

KOVINA
KOVINA NETWORKS JSC



Technology / Development / Innovation / Friendly emotion



KOVINA NETWORKS JSC

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Mission & Vision

The very best of today will be developed into tomorrow's standard.

The very best of today will be developed into tomorrow's standard. Regardless of what component you add to a passive Fiber Optic Network, its function is never better than the connection allows. The connection depends on connector components and the termination process.

The heart of any Fiber Optic connector is the ferrule. KOVINA Network has chosen to produce own ZrO₂ ferrules with superior quality in order to ensure the extreme quality we propose our chosen customers.

The manufacturing-and measuring-equipment is the best available and is constantly updated as Fiber Optics is a pretty young business where the speed of development still is high.

Other connector-components are licensed or developed in cooperation with the licence and/or our customers. The process of terminating connectors has to be tuned in order to reach our target of supplying the best there is.

Even though our employees are skilled and have long experience we continuously run training programs to educate and test all of them to hone their ability and know-how toward the extreme.

By taking the measures as per above KOVINA Networks has the confidence to develop and supply materials today at specifications of tomorrow.

Certification & Registration

KOVINA Networks was certified that the quality management system has been assessed and found to be in accordance with the requirements of the quality standards ISO9001.

KOVINA Networks was that the environmental management system has been assessed and found to be in accordance with the requirements of the environmental standards ISO14001.

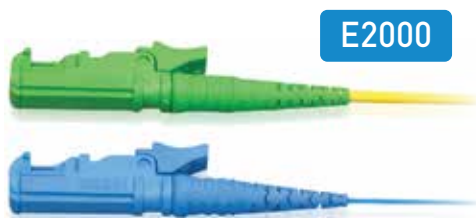
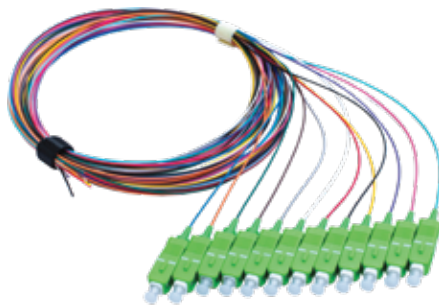
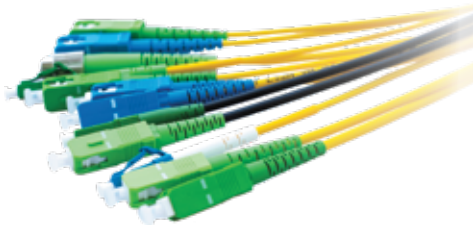
KOVINA Networks was that the quality system as been assessed and found to be in accordance with the requirements of ISO9001.

KOVINA Netowkrs' factories in Korea (since 2000) and factories in Vietnam (since 2016) have produced optical communication parts for over 20 years and supplied them to European and global communication equipment and FTTx builders, have constantly been verified the quality and technology of our products.

KOVINA NETWORKS JSC

Patch Cord

SC / FC / ST / LC / E2000 / MT-RJ / DIN / MU / Optional connectors



E2000



MT-RJ



DIN



MU

· Other connectors are available upon request

Patch Cord

SC / FC / ST / LC / E2000 / MT-RJ / DIN / MU / Optional connectors

Features and Benefits

- 01. Compliant with : JIS C-5973, IEC, Bellcore
- 02. Optical performance 100% factory tested
- 03. Standard length of SC and FC, ST assemblies in stock
- 04. Customized assemblies available include of lengths, connector type and performance
- 05. Precision ceramic ferrule with end-face geometry per IEC proposal

Application

- 01. Telecommunication Networks
- 02. CATV Networks
- 03. Active Device Termination
- 04. Local Area Networks
- 05. FTTx
- 06. Testing Instruments

Specification

Characteristics	Conditions	Values
Insertion Loss	Against Reference connector	<0.1dB , <0.2dB
Return Loss	UPC	>55dB
	APC	>65dB
Durability	500 times	<0.2dB
Temperature Cycling	-40~+80°C (21Cycles), 168hr	<0.2dB
Humidity Cycling	-10~+65°C, 95%RH, 168hr	<0.2dB
Vibration	20G, 20~2000Hz, 4min/Cy, 4Cy/axis, 6axis	<0.2dB
Flex Test	0°->90°->0°->90°, 5kgf (100Cycles)	<0.2dB
Twist Test	Ø0.9mm:0.75kgf, Ø2.0mm:1.53kgf	<0.2dB
Straight Pull Test	100N Load, 5Sec at least	<0.2dB
Impact	5 times/direction, 6direction, 500G, 1ms	<0.2dB

· Customized specification is available upon request.

