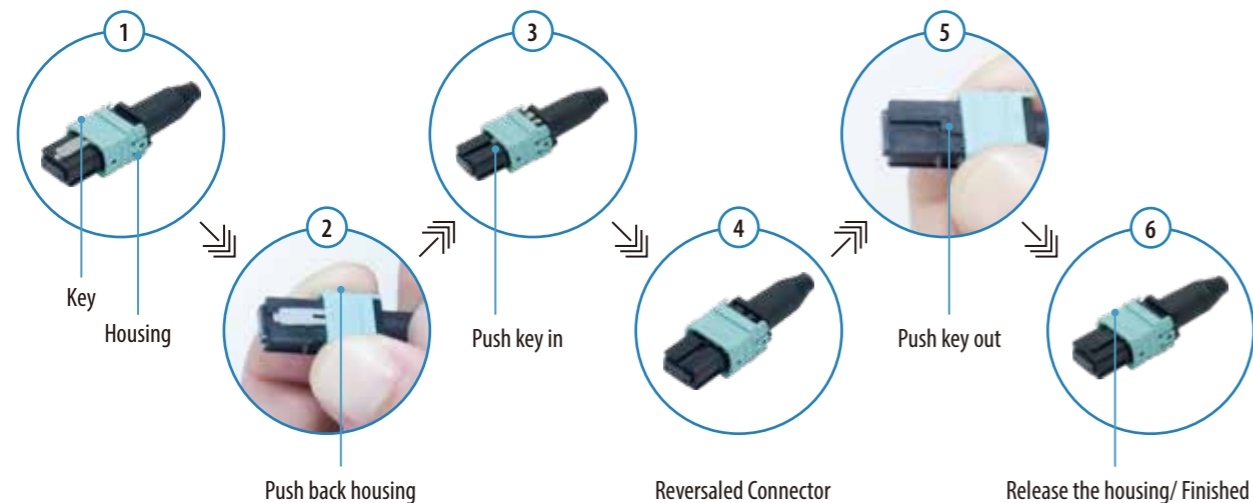
FEATURES
• Array connectors with high precision low loss MTP / MPO connectors
• Smooth upgrading to next generation data center for 40GbE and 100GbE
• Outer jacket material option: PVC, LSZH and other selected materials
• Cable flammability rating: OFNR, OFNP, LSZH

Item	Single mode		Multimode	
	MTP / MPO	LC	MTP / MPO	LC
Insertion Loss	≤0.75 dB	≤0.35 dB	≤0.5 dB	≤0.35 dB
	typical≤0.5 dB	typical≤0.2 dB	typical≤0.35 dB	typical≤0.2 dB
Return Loss	≥60 dB (APC)		≥30 dB (PC)	
Repeatability	≤0.1dB			
Durability	≤0.2 dB typical change, 500 matings			
Interchangeability	≤0.2dB			
Tensile strength	>70N			
Operating Temperature	-40 to +85°C			

Switch Polarity (Sample: Aqua housing/3.0mm short mini boot)

1

Key
Housing

2
Push back housing

3
Push key in

4
Reversaled Connector

5
Push key out

6
Release the housing/ Finished

OM5 Product Series

The OM5 fiber has been approved as a new multimode optical fiber for high-speed data center applications. and is designed to support at least four low-cost wavelengths in the 850-950 nm range, 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. SWDM has many applications in Data Centers and other applications.OM5 cabling fully compatible and intermateable with OM3 and OM4 cabling. The related OM5 patchcord, Cassette and Panels has attracted wide attention in the industry, and the patchcord cover also all type of fiber connectors

FEATURES
• Wavelength range 850-953 nm
• Low insertion loss and back reflection loss
• High precision alignment
• Good exchangeability
• High temperature stability
• Compatible with OM3 and OM4 patchcord

APPLICATION
• Telecommunication networks
• Data Center
• CATV , and Multimedia
• Optical switch interframe connection
• Asynchronous Transmission Mode (ATM)

Item	Specification
Fiber Type	OM5 (50μm multimode fiber)
Wavelength Range	850-953 nm
Jacket Color	Lime Green
Furcation Color	Lime Green
Connector Type	MPO/MTP/LC/SC/FC/Customized
Connector Color	Customized
Regulatory Compliance	IEC 60793-2-10/TIA-492AAAE/RoHS/ISO9001
Operation Temperature	-40 to +85°C

Cassette and Adapter

High Performance IEC Grade B Patch Cord

For high-speed fiber-optic communications and data networks, high-performance fiber jumpers mean lower insertion loss and better random interchangeability. IEC Grade B-class patch-cord require higher processing technology and materials than ordinary products. We offer reliable and stable IEC Grade A / B / C grade patch-cord.

FEATURES
• Conforms to IEC 61753-1 and IEC 61300-3-34
• Low insertion loss, low return loss
• Random test interchangeability is good
• High precision ferrule and connector material
• Products comply with Telcordia, IEC, RoHS, REACH

SPECIFICATIONS
Beside using low concentricity ferrules for the products, all the Grade B connectors must be tuned by using the fiber core adjustment machine. This is a very important procedure to make high quality Grade B connectors. 100% connectors will be tuned in KOC factory.

Item	Unit	Parameters		
		Grade A	Grade B	Grade C
Relative Reference Insertion Loss	dB	≤ 0.10dB	≤ 0.10dB	≤ 0.10dB
Random Insertion Loss	dB	Typical≤ 0.07dB	Typical≤ 0.12dB	Typical≤ 0.25dB
		Maximum≤ 0.15dB	Maximum≤ 0.25dB	Maximum≤ 0.50dB
Return Loss	dB	UPC≥ 55dB	UPC≥ 50dB	UPC≥ 50dB
		APC≥ 65dB	APC≥ 60dB	APC≥ 60dB
		Multimodal≥ 30dB	Multimodal≥ 30dB	Multimodal≥ 30dB
Mechanical Durability	dB	Change amount <0.20 dB, 1000 repetitions		
Operating Temperature	℃	-40 to +85 ℃		

Core Adjustment Machine

Core Adjustment Machine
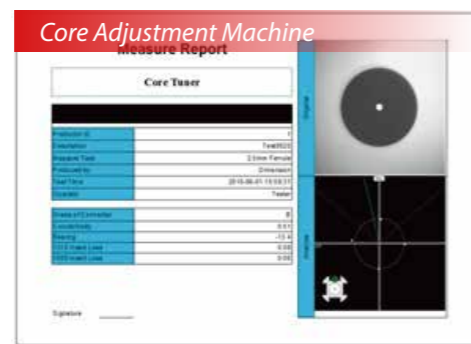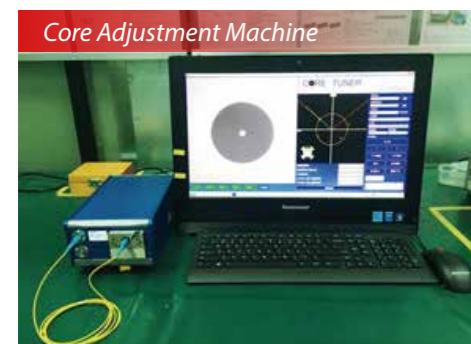
Fiber standard reference test line

Fiber standard reference test line as a fiber optic patch-cord insertion loss test standard reference line, with high reliability, high stability characteristics, widely used in optical testing equipment, research institutes, laboratory agencies, optical devices, manufacturers and other test areas.

