



THE BEST **SOLUTIONS** FOR FTTH COMMUNICATION NETWORK

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WHO WE ARE

NWC (Networkcable Co., Ltd.) is a manufacturer specializing in passive optical network components and solutions since its establishment in 1999.

NWC has conducted from a corporate philosophy of contributing to the development of the global industry through technology and has been focusing on strengthening competitive position.

With this strategy, NWC enables to offer product differentiation for Passive Components, Distribution System, Passive and Active Devices out performing FTTH products and optical, Distribution products.

NWC (Networkcable Co., Ltd.) established an sales office in USA in 2009 and additional factories in Vietnam in 2005 and in China in 2008 for market preoccupation and strengthening competitiveness.

This regional advantage helps manufacturing cost effective and able to provide a meticulous workforce that meets our performance critical workmanship standards in the areas of quality, safety and reliability.

WHAT WE ARE STRONG AT

KNOWHOW



We have been closely involved in many projects from various telecommunication companies over the years. From a lot of experience of developing, designing and manufacturing optical passive components, we get to understand what customers want. Also, these experiences have led us to develop new technologies allowing fast production, easy installation, robust quality.

Our R&D team has considerable expertise in optical technology, industrial design, structure design, functional design to fulfill the product projects from various customer.

Powerful R&D team is the strong support and assurance for good quality and competitive products.

"Innovative Design" and "Original Product" are the working motto of our R&D team.
We contribute significantly to the development of innovative products. To summarize our standard: optimum functionality, Compact and convenient design and competitive price. In the stage of development, cost-effectiveness is always within our attention.



R&D

For more than a decade, we have been committed to providing first class quality products. Our commitment to the highest standards of quality has earned us valued and trusting partnerships with some of the world's leading companies. In today's highly demanding global environment, we understand that the highest quality must be guaranteed. NWC is ISO-14001/TL 9000certified company and products are manufactured and tested to meet the most stringent industry standards.