“ Production according to customer’s specifications and packing requirements ”

MPO/MTP



Features and Benefits

01. Low insertion loss
02. Precision MT ferrule
03. Push/Pull latching mechanism
04. Easy to distinguish SM/MM by color coded housing
05. Jacketed and bare ribbon cable are available

Application

01. CATV/Access Networks
02. Telecommunication Networks
03. Modules

Specification

Characteristics	SM	MM
IL	≤ 0.75 Max	≤ 0.5 Max
RL	≥ 55 (APC 8°)	—
Durability	$< 0.3\text{dB}$ change 500 times	$< 0.2\text{dB}$ change 500 times
Operating Temperature	$-40 \sim +80^{\circ}\text{C}$	
Cable Type	4, 8, 12, 24 Bare fiber ribbon / Ruggedized cable	
Housing Color	Green, Beige, Yellow	
Boot Type	Bare fiber ribbon, Ruggedized cable	



MPO OM3 (24 fibret)



MPO OM4 (24 fibret)

Optical PLC Splitter

1xN , 2xN SPLITTER / Ribbon, Fan-out type, Various connector types

- Features and Benefits

01. Low Insertion Loss

02. Low Return Loss

03. Low PDL

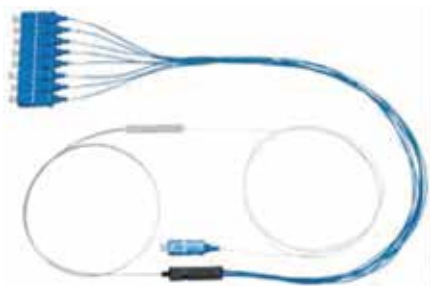
04. High Uniformity
- Application

01. Optical Communication System

02. CATV Networks

03. FTTH

04. Passive Optical Networks (PON)



Optical Specification

Parameter	Type	Unit	1x4	1x8	1x16	1x32	1x64	2x4	2x8	2x16	2x32
Wavelength		nm	1260 to 1650								
Insertion Loss (IL)*		dB	7.6	10.5	13.9	17.2	20.6	7.8	11.2	14.5	18.0
Return Loss (RL)*		dB	≥55								
PDL (dB)*		dB	<0.3								<0.4
Uniformity*		dB	0.8	1.0	1.5	1.8	1.8	1.2	1.5	2.0	2.5
Directivity		dB	≥55								
Operation Temp		dB	-40~+85℃								

*: Without connector

Mechanical Specification

Configuration		1x4, 1x8	2x4, 2x8	1x16, 1x32, 2x16, 2x32	1x64
Package	Material	Stainless Steel			
	Dimension (mm) (LxWxH)	40x4x4	50x5x4	60x7x4	58x12x4
Other Package		Customize			

Splitter Module Portfolio

Modular design for 19" / ETSI racks and cabinet systems



Features and Benefits

- 01. Optional coupling ratio
- 02. High stability and reliability
- 03. Compact design

Application

- 01. Optical communication system
- 02. FTTx PON Networks
- 03. CATV Networks
- 04. Local Area Networks

Specification

- Customized panel / coupler / splitter types are available (PLC, FBT, WDM & CWDM etc)
- Optional connector and adapter combinations available on request

Full size FTTx 19" type

- Adapter interface with a diverse range of configurations
- Standard 1:16 to 4x1:16, 1:32 & 2x1:32 or 1:64 configured on 1U height



Micro FTTx Module

Adapter interface up to 1:16 split ratio (2x1:8 or 4x1:4)
Micro Design for Vertical or Horizontal mounting (1U)
[Vertical capacity:11modules (h:130mm) Horizontal capacity:3 modules]



Compact Micro FTTx Module

Adapter interface up to 1:8 split ratio (2x1:4 or 3x1:2)
Micro Design for Vertical or Horizontal mounting (1U)
[Vertical capacity:15 modules(h:130mm) Horizontal capacity:3 modules]



Bulkhead Micro FTTx Module

Optional Connectors on 2.0mm ruggedized tubing up to 1:32 (1:64)
Compact design, cost effective and easy to install
Micro Design for Vertical or Horizontal mounting (1U)
[Vertical capacity: 28 modules (h:80mm)Horizontal capacity:10 modules]