FEATURES
• High precision ceramic ferrule
• High precision connector
• High standard ferrule grinding geometric 3D control precise control of concentricity direction
• low insertion loss, low return loss
• SC, LC, FC, MU and other models

SPECIFICATIONS

Item	Unit	Parameters	
		APC	UPC
Insertion loss	dB	≤ 0.10dB	≤ 0.10dB
Return loss	dB	APC≥ 65dB	UPC≥ 55dB
2.5mm Ferrule grinding radius ROC	mm	6~11mm	12~25mm
1.25mm ferrule end face radius ROC	mm	6~11mm	7~20mm
Vertex offset	um	≤ 30um	≤30um
Angle deviation	°	8±0.2	0±0.2
Fiber height	um	±50	
Concentricity offset angle	°	±45	
Mechanical durability	dB	Change amount <0.20 dB, 1000 repetitions	
Operating temperature	℃	-40 to + 75 ℃	

SUS Pigtails

FEATURES
• Optical performance 100% factory tested
• Customized assemblies available
• Precision ceramic ferrule with end-face geometry
• Environmentally stable

APPLICATIONS
• Optical Module(LD,PD)
• Passive Device
• Active device termination
• Instrumentation

SPECIFICATIONS

Characteristics	Conditions	Values
Insertion Loss	/	<0.2dB
Return Loss	SPC	>45dB
	UPC	>55dB
	APC	>65dB

ORDER GUIDE

LD/PC Pigtails	Fiber Type	Connector Type	Polishing Type	Lenght(M)	Cable Diameter(MM)
LPP	9-9/125µm	S-SC	P-PC	1-99	1-0.9
	5-50/125µm	F-FC	A-APC		2-2.0
	6-62.5/125µm	T-ST			
		L-LC			
		M-MU			
		E-E2000			

OptoNest Attenuation Fiber

OPTONEST specialty optical fibers are fabricated for WDM attenuator application with flat attenuation properties. The attenuation fibers have the potential to offer high reliability and stable input power endurance. OPTONEST attenuation fibers are designed to be used for plug and in-line types attenuators covering from 1240nm to 1600nm with 0.1~30 dB

SPECIFICATIONS

Characteristics	Conditions
Core Diameter(µm)	8 ~ 9
Numerical Aperture(NA)	0.12 ± 0.01
Inner Cladding Diameter(µm) *	40 ~ 50
Outer Cladding Diameter(µm)	125 ± 0.5
Core to Cladding Concentricity Error(µm)	≤0.8
Attenuation 1310nm(dB/21 or 22.4mm)	0.1 to 30
Attenuation 1550nm(dB/21 or 22.4mm)	0.1 to 30
Attenuation Tolerance(%)	±7.5
Storage Temperature Range(-40℃ ~ 85℃)	≤0.2dB
Cut-off Wavelength(nm)	1200 ~ 1250
Operating Wavelength(nm)	1310/1550 (1200 ~ 1650)
Optical Power Endurance	≤0.2dB (@200mw)

COMPARISON DATA
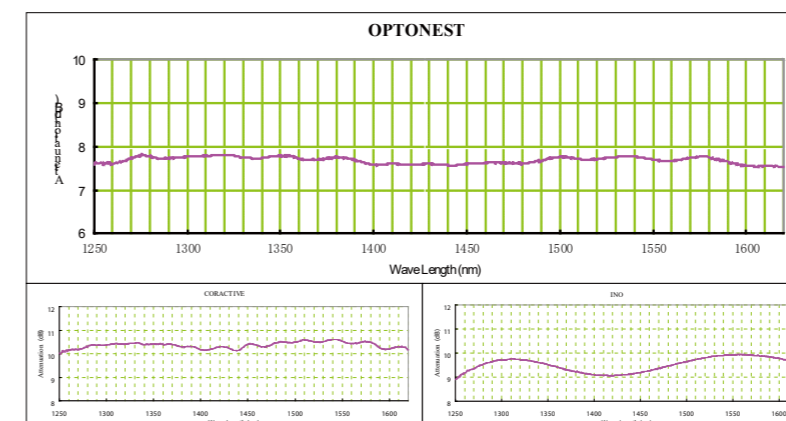
Comparison of Measured Attenuation Data (dB) of Attenuation Fibers Manufactured by Optonest, Coractive, and INO

The measurement was carried out using the OSA by one of the attenuator manufacturers in Taiwan.

Fiber Optic Attenuator

Wherever you need precise control over signal dB, Kamaxoptic attenuators are the perfect choice. Available in plug-in, inline fixed and VOA models in all standard types, these precision connectivity solutions provide attenuation in 1dB increments.

FEATURES
- Bellcore Compliant
- Durability (well over 100mw)
- Wavelength Independent (DWDM)
- Simple and Reliable Structure
- Customized attenuation available

SPECIFICATIONS

Adapter Type Fixed Attenuator	
Attenuation Range	0-30dB
Available Wavelengths	1310nm or 1550nm
Fixed attenuation value	1,2,3,5,10,15,20dB or optional
Return Loss	≥50 dB (SPC) , ≥60 dB (APC)
Attenuation Accuracy	+/-0.5 (1-5) dB , +/-10% (6-30) dB
Polarization Dependent Loss	≤0.2dB
Temperature Range	-40° C-80℃
Humidity Range	+/- 0.2 dB Change in 10% to 90% relative Humidity Range.
Vibration	≤0.1 dB change between 10Hz to 55Hz.
Drop	+/- 0.2dB after 8 drops (3 axes) from 1.8 meters onto a hardsurface.

Plug-in Fixed Attenuator	
Operating Wavelength	SM: 1200-1600nm or 1310nm, 1550nm . MM: 850nm, 1300nm
Return Loss	≥50 dB (UPC) , ≥60 dB (APC)
Attenuation Accuracy	+/-0.5 (1-5) dB , +/-10% (6-30) dB
Polarization Dependent Loss	≤0.2dB
Maximum Optical Input Power	200mW
Operating Temp. Range	-40 ~ 80° C

MPO Attenuator
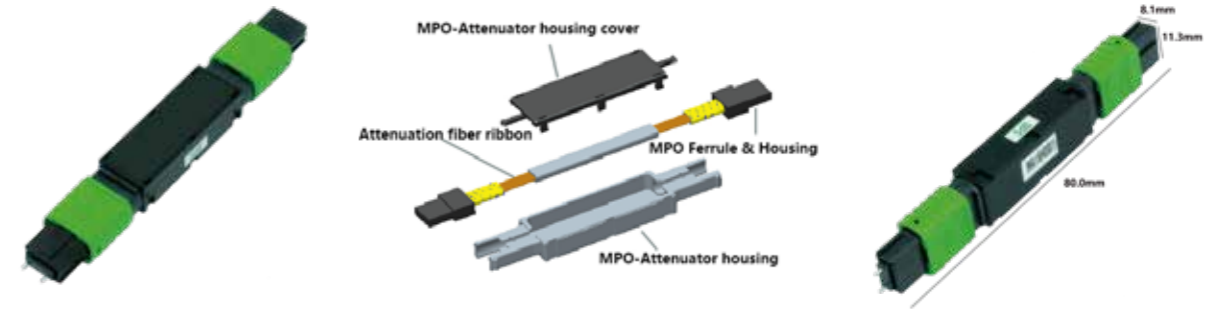
FEATURES
- Small / Compact Housing Design
- QSFP Available
- RoHS Compliant
- Data Center Infrastructure
- Storage Area Network and Fiber Channel
- Various 40G and 100Gbps Protocols

APPLICATIONS
- High Stability and High Durability
- Compact Housing Dimension
- QSFP Available
- RoHS Compliant
- Data Center Infrastructure
- Parallel Optics
- Storage Area Network and Fiber Channel
- 40G and 100Gbps Protocols

SPECIFICATIONS

Parameter	Conditions
Operation Wavelength	1310/1550nm
Attenuation Tolerance	±1dB(at 2-10dB) , ±10%(at 11-20dB)
Return Loss	60dB(8°Polishing, SM)
Operating Temperature	-25℃~75℃
Attenuation	1~20dB
PDL	≤ 0.2dB
Maximum input optical power	200mW
Housing Dimension	Height 8.1mm/Length 80.0mm/Width 11.3mm

Optical Loopback

Fiber Optic Loopbacks are designed to provide return patch for a fiber optic signal. They are used for fiber optic testing applications or network restorations. When it is used in testing applications, loopback signals are used for diagnosing problems. The best practice is to send a loopback test to network equipment, one at a time for isolating the problem.
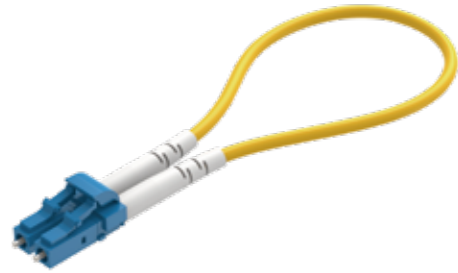
FEATURES
• MPO, LC , SC or other type available
• Insertion loss: Less than 0.3dB
• Exchangeability < 0.2dB
• Operating temperature range: -40 to +80℃
• LAN and Optical equipment testing

Mini LC Multimode Loopback

Type	Fiber Type	Cable Type
MLB-LC	50/125	0.25
	62.5/125	0.9

Loop back patch-cord

Type	Connector Type	Mode Type	Cable Type
LB-A-B-C	MPO/SC/SCA/LC/ LCA/MTRJ...	9(SM)/6(MM62.5)/ 5(MM50)	3/2/09/25

Mechanical Splicer

Mechanical splice is a tool for quick and easy operation of field fiber splice application. It employs the mature V-groove technology, can be widely applicable for different optical cable, optical fiber splicing in fiber distribution units. Not only for the splicing of the optical drop cables with the pigtails in multimedia boxes, but also applicable for repairing any damaged lines to realize firm and reliable splicing in optical fibers.