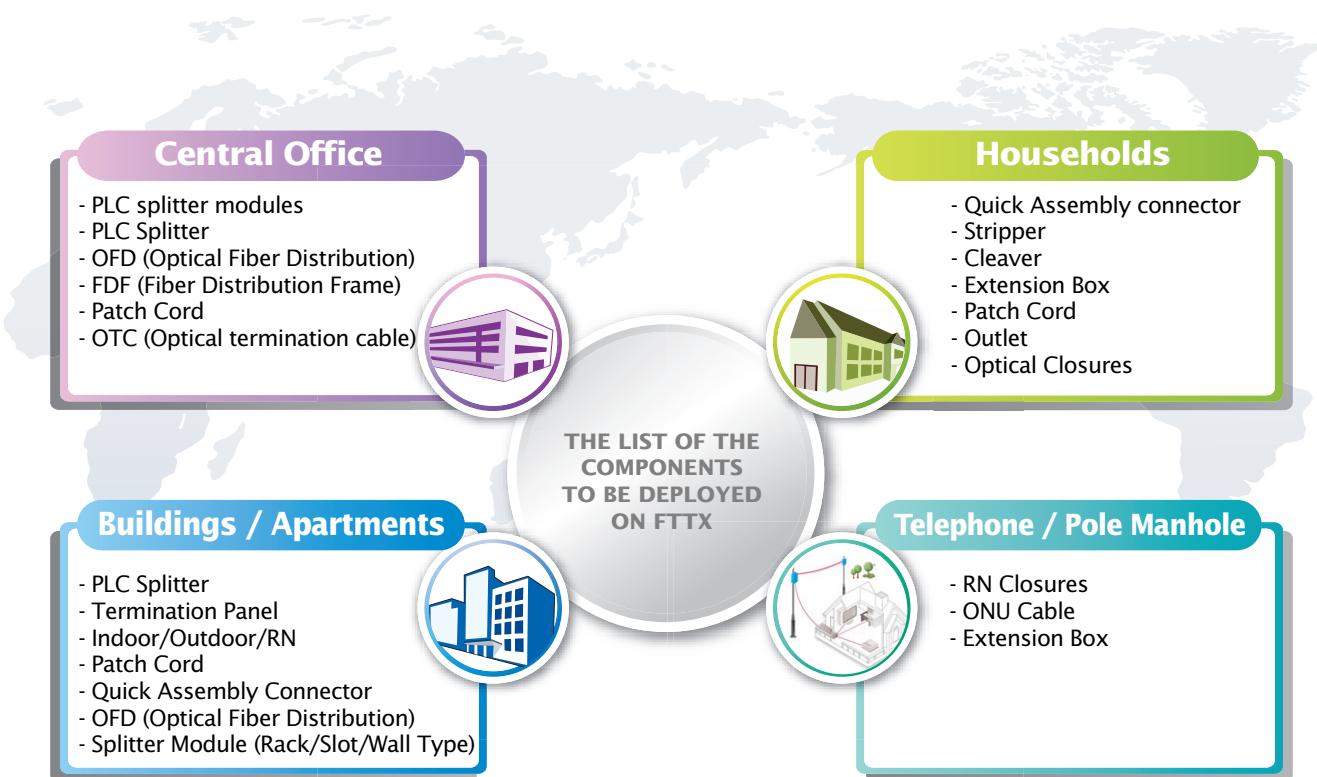
QUALITY



FAST DELIVERY

NWC has been making every effort to increase its efficiency and productivity. One of our efforts is an employee suggestion system. The ideas generated by workers can range from simple quality of work life improvements to larger streamlining issues that can save the company many thousands of dollars per year. It enabled us to achieve cost savings and improve product quality, workplace efficiency, customer service and working condition. Over 16 years, we believe that there has been a lot of improvements and we have expand our knowledge on time-saving, cost-saving.

THE LIST OF THE COMPONENTS TO BE DEPLOYED ON FTTX



Passive optical networking (PON) is a well-proven technology enabling cost reduction and growing deployments. Many service providers have been using and are planning to use PON as their main broadband access technology. There are a number of reasons to consider deploying optical fiber rather than copper:

- The lifetime costs for optical fiber are less than for copper-based systems. Typical aging lifespan of fiber cables is over 50 years.
- It's transparent with regard to data formats and data rates; therefore, to increase bandwidth the optical fiber does not have to be replaced, just replace the terminal equipment. This is a very important issue from the point of view of life cycle costs as well as persistence of the technology.
- Only optical fiber can "truly" reach the 50-1000 Mbps and beyond to support a full-range of applications.
- optical fiber is less susceptible to electrical interference from power lines and spurious radio signals and immune from lightning-induced surges.
- Attenuation (or signal loss) for fiber is several orders of magnitude less than any other broadband technology, thereby significantly reducing the need for expensive signal regeneration equipment and/or amplifiers.
- optical fiber offers ;
 - Higher Bandwidth
 - Lower Latency (i.e., delay)
 - Lower Bit Error Rate

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Fiber Optic Fixed Attenuators

01 PLUG-IN ATTENUATOR



SC



SC



ST



Description

An optical attenuator is a device used to reduce the power level of an optical signal, either in free space or in an optical fiber.

The basic types of optical attenuators are fixed, step-wise variable, and continuously variable.

NWC attenuators utilize optimized doped fibers to reduce the power level of an optical signal. This method show higher performance than fiber splices or fiber offsets. NWC attenuators are capable of performing in the 1310, C and L Bands and also have capability of withstandig over 1W of high power light exposure for extended periods of time. Low Polarization Dependent Loss (PDL) and a stable and independent wavelength distribution makes them ideal for DWDM.

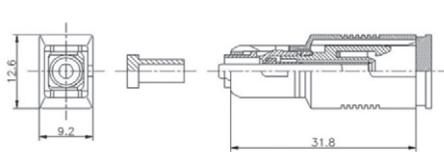
Features

- Optimized ion doped fiber technology
- Various fixed attenuation available
- Superior durability
- Low polarization dependence
- Superior spectral flatness and very low ripples
- Withstands high optical power up to 1W
- Telecordia(GR-910-CORE) Compliance

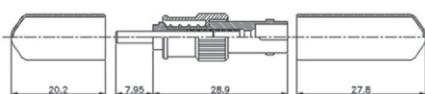
Applications

- Telecommunication Network
- CATV Network
- Data communication Network
- Instrumentation
- Local Area Network