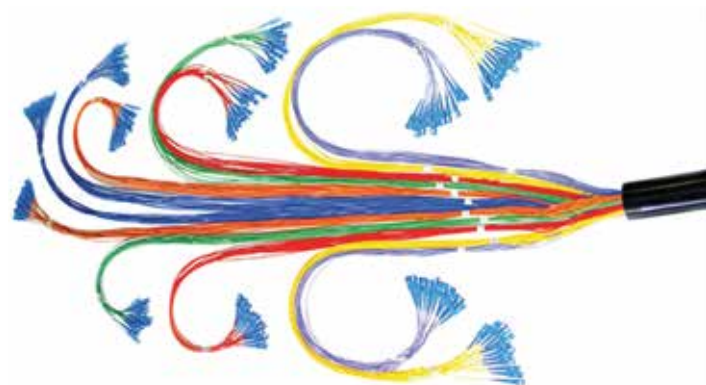
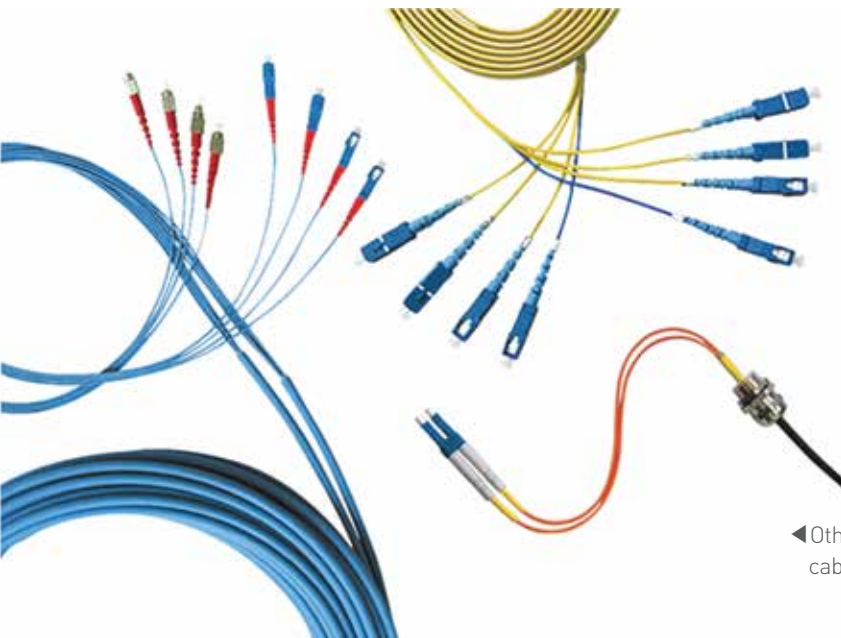
Multi Fiber for FTTx & Data Center

Features and Benefits

01. Customized configurations
02. Indoor or outdoor connectors
03. Indoor or outdoor cable design
04. Optical performance 100% factory tested
05. Hybrid cables
(fiber and/or Cu-transmission and/or power available)
06. Prepared for easy installation

Application

01. Telecommunication Networks
02. Mobile Infrastructure
03. CATV Networks
04. Local Area Networks
05. Data Communication Networks
06. FTTx applications



◀ Other requirements like cable color, strength member and cable could be changed / added according to customer request.

Specification

We offer broad experience related to various FTTx solutions.

We handle all issues of the complete FTTx assembly solution to secure 100% optical performance during the systems life time. When designing our FTTx products, we handle not only the issues related to the FO assembly including components and material but also the complete solutions covering installation issues and transport protection. Based on our own components and FO cables for the interconnect & Access area we offer customized designs and future proof solutions. Please contact us for further info.

Plug Type Attenuator / Terminator

SC / FC / MU / ST / LC / TERMINATOR

Features and Benefits

01. Optical performance 100% factory tested
02. PC, UPC and APC available
03. Polarization insensitive
04. Compact design fits in existing connections or patch panels
05. Convenience and easy of handling



SC



FC



MU

Application

01. Telecommunication Networks
02. CATV Networks
03. Data Communications Networks
04. Instrumentation
05. Local Area Networks