FEATURES
• Precision metallic alloy components with co-axial self centering, excellent and durable optical property.
• Axially firm fitting of optical fibers, reducing any performance degradation due to loss in the matching gel
• Uninterrupted fitting and connecting technology, hence signals are free of impact from external force
• High success rate and easiness in installation.
• Typical IL<0.2dB

Fiber type	φ 0.25mm& φ 0.90 mm
Fiber diameter	125µm (657A& 657B)
Tight buffer diameter (µ m)	250µm & 900 µm
Mode	SM & MM
Average Insert loss	≤ 0.10dB(1310nm & 1550nm)
Return loss	≤ -40dB
Fastening strength of naked fiber	> 5 N
Fastening strength of naked fiber holder	> 8 N
Using temperature	-40 ~ 75℃
Repeatability(10 times)	Δ IL ≤ 0.2dB ΔRL ≤ 5dB

Optical MPO Loopback Module

MPO Loopback used widely within testing environment especially within parallel optics 40 and 100G networks. Devices allow verification and testing of transceivers featuring MPO/MTP interface. Loopbacks are built to link Transceivers (TX) and Receivers (RX) positions of MPO/MTP transceivers interfaces.

FEATURES
• SM, MM(OM2/OM3/OM4) available
• 12 or 24 Fiber for 40G and 100G
• Female and Male MPO/MTP option of Connectors
• MTP with pull-latch for high density system
• Polarity upon customer choice
• Factory Terminated and Tested
• MPO/MTP Interface feature superior optical and mechanical properties
• TIA/EIA-568-C.3 and IEC-61754-7 compliance
• RoHS and REACH complianc

SPECIFICATIONS

*MTP is the trademark of USCONEC.

Item	Unit	Parameter
Fiber Count	/	12 Fibers / 24 Fibers
Fiber Type	/	SM: G652D/G657A1 , MM: OM1/OM2/OM3/OM4
Polishing Type	/	SM: APC , MM: PC
Housing	/	MPO / MTP
Housing Color	/	MM (Beige), OM3 (Aqua), OM4(Purple) SM (Green), SM Elite (Yellow)
Insertion loss	dB	SM(G652D)<1.5dB , SM(G657A1)<0.7dB , SM Elite<0.3dB , MM<1.0dB
Return Loss	dB	SM>55dB , MM>30dB
Operating Temperature	℃	-40℃ ~85℃
Dimension	mm	60x20x6.5 (L x W x H)

ORDER INFORMATION

Model	Polarity Type	Fiber Count	Fiber Type	Polishing	Housing	Housing Color
ML	A = Type A	12	9 = G652D	A =APC	O =MPO	G = Green
	B = Type B	24	1 = G657A1	P =PC	T =MTP	A = Aqua
			2 =50/125			B = Beige
			3 =OM3			P = Purple
			4 =OM4			Y = Yellow

SC SM Simplex FTTH Fast Connector

FEATURES
• Patent fiber alignment technology
• High performance, high reliability
• No Polish, no electricity needed
• Quick installation, easy for operation
• High one-time assembly success rate

APPLICATIONS
• For FTTH Drop Cable field termination
• For emergency fiber path repair
• FTTH, LAN and other fiber optic system
• SC type available

ADVANTAGES
• Ferrule hole V-groove alignment ensure the fiber core alignment error <0.5um. This will reduce the connect loss.
• The V-groove has the advantage than V-groove when different fiber diameter are used. This will reduce core offset between customer and stuff fiber.
• Outdoor optical fiber temporary connection
• Flexible fiber connect, high pulling resistance

SPECIFICATIONS

Item	Parameter
Insertion Loss	Average≤0.2dB, Max≤0.5dB
Return Loss	UPC: ≥40dB, APC: ≥55dB
One-time Assembly Rate	≥97%
Assembly Repeatability	≥5 times
Life time	≥10 years
Average Assembly Time	3 minutes
Tensile Resistance	≥30N
Operation Temperature	-40ºC~+85ºC

FIC Connector for FTTH Drop Cable

FTTH Drop Cable FIC Connector (Field Installable Connector) is specially for single fiber FTTH drop cable filed termination. It provides efficient assembly and high reliability connection to make it easy for the last meters optic cable termination for FTTH.

FEATURES
• SC/FC/LC type available
• Field installable, cost effective, easy to operate
• About 2 mins to finish per termination
• Patent of precision ceramic U-groove alignment technology, avarage IL<0.2dB, reliable durable and superior optical performance
• Factory pre-polished, no electricity required

SPECIFICATIONS

Item	Parameter
Insertion Loss	Average≤0.2dB, Max≤0.4dB
Return Loss	UPC: ≥40dB, APC: ≥55dB
One-time Assembly Rate	≥97%
Assembly Repeatability	≥5 times
Life time	≥10 years
Average Assembly Time	3 minutes
Tensile Resistance	≥30N
Operation Temperature	-40℃~+85℃
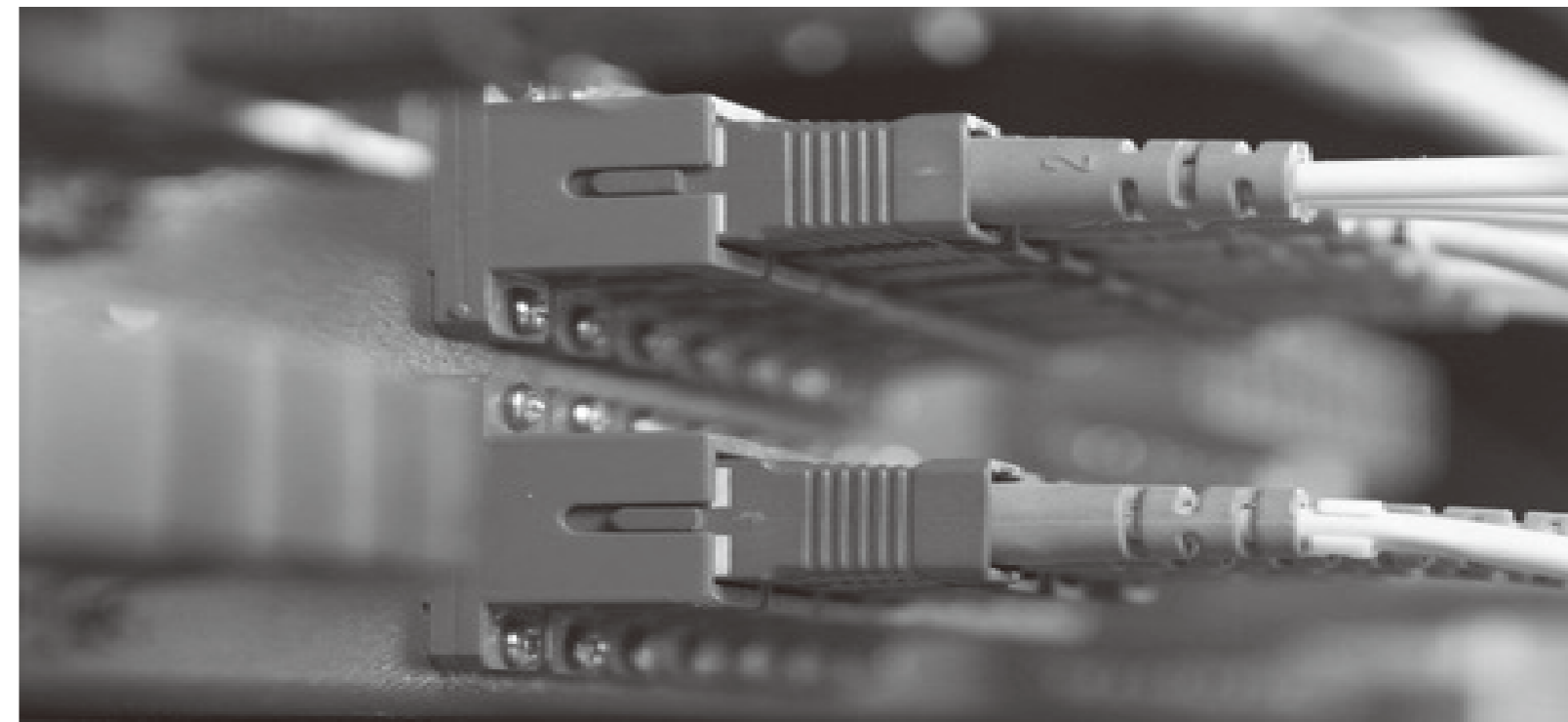
LC/PC Field Installable Connector

Field Installable Connector (FIC) is a perfect solution for field working and FTTH connection. It is widely used for where need to quick connection, providing a quickly assembling and stable performance. When engineers work in field for installation, maintenance, repair of optical fiber, or FTTH indoor terminate, they can use it easily because it has no epoxy, no polishing. FIC is designed inside ferrule with fiber stuff and pre-polishing in the factory. It provides a perfect ferrule endface quality. This has great help to protect user's equipment interface and reduce the connector loss.