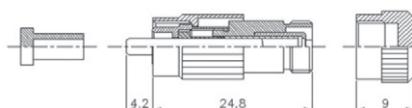
Appearance



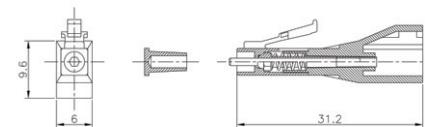
SC Type



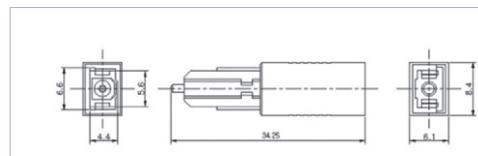
ST Type



FC Type



LC Type



MU Type

Fiber Optic Fixed Attenuators



FC

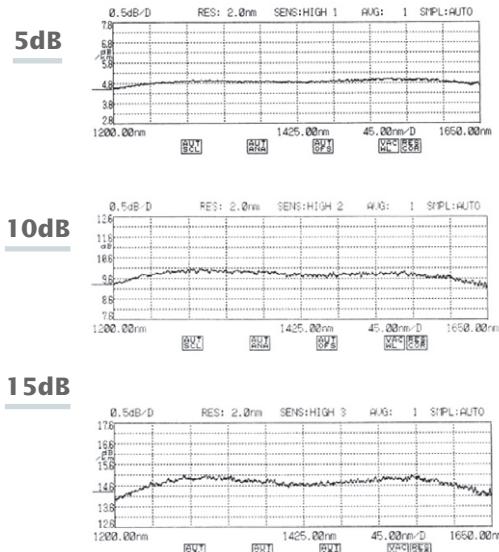
LC

MU

Specifications

Characteristics		Single Mode (9/125μm)	Multi Mode (G1 50/125μm,62.5/125μm)
Attenuation Value		0dB to 20dB (1dB step), 25dB, 30dB	0dB to 25dB (1dB step)
Operating Wavelength		1260nm ~ 1620nm	850nm or 1300nm,1310nm
Return loss	SPC	≥40dB	
	UPC	≥55dB	—
	APC	≥65dB	
Attenuation Tolerance	1dB ~10dB	± 0.5dB	
	11dB ~15dB	± 1.0dB	± 0.5dB
	16dB ~30dB	± 1.5dB	
Maximum Power Capability		1 W	
Operating Temperature		- 40°C ~ +75°C	

Wavelength dependence



Ordering Information

OFATP



① Fiber Type	② Type	③ Connector type	④ Attenuation Value	⑤ Wavelength	⑥ Sleeve
SM : 9/125	SCD : Dicasting Housing	SP : SPC	01 : 1dB	85 : 850nm	C : ceramic
MM : 50/125	SCP : Plastic Housing	UP : UPC	02 : 2dB	30 : 1300nm	B : Bronze
HMM : 62.5/125	FC	AP : APC	13 : 1310nm	
	ST		20 : 20dB	15 : 1550nm	
	LC		25 : 25dB	35 : 1310nm	
	MU		30 : 30dB	& 1550nm	

Fiber Optic Fixed Attenuators

02 IN-LINE ATTENUATOR



Features

- Optimized ion doped fiber technology
- Various Fixed attenuation available
- Superior durability
- Low polarization dependence
- Superior spectral flatness and very low ripples
- Withstands high optical power up to 1W
- Telecordia STD(GR-910-CORE) Compliance

Ordering Information

OFATI



① Fiber Type	② Type	③ Connection End Shape	④ Total Length	⑤ Attenuation Value	⑥ Wavelength
SM : 9/125	SC	SP : SPC	05 : 0.5m	01 : 1dB	85 : 850nm
MM : 50/125	FC	UP : UPC	10 : 1 m	02 : 2dB	30 : 1300nm
HMM : 62.5/125	ST	AP : APC	13 : 1310nm
	LC		50 : 5 m	20 : 20dB	15 : 1550nm
	MU		25 : 25dB	35 : 1310nm
			100 : 10 m	30 : 30dB	& 1550nm

03 HYBRID ATTENUATOR



Features

- Optimized ion doped fiber technology
- Various Fixed attenuation available
- Superior durability
- Low polarization dependence
- Superior spectral flatness and very low ripples
- Withstands high optical power up to 1W
- Telecordia STD(GR-910-CORE) Compliance

Ordering Information

OFHATP



① Fiber Type	② Male	③ Female	④ Connection End Shape	⑤ Attenuation Value	⑥ Sleeve
SM : 9/125	SC	SC, FC, ST, LC	UP : UPC	01 : 1dB	C : Ceramic
MM : 50/125	FC	FC, ST	AP : APC	B : Bronze
HMM : 62.5/125	ST	SC, FC, ST		30 : 30dB	

Fiber Optic Variable Attenuators

04 FIBER-BENDING ATTENUATOR (Manual)

Specifications

Characteristics	Values
Attenuation Variable Range	30dB (@ 1310nm, 1550nm)
Return Loss	UPC : >55dB , APC : >65dB
Resolution	0.5dB
Operation Temperature	-15°C ~ 60°C
Storage Temperature	-40°C ~ 70°C