TERMINATOR



ST

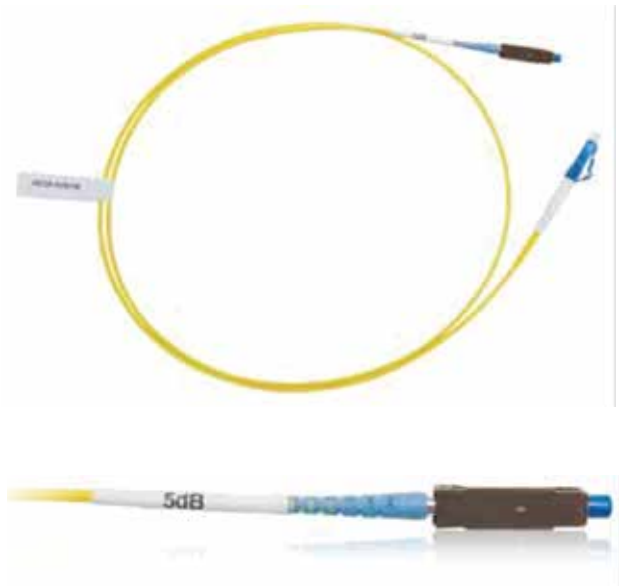


LC

Specification

Characteristics		SM (9/125 μ m)	MM (50/125 μ m)
Attenuation Values		1dB to 20dB (1dB step) 25dB, 30dB	1dB to 25dB(1dB step)
Operating Wavelength		1260nm~1620nm	850nm or 1310nm
Return Loss	PC	≥ 45 dB	-
	UPC	≥ 55 dB	
	APC	≥ 65 dB	
Attenuation Tolerance	1db~10dB	± 0.5 dB	± 0.5 dB
	11db~30dB	$\pm 10\%$	
Durability		500 times	
Temperature Cycling		-40~+80℃	
Humidity Cycling		75℃, 95% / 336hr	
Vibration		10~55Hz (2hr)	
Maximum Power Capability		1W	

In-Line Attenuator



Features and Benefits

- 01. Optical performance 100% factory tested
- 02. Environmentally stable
- 03. Precision ceramic ferrule with end-face geometry per IEC proposal
- 04. Polarization insensitive
- 05. Standard length assemblies in stock

Application

- 01. Telecommunication Networks
- 02. Data Communications
- 03. Instrumentation
- 04. CATV Networks
- 05. Active device termination

Specification

Characteristics	Conditions	Values
Attenuation Values	* Including connector termination	±0.5dB (for 1dB~10dB)
		±1.5dB (for 10dB~30dB)
Return Loss	PC	≥45dB
	UPC	≥55dB
	APC	≥65dB
Durability	500 times	<0.2dB
Temperature Cycling	-40~+80℃ (42Cycles)	<0.2dB
Humidity Cycling	75℃, 95% / 336hr	<0.2dB
Vibration	10~55Hz (2hr)	<0.2dB
Impact	1.5m drop, 8 Cycles	<0.2dB

PANDA & 4~8 Fiber Aligned Patch Cord

Polarization-maintaining and Absorption reducing patch cord



Features and Benefits

- 01. Compatible optical fiber : SM.15-P, SM.13-P
- 02. Cord Type(μm) :250, 400, 900
- 03. Various connector type available
- 04. Compact size, light weight

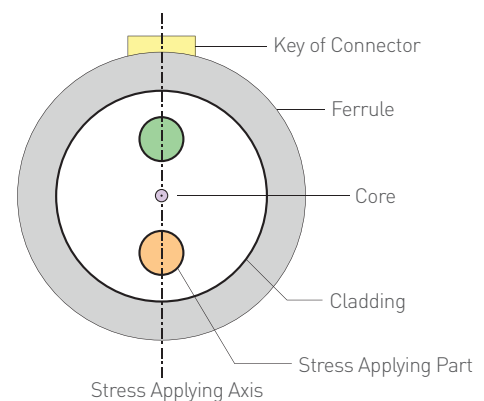
Application

- 01. LD Module
- 02. Polarization Maintaining Fiber Coupler
- 03. External modulator
- 04. High-speed transmission system
- 05. PMD compensator



Specification

Fiber Mode	SM		
Type	SC, FC		
Ext. Diameter (mm)	0.9		
Polishing Quality	PC	UPC	APC
Insertion Loss (dB)	<0.5	<0.5	<0.5
Return Loss (dB)	>40	>50	>60
Axial Alignment	±3°	±3°	±3°



ODC Cable Assembly(FTTx)