FEATURES
• Patent fiber alignment technology
• High performance, high reliability
• No Polishing, no electricity needed
• Quick installation, easy for operation
• High one-time assembly success rate

APPLICATIONS
• For 0.9mm indoor Cable field termination
• For emergency fiber path repair
• FTTH, LAN and other fiber optic system
• LC type available

SPECIFICATIONS

Item	Technical Parameters
Applicable for	Indoor cable 0.9MM
Optical fiber diameter	125μm (657A1 & 657A2)
Tight buffer diameter	250μm
Fiber mode	Single mode
Operation time	< 100s
Return loss	>-45dB
Fastening strength of naked fiber	>4 N
Fastening strength of naked fiber holder	>8 N
Tensile strength	>10 N
Using temperature	-40~+75℃
On-line tensile strength (20 N)	△ IL ≤ 0.5dB △ RL ≤ 5dB
Mechanical durability (500 times)	△ IL ≤ 0.5dB △ RL ≤ 5dB
Drop-off test (drop-off height 4m, once per direction, totally 3 times)	△ IL ≤ 0.5dB △ RL ≤ 5dB

Field Installable Connectors

Field Installable Connector(FIC) is new type optical connector to use in field and FTTX connection. When engineers work in field for installation, maintenance, repair of optical fiber, they use it easily because it has no epoxy, no polishing, and no tools are needed.

FEATURES
• With pre-polished fiber
• Field installable, Cost effective, User friendly
• No Electricity required
• Less than 1 min, Field assembly time
• Reliable and superior optical performance
• Cable Tensile test complied with Telcordia GR-326-CORE

SPECIFICATIONS

| Item	Technical Parameters
Fiber Type	Singlem ode and Multimode
Insertion Loss	≤0.4dB(Typ)
Retum Loss	≥50dB
Polishing Type	UPC and APC
Operation Temp	-40ºC~+70ºC
Connection Method	Push-On

Outdoor Waterproof Connector Series

FEATURES
• Robust minicord-breakout or field cable
• UL OFNR or OFNP rated cables available
• High shock,vibration and mechanical resistance
• Blind insertion design,easy and cost effective installation
• Waterproof,dust proof and corrosion resistant
• Scoop and blind proof
• Additional alignment pins to gain better optical performance
• Broad temperature range and wide range of outdoor cable
• EMI protected and RoHS compliant

APPLICATIONS
• CATV
• Data communication
• LAN&WAN
• Antenna to the box
• Broadband
• FTTP
• Mine
• Railway

SPECIFICATIONS

Item		Parameters		
		APC	J599	J599MPO
Insertion Loss	SM	≤0.7dB(typ.≤0.5dB)	≤1dB	≤0.75dB(Low loss ≤0.3dB)
	MM	≤0.6dB(typ.≤0.2dB)	≤0.75dB	≤0.6dB(typ. ≤0.2dB)
Return Loss	SM	≥50dB	≥50dB	≥50dB
Mechanical performance	Plug	≤500(Cable)	≤1000(Cable)	≤500(Cable)
	Branch	≤100N(Branch)	≤100N(Branch)	≤30N(Branch)
Cable OD		5.0mm/4.0mm/Customized	4.0mm/7.0mm/Customized	7.0mm/Customized
Branch Connector		LC/FC/SC		
Operating Temperature		-40℃ to + 85℃		
IP Rating		IP67		
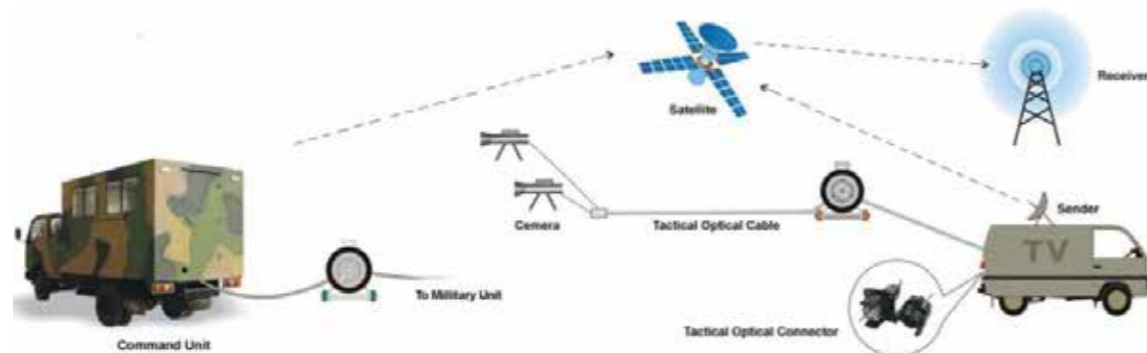
Waterproof Connector

FEATURES
• Cost effective solution for in house termination
• Water proof, dust proof and corrosion resistant
• Wide range of operational temperature
• Wide range of cables to be used,3-8mm OD cable with two 2.0mm to 3.0mm jacketed subunits
• Multimode and single mode
• Intermateable to other Industrial adaptor per IEC 61076-3-106
• Simple assembly requiring no special tools
• Durable mechanical mating,minimum of 500 mating

APPLICATIONS
• Outdoor environment of optical fiber communication
• Outdoor communication equipment connection
• Optical fiber base station connection
• Field optical communication link temporary fast connection
• Broadband
• CATV
• FTTP

SPECIFICATIONS

Parameter	FuLLAXS-LC		Optitap-SC		MINI-SC		ODVA-SC		ODVA-LC		ODVA-MPO		ODVA-MPO Low loss		PDLC	
	SM	MM	SM	MM	SM	MM	SM	MM	SM	MM	SM	MM	SM	MM	SM	MM
Insertion Loss(dB)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.75	0.5	0.35	0.35	0.2	0.2
Return Loss(dB)	50	/	50	/	50	/	50	/	50	/	60	25	60	25	50	/
Cable outer Diameter(mm)	4.8 or 7.0		3 or 5		3 or 5		3 ~ 8		3 ~ 8		3 ~ 8		3 ~ 8		3 ~ 7	
IP Rating	IP67		IP67		IP67		IP68		IP68		IP68		IP68		IP67	
Durability	<0.2dB typical change 500 matings															
Operating Temperature	-40℃ to +70℃															

Fiber Optic PLC Splitter

The single-mode Planar Light wave Circuit Splitter (PLCS) is developed based on unique quartz glass waveguide and processes with reliable precision aligned fiber pigtail in a miniature package. It provides a low cost light distribution solution with small form factor and high reliability. The PLCS has the high performance in terms of low insertion loss, low PDL, high return loss and excellent uniformity over a wide wavelength range from 1260nm to 1620nm and working in temperature from -40ºC to +85ºC. KOC's PLCS has standard configurations of 1x4, 1x8, 1x16 and 1x32 configurations, as well as customized structures of 2x16, 2x32 and so on.