Ordering Information

VBA	①	②	③	④
① Cable Length	② Connector Type	③ Connection End Shape	④ Cord Dia.	
001 : 1m	SC	SP : SPC	20 : 2.0mm	
.....	FC	UP : UPC	24 : 2.4mm	
010 : 10m	ST	AP : APC	30 : 3.0mm	
.....	LC			
100 : 100m	MU			



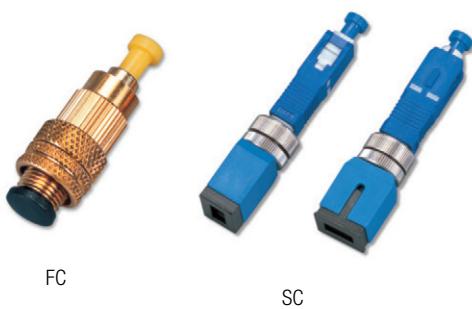
05 AIR-GAP ATTENUATOR (Manual)

Specifications

Characteristics	Values
Connector Type	SC, FC
Applicable optical connector (Female to Male)	UPC to UPC APC to APC
Attenuation Variable Range	1~28dB 28dB
Attenuation Value	min. >50dB >60dB
Return Loss	max. <13dB <13dB
Resolution	0.5dB
Operation Temperature	-15°C ~ 60°C
Storage Temperature	-40°C ~ 70°C

Features

- Wide Attenuation range
- Environmentally stable
- Precision ceramic ferrule with end-face geometry per IEC proposal
- Readily panel mountable
- Low back reflection



Ordering Information

VAA	①	②	③	④	⑤
① Fiber Type	② Type	③ Connector Type	④ Grade	⑤ Connection End Shape	
SM : 9/125	PL : Plug	SC	N	UU : UPC to UPC	
		FC	A	UA : UPC to APC	
			S	AA : APC to APC	

Fiber Connecting Products

06 / CONNECTOR



Features

- Comply with : JIS C-5973, IEC, Telcordia
- High stable mating and de-mating characteristics
- Optimum optical performance through high quality ferrule
- Designed for variable cable dia.
- Available long flange for ferrule and Angled ferrule
- Widely used for LD/PD modules



12 Color SC Housing / Adapter

Specifications

Characteristics	Values
Structure	Satisfied Telcordia GR-326-CORE
Fiber Type	SM (9/125), MM (50/125,62.5/125)
Insertion Loss	≤0.2dB (against master connector)
Mating durability	≤0.2dB (500times)
Operating temperature stability	≤0.3dB (- 40°C ~ + 75°C)