Features and Benefits

- 01. Cost effective solution for in house termination
- 02. IP68 Water immersion and Dust protection
- 03. operational temperature for outside plant -40~+70℃
- 04. cables to be used, 5-8mm OD cable with two 2.0mm to 3.0mm jacketed subunits
- 05. Chemical Resistance
- 06. Intermatable to other Industrial LC adaptor per IEC 61076-3-106
- 07. Simple assembly requiring no special tools
- 08. Durable mechanical mating, minimum of 500 mating
- 09. TPU(Thermoplastic Polyurethane, LSZH, OFNP, OFNR and Armored jacket available

Specification

Characteristics	SM	MM
LC Connector	Typical	Typical
Insertion Loss	0.1dB	0.2dB
Return Loss	≥55dB	—
Durability	Cycling rate >3Sec	<0.2dB
Temperature Cycling	-40~+70℃	
IP Rating	IP68	



FTTA



OTP/FTTx Box

SNET-OTP/12A

Shinhan Networks OTP/FTTx Box is designed to support



Features and Benefits

- 01. Fusion Splicing
- 02. PLC Splitter Installation
- 03. Connection of Micro Duct with Blowing Fiber

Application

- 01. 2~3 Ports for Main Cable Entrance & Mid-Span & 8~12 Ports for Subscribers
- 02. Saving Time by Simple Fixing Method of SC, LC Adapters
- 03. Choice of Versatile Cable IN/OUT Panel according to Customers' Need
- 04. IP65
- 05. Easy & Simple Field Installation by Factory Pre-assembling

Number of pre-assembled adapters	SNET-OTP/12A-00	SNET-OTP/12A-08	SNET-OTP/12A-12
	0	8	12

Dimension in mm : 220×300×80 / Weight in kg : 1.4

01 Capacity of optical cables

Inlet ports for OSP cables	2~3 ports	Outgoing ports for drop cables	8~12 ports
Diameter of inlet cables	3mm~13mm	Diameter of outgoing cables	3.0mm
Fixing method of inlet cables	Both strength member and sheath fixing	Fixing method of outgoing cables	Sheath fixing

02 Patch Panel

Maximum number of pre-assembled adapters	12	Maximum number of splitters available	2
Type of adapters	SC,LC	Splice method for splitter- cable	Fusion splice
Optical splitters available	1×2, 1×4, 1×8, 1×12	Number of splice slots in the splice tray	12

03 Material

Material of outer boxes	PC + ASA
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OTP Box

Features and Benefits

1. Fusin Splicing
- . PLC Splitter Installation
3. Connection of Micro Duct with Blowing Fiber
4. 2/04 for Main Cable Entrance & Mid-pan & 8-12 2/04 for Subscriber
5. Saving Time by Simple Fixing Method of SC, LC Adapters
6. Choice of Versatile Cable IN/OUT Panel according Customers 4/ Need
7. Complied with I265
8. Easy & Simple Field Installation by Factory Pre-assembling



OTP 04



OTP 08



OTP 16



OT2 16B

Fiber Distribution Frame

Features and Benefits

- 01. Compact size
- 02. Locking mechanism can be possible
- 03. Easy to install

Application

- 01. Data / Telecommunication Networks
- 02. FTTx Networks
- 03. CATV Networks



Drawer Type (Aluminum)

Model	Fiber Capacity	Dimension (WxDxH)
FDF-DA-12	12 Core	490 x 350 x 1U
FDF-DA-24	24 Core	
FDF-DA-48	48 Core	
FDF-DA-64	64 Core	

Drawer Type

Model	Fiber Capacity	Dimension (WxDxH)
FDF-D-12	12 Core	480 x 310 x 1U
FDF-D-24	24 Core	



Round Type

Model	Fiber Capacity	Dimension (WxDxH)
FDF-R-12	12 Core	480 x 350 x 1U
FDF-R-24	24 Core	



Wall Mount Type

Model	Fiber Capacity	Dimension (WxDxH)
FDF-W-24	24 Core	315 x 310 x 82
FDF-W-48	48 Core	315 x 380 x 110



Mini FDF (Metal)

Model	Fiber Capacity	Dimension (WxDxH)
FDF-MM-4	4 Core	118 x 136 x 30
FDF-MM-8	8 Core	
FDF-MM-12	12 Core	140 x 190 x 35



Mini FDF (Plastic)

Model	Fiber Capacity	Dimension (WxDxH)
FDF-MP-8	8 Core	125 x 180 x 45