FEATURES
• Low-cost solution with small form factor
• High reliability
• High performance in terms of low insertion - loss, low PDL, high return loss
• Excellent uniformity
• 1260nm to 1650nm

SPECIFICATIONS

Port Configuration	1x2	1x4	2x4	1x8	2x8	1x16	2x16	1x32	2x32	1x64
Operating Wavelength(nm)	1260 ~ 1650									
PDL (dB)	< 0.2	< 0.3								< 0.2
Directivity (dB)	> 55									
Return Loss (dB)	> 55									
Operation Temperature (°C)	-40 ~ +85									
Storage Temperature (°C)	-40 ~ +85									
Fiber Type	G652D OR G657A									
Port Configuration	1x2	1x4	2x4	1x8	2x8	1x16	2x16	1x32	2x32	1x64
Insertion Loss (dB)	≤4.3	≤7.20	≤7.5	≤10.5	≤11.2	≤13.6	≤14.6	≤17.0	≤17.5	≤21
LOSS Uniformity (dB)	≤0.5	≤0.6	≤1.2	≤0.8	≤1.5	≤1.4	≤2.0	≤1.6	≤2.5	≤2.5
Ribbon Fiber Packaging Size (L×W×H) (mm)	40x4x4	40x4x4	45x4.5x4	40x4x4	45x4.5x4	45x4.5x4	60x7x4	50x7x4	65x7x4	60x12x4
0.9mm Loose Tube Packaging Size (L×W×H)(mm)	50x7x4	50x7x4	60x7x4	60x7x4	60x12x4	60x12x4	80x12x4	80x20x6	90x20x6	100x40x6

Fiber Distribution Frame

The manufacturer specialized in data center cabling products and high precision connecting components. Its MTP * / MPO connector advanced capabilities provide guaranteed and reliable connection for 40G / 100G data centers.
KOC high-density fiber pre-connected system deploys high-density data center easily and quickly in horizontal area and storage area of the network. The maintenance and expansion in the future is very simple.
MTP / MPO pre-terminated cabling system consists of three parts: trunk cable, MTP / MPO pre-terminated module and patch panel.
KOFDS series of Fiber Distribution Frames, designed for Central Data Office or the building MDF room, provides high-density fiber management and distribution. The modular design ensures the easily maintenance and efficient management for your fiber cabling systems.

Features
• Indoor cable distribution
• Fiber entries on top or bottom available
• High-density and modular design
• Max. capacity up to 792 fibers
• No tools are needed during operation
• Customizable
• 19" standard cabinet
• Accomplishing scientific arrangement for patch cords with fiber storage units
• suitable for inserting installation of SC, FC and ST adaptors
• Safety design in grounding and security door
• Top, bottom and rear openings for cable entry covered with removable blank panels.

Fiber Interconnect Carbinet

KOFDS-FIC series Fiber Interconnect Cabinets, for outdoor and indoor applications such as street distribution cabinet and building main distribution room. It provides fiber fusion splice, cross connect, optical signal split, fiber storage and management.

FEATURES
- Outdoor and indoor application
- Anti-corrosive and water-proof
- Ease and safe fiber distribution management
- Max capacity up to 288 fibers
- Modular design for easily hardware upgrade.
- Customizable

PRECAST CONCRETE BASE SIZE

Capacity (Core)	Size (Width*Height*Depth)	The foundation into the thread hole (mm)
144	530x290x200	310x170x200
288	730x350x200	510x230x200
576	730x550x200	510x430x200

KOFDS-GJ144-01 KOFDS-GJ288-02 KOFDS-GJ288-03 KOFDS-GJ288-05 KOFDS-GJ288-06

KOFDS-GJ288-01 KOFDS-GJ288-04 KOFDS-GJ567-01

ORDER GUIDE

Parameter	Dimension (Width*Height*Depth)
KOFDS-GJ144-01	1030x550x310
KOFDS-GJ288-01	1450x750x320(360)
KOFDS-GJ288-02	1450x750x320(360)
KOFDS-GJ288-03	1450x750x320(360)
KOFDS-GJ288-04	1450x750x320(360)
KOFDS-GJ288-05	1450x750x320(360)
KOFDS-GJ288-06	1450x750x320(360)
KOFDS-GJ576-01	1450x750x550

Fiber Distribution Frame

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- Fiber entries on top or bottom available
- High-density and modular design
- Max. capacity up to 792 fibers
- No tools are needed during operation
- Safety design in grounding and security door
- Customizable

APPLICATIONS
- Connecting distribution network and equipment cable
- Connecting with indoor cable termination equipments
- Widely applied in the computer network project, building wiring, telecommunication, intelligent building, school and so on.

ORDER GUIDE

Type	Net size (mm)	Products dimension(mm)	Products weight(kg)	Package dimension for out side carton (mm)	No of units per carton(pcs)	Total weight(kg)
KOFDS-FDF-C-12	480*250*1U	465*285*75	3.1	485*425*305	5	16.2
KOFDS-FDF-A-48	480*210*3U	450*255*145	6	530*480*340	4	25.6
KOFDS-FDF-A-72	480*210*4U	455*255*195	7.7	545*475*425	4	32.5

Rack Mount Patch Panel

According to the needs of data center setup, we recommend to use HDF high-density rack-mounted cabinet; for data center with MDA, IDA or HDA wiring area fiber trunk connection and management. It is installed in 19-inch rack or cabinet with Pre-terminated MPO adapter module or MPO adapter front panels. This economical design of Highdensity and module reduces the number of frames, saving valuable rack space.
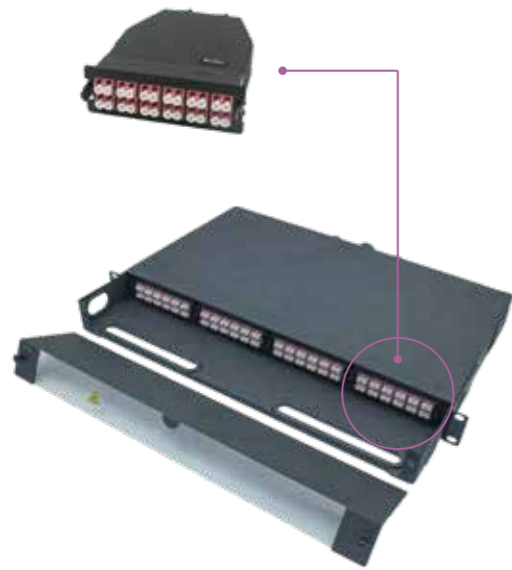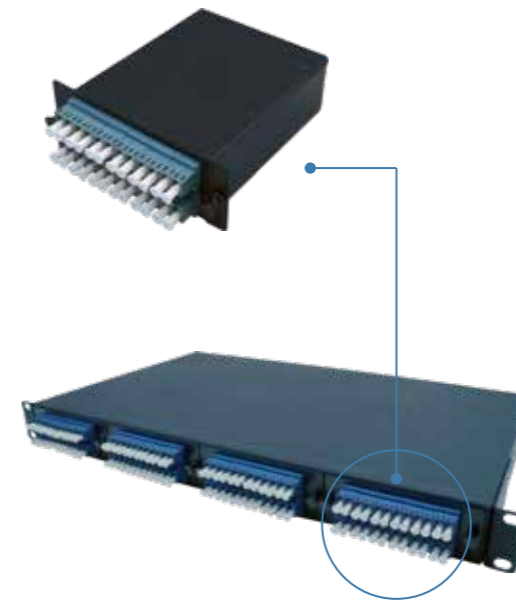

FEATURES
• MPO 1U optical fiber patch panel can accommodate 4 MPO pre-terminated cassettes. If MPO panels are installed, the maximum cores can reach 288
• MPO 2U optical fiber patch panel can accommodate 8 MPO pre-terminated cassettes. If MPO panels are installed, the maximum cores can reach 576
• MPO 3U optical fiber patch panel can accommodate 12 MPO pre-terminated cassettes. If MPO panels are installed, the maximum cores can reach 864
• Made of high quality cold rolled steel plate;
• Multiple cable entry and patch cord exit for easy operation and management
• More than four times the density of traditional patch panels, greatly save the space of the cabinet
• Compliant with TIA / EIA604-D-2007, IEC61754-7-2008 series standards
• Modular design, 19-inch rack mount, easy for future expansion

MTP/MPO - LC Fix Type Fiber Optical Cassette

MTP / MPO-LC fiber optic cassette is a closed-type of device with a 12/24-core fiber patch cords for branching 12-core MTP / MPO trunk cable to LC Connectors so that the system appliances are easily be connected to the ports or panels. The cassette can be quickly deployed to 24 LC or 12 SC adapters and can be easily installed in HDF high-density rack-mounted ODF. The modular structure is high manageable and flexible. With the future requirements on the connectivity, the modules can be changed to meet the corresponding needs. In the meanwhile, the existing trunk cabling structure remains unchanged.

FEATURES
• Excellent transmission performance is 100% factory pre-terminated and tested
• The adoption of universal polarity design ensures the correct fiber polarity and the variety of polarity to be chosen in the system
• Flexible expansion, modular design
• One-hand operation
• Metal shell design, good intensity, effective protection for internal fiber branch parts
• Compliant with TIA / EIA604-D-2007, IEC61754-7-2008 series standards
• Super bend-bright fiber, minimum fiber bending radius, minimized structure
• Smooth upgrade to next generation data center of 40GbE and 100GbE applications

Item	Single mode Module IL (Max)	Multimode Module IL (Max)
Standard	1.0 dB	1.0 dB
Low Loss	0.7 dB	0.7 dB
Ultra-Low-Loss	0.5 dB	0.35 dB

MTP/MPO - LC Sliding Type Fiber Optical Cassette

MPO fiber cassette is mainly used for data center with the security transactions between MPO pre-terminated trunk cable and LC or SC connectors. They are installed in the 19 "1U-3U fiber patch panels. LC or SC adapters are installed in the front panels. MPO adapters and pre-terminated trunk cable are installed in the rear panels. Plug-and-play modular structure enables quick deployment of data center fiber infrastructure and improve troubleshooting and reconfiguration after relocating, increasing and changing the cables. 100% of the terminals are terminated in the factory and rigorously tested to ensure minimal insertion loss. They are applicable to IDC and FTTB pre-wired systems and to Ethernet transmission. The cassettes are suitable for future 40G / 100G system applications. They are able to meet the full demands of high speed networks with convenient for upgrading
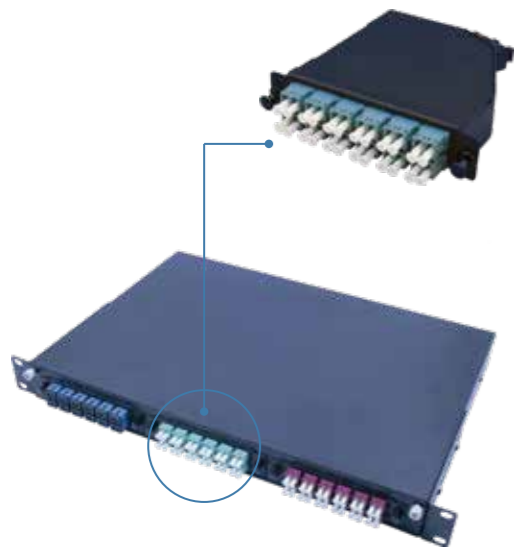

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• Super bend-bright fiber, minimum fiber bending radius, minimized structure
• One-hand operation
• Smooth upgrade to next generation data center of 40GbE and 100GbE applications
• Metal shell design, good intensity, effective protection for internal fiber branch parts
• Compliant with TIA / EIA604-D-2007, IEC61754-7-2008 series standards

High Density Fiber Distribution Frame

MTP * / MPO fiber distribution frame is a scalable solution mainly used in high-density 10 Gigabit Ethernet applications. There are Main Distribution Area (MDA) and Horizontal Distribution Area (HDA) terminal cabling products. There are usually three designs: 1U, 2U, 3U. According to data center setup needs, it simplifies the field installation, improves system performance and achieves higher system density, modular system management and pre-assembled components so that it reduces the installation time and achieves the movement and expansion in the fastest way.

FEATURES
• Sliding tray design, the new type of the expansion and adequate operational space enable the highest density
• A variety of welding wiring signs enable easy welding and cabling records
• High-density trunk cable with lesser bending radius enables easy storage and installation
• Connector module, 19-inch rack mount for easy installation and expansion
• Low insertion loss enable multi-level connections in complete fiber link when deploying TIA-942 compliant systems
• Customized branch cable assemblies for seamless integration with mainstream SAN switches
• Factory termination provides stable quality and ensures system reliability . It reduces installation time, meet series standards of TIA / EIA604-5-D-2007, IEC61754-7-2008

Adapter Panel

The adapter panel provides fast and efficient port management for MTP/MPO or LC/SC connectors. It is applicable for next-generation high-density data center solutions. The panel reaches the connection and deployment of the patch cords and pigtails between the devices and patch panels. The panel is used with the field mounting connectors, or with the pre-terminated cables device to the interconnect hardware.

FEATURES
• High-density ports, single adapter panel Configurable with 24 IP adapter ports or 6 SC adapter ports or 6 MPO / MTP adapter ports;
• High-quality cold-rolled steel, compliant with European ROHS standards
• Clear connector coding mark
• Flexible structure, adapter port configuration can be flexibly selected
• Applicable to all types of industrial standard adapters
• Cartridge installation for easy installation
• Easy to upgrade to 40G / 100G network without changing the fiber management structures
• Compliant with TIA / EIA604-D-2007, IEC61754-7-2008 series

Fiber Distribution Box

FEATURES
• Indoor application
• Fiber splice, optical splitter, cable storage
• Max capacity up to 72 fibers
• Customizable

INTRODUCTIONS
• Available for small capacity communication system, wall mounting, reasonable and compact structure, harmonized with machine room.
• The cabinet is composed of two parts, one links with optical cables for fusion connection between optical cable and fiber pigtail and another links with patch cord.
• Provide fusion and storage appliance for optical cables.
• Reliable protection appliance of fixing, stripping and earthing for optical cables.
• Whole range protected design for fiber lay to ensure the bending radius ≥40mm
• Provide various accessories to avoid any unexpected damage to the fiber

ORDER GUIDE

Type	Size(mm)	Max capacity(core)	Remark
KWMSB-D /A-24	455*405*80	24	The case body is made of cold rolled steel sheet, electrostatic spraying, outdoor wall mounting, provide 24-72 adaptors, available for SC/ST/LC
KWMSB-D /A-48	455*405*120	48	
KWMSB-D /A-72	455*405*150	72	
KWMSB-D /B-48	455*405*120	48	The case body is made of stainless steel, electrostatic spraying, outdoor wall mounting, provide 48-72 adaptors available for FC\SC\ST\LC
KWMSB-D /B-72	455*405*150	72	The case body is made of stainless steel, electrostatic spraying, outdoor wall mounting, provide 48-72 adaptors available for FC\SC\ST\LC
KWMSB-D /A-24A	350*350*80	24	The case body is made of cold rolled steel sheet, electrostatic spraying, wall mounting, provide 12-24 adaptors, available for SC\ST\LC
KWMSB-D /C-FC12	350*300*80	12	
KWMSB-D /C-SC12	350*300*80	12	
KWMSB-D /D-FC24	350*300*80	24	
KWMSB-D /D-SC24	350*300*80	24	
FSP-72A	550*480*120	72	
FSP-32B	360*345*100	32	
FSP-16C	400*385*110	16	
FSP-16B	320*270*100	16	
FSP-16A	360*345*100	16	

Indoor/Outdoor Fiber Terminal Box

Indoor/Outdoor Fiber Terminal Boxes are environmentally sealed enclosures to distribute fibers for FTTx networks. They can be mounted on the wall or pole, for fiber fusion connect, termination, splitter and management.

FEATURES
• Outdoor and indoor applications
• High quality engineering plastic construction
• IP55 for outdoor environment
• Max splicing capacity up to 72 fibers
• Max loading PLC splitter up to 2x16ch

FCS-2A	FCS-4A	FCS-4B	FCS-8C	FCS-24A

ORDER GUIDE

Module	Size A*B*C(mm)	Max Capacity			Installation Size		Cable-in way
		SC	LC	PLC	D*E(mm)	D*E(mm)	
FCS-2A	102*167*31	2	4	4	159*80		
FCS-4A	186*116*40	4	8	4/8		195	
FCS-4B	191*120*44	4	8	4/8	185*93		
FCS-2B	150*120*37	2	4			60	
FCS-6A	150*120*37	6	6				
FCS-8A	213*163*47	8	16	8/16	206*129		
FCS-8C	199*160*46	8	16	8/16	173*136		
FCS-8E	230*180*55	8	16	8/6	81*120		
FCS-12B	263*135*46.5	12	24			66	
FCS-8B	250*190*39	8	16	8/16	130*82		Cut free
FCS-12D	250*190*39	12	24	8/16	130*82		Cut free
FCS-16H	295*240*85	16	24	16	190*270		Cut free
		Splitting	Splicing				
FCS-8H	225*200*65	8	2		168*210		
FCS-12C	225*200*65	12	12		168*210		
FCS-16B	330*260*130	16	4		200*260		
FCS-16C	320*240*100	16	4		190*298		
FCS-16G	293*219*84	16	16		155*82		Cut free/With cut
FCS-24A	320*240*100	24	24		190*298		
FCS-24B	330*260*130	24	24		200*260		
FCS-32B	420*320*130	32	8		256*400		
FCS-36B	420*320*130	36	36		256*400		
FCS-48B	420*320*130	48	48		256*400		

Optical Collimator

FCS series User Terminal Boxes are widely used in fiber to the home, fiber to the office and fiber to the desktop. KOC's last meter fiber terminal units provide different options for customer fiber access solutions.

FEATURES
• High precision ceramic ferrule
• High precision connector
• High standard ferrule grinding geometric 3D control precise control of concentricity direction
• Low insertion loss, low return loss
• SC, LC, FC, MU and other models

SPECIFICATIONS

Application	3.0 x 2.0 mm drop cable or indoor cable
Fiber diameter	125μ m(652 & 657)
Tight cladding diameter	250μ m & 900μ m
Mode of application	MM or SM
Tensile strength	>50 N
End-use temperature	-40~+85℃
Adaptor	SC & FC
Insertion loss	≤0. 2dB(1310nm & 1550nm)
Output	2

ORDER GUIDE

Module	Size A*B*C(mm)	Max Capacity		Installation Size	
		SC	LC	D*E(mm)	D*E(mm)
FCS-2H	84*130*24	2	4		85
FCS-2C	86*86*24	2	4		60
FCS-4C	149*110*33	4	8	132*50	

Indoor Fiber Terminal Box

KWMSB-A/L series Indoor Fiber Terminal Boxes are wall-mounted small size distribution units. The boxes have two cable entries. Fibers are spliced inside and distribute to the optical signal point. The interface can be adapters or pigtails.

FEATURES
• Indoor applications
• Capacity 8 - 48 fibers
• Output SC/FC/ST/LC connector available
• Splitter type is available, up to 2x32ch PLC splitter
• Customizable

ORDER GUIDE

Type	Size(mm)	Max capacity(core)	Remark
KWMSB-A-FC12	330*183*70	12	The body is made from cold rolled steel plate, the surface use the technique of electrostatic spraying, 12 outlets for adaptors, available for FC/ST/SC adaptors.
KWMSB-A-SC12	330*183*70	12	The body is made from cold rolled steel plate, the surface use the technique of electrostatic spraying, 12 outlets for adaptors, available for FC/ST/SC adaptors.
KWMSB-A-ST12	330*183*70	12	The body is made from cold rolled steel plate, the surface use the technique of electrostatic spraying, 12 outlets for adaptors, available for FC/ST/SC adaptors.
KWMSB-A-FC24	330*183*100	24	The body is made from cold rolled steel plate, the surface use the technique of electrostatic spraying, 12 outlets for adaptors, available for FC/ST/SC adaptors.
KWMSB-A-CQ48	330*183*70	48	
KWMSB/G-24A	300*120*46	24	The body is made from cold rolled steel plate, the surface use the technique of electrostatic spraying, fiber pigtail outlet
KWMSB-L-FC8	260*140*40	8	The body is made from cold rolled steel sheet, and the surface use the technique of electrostatic spraying, 8 outlets for adaptors, Available for FC/SC/ST
KWMSB-L-SC8	260*140*40	8	The body is made from cold rolled steel sheet, and the surface use the technique of electrostatic spraying, 8 outlets for adaptors, Available for FC/SC/ST
KWMSB-L-ST8	260*140*40	8	The body is made from cold rolled steel sheet, and the surface use the technique of electrostatic spraying, 8 outlets for adaptors, Available for FC/SC/ST
KWMSB-L-CQ8	260*120*40	8	The body is made from cold rolled steel sheet, and the surface use the technique of electrostatic spraying,8 outlets for fiber pigtail

Fiber Splice Enclosure

FCS series User Terminal Boxes are widely used in fiber to the home, fiber to the office and fiber to the desktop. KOC's last meter fiber terminal units provide different options for customer fiber access solutions.

FEATURES
• High precision ceramic ferrule
• High precision connector
• High standard ferrule grinding geometric 3D control precise control of concentricity direction
• Low insertion loss, low return loss
• SC, LC, FC, MU and other models

KPJM SERIES VERTICAL DOME FOSC

KDE-3JF 96 Single Fiber (4 pcs Splice Tray)	KDE-3RS 96 single fiber (4 pcs Splice Tray)	KILE-3 288 single fiber (12 pcs Splice Tray)	KILE-4 single fiber (4pcs Splice Tray)

KPJ SERIES HORIZONTAL

KILE-1 single fiber (4pcs Splice Tray)	KILE-2 192 single fiber (8pcs Splice Tray)	KILE-3 288 single fiber (12pcs Splice Tray)	KILE-4 single fiber (4pcs Splice Tray)

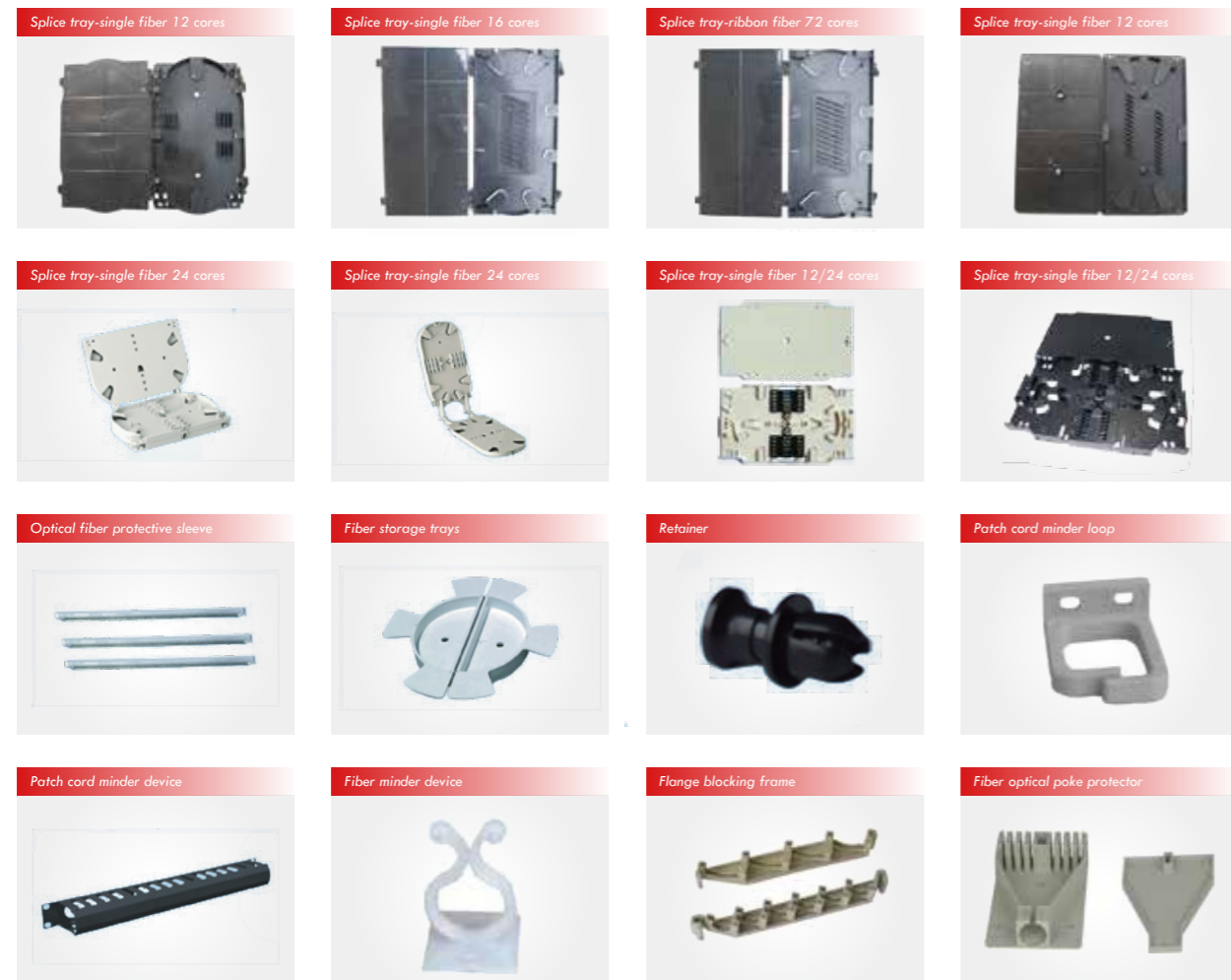| KILE-5 single fiber (8pcs Splice Tray)	KILE-6 single fiber (8pcs Splice Tray)	KILE-6 single fiber (8pcs Splice Tray)

Cable Management Accessories

Cable management accessories help to fiber distribution managing.

FEATURES
- Splice tray (12 fibers, 24 fibers)
- 60mm and 40mm heatshrink protection sleeve
- Fiber bend radius limiter
- Other tools

ACCESSORIES

Splice tray-single fiber 12 cores	Splice tray-single fiber 16 cores	Splice tray-ribbon fiber 72 cores	Splice tray-single fiber 12 cores

Splice tray-single fiber 24 cores	Splice tray-single fiber 24 cores	Splice tray-single fiber 12/24 cores	Splice tray-single fiber 12/24 cores

Optical fiber protective sleeve	Fiber storage trays	Retainer	Patch cord minder loop

Patch cord minder device	Fiber minder device	Flange blocking frame	Fiber optical poke protector

CWDM (Coarse Wavelength Division Multiplexers)

CWDM (Coarse Wavelength Division Multiplexer) is based on thin-film filter technology and patented athermal platform systems for optical devices. The CWDM is used to combine or separate different optical wavelength signals. This device offers a very flat and wide passband, low insertion loss, and high isolation, which make it ideal for CWDM Network applications and Optical Amplification Systems. KOC CWDM devices are Bellcore GR-1221 qualification tested and are in compliance with industry green initiatives such as RoHS and WEEE. All KOC CWDM products are epoxy-free in the optical path.

FEATURES
- Widely Operating Wavelength Range
- Low Insertion Loss
- High Channel Isolation
- High Stability and Reliability
- Insensitive to shock and vibration
- Ultra Flat Wide Pass band
- Epoxy Free Optical Path

APPLICATIONS
- System Monitoring
- WDM System
- Transmitters and Fiber lasers
- Fiber Optical Amplifier
- Fiber optic instruments

SPECIFICATIONS

Parameter		Specification	Unit
Channel Center Wavelength		1270"'1610 or 1271-"1611	nm
Channel Spacing		20	nm
Channel Clear Passband		ITU+7	nm
Transmission Insertion Loss	Max	0.8 (Typ 0.6)	dB
Reflection Insertion Loss	Max	0.6 (Typ 0.4)	dB
Passband Ripple	Max	0.3	dB
Transmission Isolation	Min	30	dB
Reflection Isolation	Min	12	dB
Return Loss	Min	45	dB
Directivity	Min	45	dB
Polarization Dependent Loss	Max	0.1	dB
Operating Temperature Range		0~ + 70	°C
Storage Temperature Range		-40~+85	°C
Maximum Power Handling		300	mW
Package Dimension (L" ¢)		38*5.5	mm

ORDER GUIDE

CWDM-3P	Center wavelength	Fiber Type	Connector Type
	1271~1611; 1270~1610	1: 250µm bare fiber	0: Without connector
	Example: 1271 = 1271nm	2:900µm tight buffer fiber	1: FC/ PC 2: FC/UPC 3: FC/APC
	other		4: SC/PC S: SC/UPC 6: SC/APC
			7: ST 8: LC 9: MU X: Cusmized

CWDM Module

CWDM Module is based on Thin-Film-Filter and Micro-Optics, this product features wide pass band, low insertion loss and high channel isolation, high stability and reliability.

FEATURES
- Ultra-low Insertion Loss
- High Channel Isolation
- Super Thermal
- RoHS Compliance
- Optical Path Epoxy Free

APPLICATIONS
- Metro CWDM system
- Access CWDM system
- Enterprise Network
- RoHS Compliance
- CATV Network

SPECIFICATIONS

Parameter		Mux & Demux			
Channel Space (nm)		20			
Channel Number		2CH	4CH	8CH	16CH
Center Wavelength (nm)		1270~1610			
Channel Passband (@-0.5dB) (nm)		+/-7.5			
Fiber Type		ITU-T G652D with0.9mm loose tube or customed			
IL (dB)		0.9	1.5	2.4	3.5
Passband Ripple (dB)		0.5			
Isolation (dB)	Adjacent Channel	30			
	Non-Adjacent Channel	40			
	Upgrade Port	13			
PDL (dB)		0.2			
PMD (ps)		0.1			
RL (dB)		45			
Directivity (dB)		50			
Maximum Optical Power (mw)		500			
Operating Temperature (℃)		-5~65			
Storage Temperature (℃)		-40~85			
Fiber Length (m)		0.6			
Connector type		SC/PC,LC/PC or cstomed			
BOX Package (mm)		Rack mount 1u 19" or customed			

ORDER GUIDE

PD-CWDM	Channels	Jumper Type	Connector	Fiber Length	
	2CH	B: 250um	0: None	10: 1.0m	15: 1.5m
	4CH	9: 900um	1: SC/UPC	18: Other	3: FC/UPC
	8CH	8: Other	2: SC/APC	4: FC/APC	5: LC/UPC
	16CH			6: LC/SPC	7: MU/UPC
	Customed			16: Other	

DWDM (Dense Wavelength Division Multiplexers)

DWDM (Dense Wavelength Division Multiplexer) is based on a patented athermal platform for optical devices. This multiplexer features ultra low insertion loss, superb thermal stability, and unparalleled reliability. The technology is a lead-free packaging platform and contains no epoxies in the optical path. KOC DWDM is Telcordia GR-1221 and GR-1209 tested, qualified for uncontrolled environment applications, and is in compliance with industry green initiatives such as RoHS and WEEE.
KOC can provide customized designs to meet specialized feature applications. KOC also offers modular assemblies that integrate other components to form a full function module or subsystem.

FEATURES
- Widely Operating Wavelength Range
- Low Insertion Loss
- High Channel Isolation
- High Stability and Reliability
- Insensitive to shock and vibration
- Ultra Flat Wide Pass band
- Epoxy Free Optical Path

APPLICATIONS
- System Monitoring
- WDM System
- Transmitters and Fiber lasers
- Fiber Optical Amplifier
- Fiber optic instruments

SPECIFICATIONS

Parameter		Specification								Unit
Channel Wavelength		ITU 100GHz Grid				ITU 200GHz Grid				nm
Channel Spacing		100				200				GHz
Channel Count		Single	2	4	8	16	20	40		CH
Channel Passband (@-0.5dB bandwidth)	Min	0.125				0.25				mn
Insertion Loss	Max	<1.1 (add or drop) <0.8 (other)	1.3	2.2	3	4	4.2	4.5		dB
Isolation	Min.	>30 (add or drop) >12 (other)			30 40					dB
Passband Ripple	Max.	0.5								dB
Polarization Dependent Loss	Max.	0.1								dB
Polarization Mode dispersion	Max.	0.1								ps
Directivity	Min.	50								dB
Return Loss	Min	45								dB
Insertion Loss Temperature Stability	Max.	0.005								dB/℃
Temperature Wavelength Drift	Max.	0.003								nm/℃
Power Handling	Max.	300								mW
Tensile Load	Max.	5								N
Pigtail Type		white 0.9mm loose tube								
Fiber Type		SMF-28e								
Fiber length		≥1.0 or customer requirements.								m
Operating Temperature		-10 ~ 70								℃
Storage Temperature		-40 ~ 85								℃
Package Dimension		100X80×10 & 141X115X18&5.5*36								mm

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Why KOC can promise Fast delivery?

- "Ready to produce" materials
- Special designed textures & tools
- Simplified order handling process
- Well trained operators for multi-tasks
- Target to deliver assemblies to site
- 3~7 days from Receipt of PO
- The most rational and fast way of logistics
- Engineers: earliest entrants in fiber industry of China
- Sales: overseas working experiences
- Operation team: fortune global 500 working experience

2,500 $^{m^2}$
Production Area

1,000 $^{m^2}$
Office Area

42 *staff*
Bachelor degree or higher

90 *staff*
10+ years working experience