Ordering Information

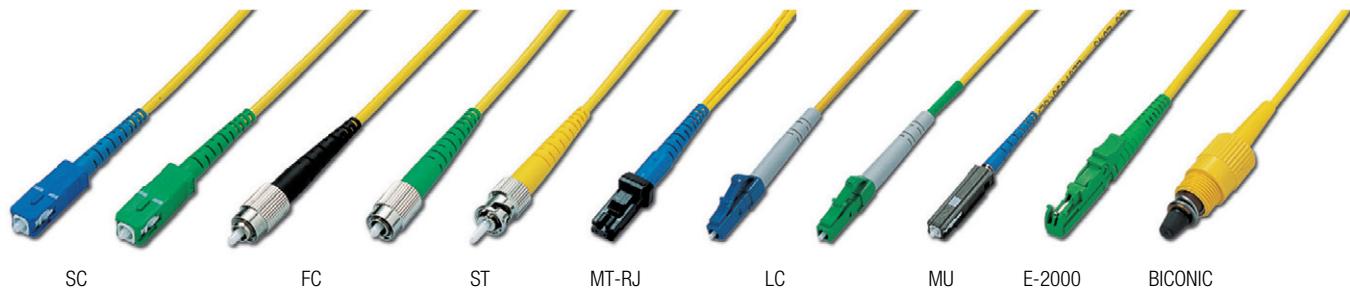
OFC ○○-○○-○○○-○-○-○-○○-X-XX-XXX

① ② ③ ④ ⑤ ⑥

① Type	② Ferrule type	③ Ferrule Inner Dia.(μm)	④ Ferrule Cap color	⑤ Boot Color	⑥ Boot Dia(mm)	X Configuration	XX Housing color	XXX Width of key
SC	N : Without ferrule	250 : 125(SM)	B : Blue	B : Blue	09 : 0.9	P : One-Piece	B : Blue	N : 2.09mm ~
FC	P : PC ferrule	255 : 125.5(SM)	K : Black	K : Black	16 : 1.6	Pre-Assembled	G : Green	2.14mm
ST	PL : PC ferrule with	260 : 126(SM,MM)	G : Green	G : Green	20 : 2.0	K : Multi-Piece	GR : Gray	R : 1.97mm ~
LC	long flange	270 : 127(MM)	Y : Yellow	Y : Yellow	24 : 2.4	* Only SC type	* Only SC,LC Type	2.02mm
MU	S : Step APC ferrule			R : Red	30 : 3.0			* Only FC type
MT-RJ	C : Cone APC ferrule			W : White				
Biconic	AL : Angled ferrule			O : option				
E-2000	with long flange							

Fiber Connecting Products

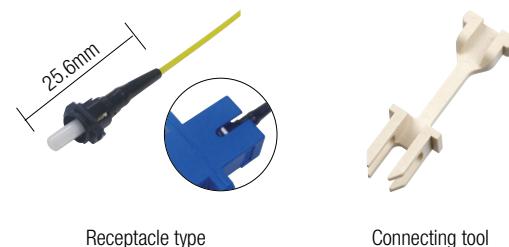
07 PATCH CORD



Features

- Comply with : JIS C-5973, IEC, Bellcore
- High stable mating and de-mating characteristics
- Low insertion loss and high return loss
- Designed for variable cable
- Customized assembly
- Various connector and optical performance combinations

[Receptacle connector]



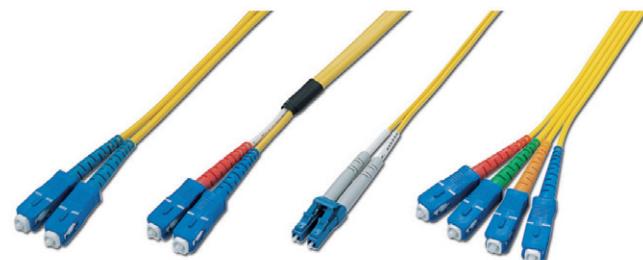
Receptacle type

Connecting tool

Specifications

Characteristics		Values
Structure		Satisfied Telcordia GR-326-CORE
Fiber Type		SM (9/125), MM (50/125,62.5/125)
Insertion Loss		≤ 0.2dB (against master connector)
Return Loss	SPC	≥ 40dB
	UPC	≥ 55dB
	APC	≥ 65dB
Mating durability		≤ 0.2dB (500times)
Operating temperature stability		≤ 0.3dB (-40°C ~ +75°C)

[Duplex & 4core patch cords]



Ordering Information



① Fiber Type	② Length	③ ④ Connector Type / End Shape	⑤ Cord Dia(mm)	⑥ Boot Color	⑦ Cord	X-Housing color	XX-Width of key
SM : 9/125	1~99m	S : SC	09 : 0.9	B : Blue	SP : Simplex	B : Blue(PC)	W : 2.09mm ~
MM : 50/125		F : FC	16 : 1.6	K : Black	DR : Duplex	G : Green(APC)	2.14mm
HMM : 62.5/125		T : ST	20 : 2.0	G : Green	Round	GR : Gray(MM)	N : 1.97mm ~
OM3 : 50/125		L : LC	24 : 2.4	Y : Yellow	DZ : Duplex	* Only SC,LC Type	2.02mm
		M : MU	30 : 3.0	R : Red	zipcord		* Only FC Type
		R : MT-RJ		W : White	Q : Quad		
		C : Receptacle type		O : option	zipcord		

Fiber Connecting Products

08 / ADAPTOR

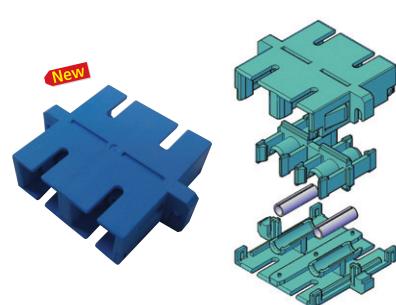


Features

- Comply with : JIS, IEC, Bellcore
- Precision sleeve (Zirconia & Bronze)
- Various type available
- Integrated body structure



LC-SC-H



New
Assembly SC DP

Specifications

Characteristics	Values
Structure	Satisfied Telcordia GR-326-CORE
Insertion Loss	≤0.2dB (against master connector)
Mating durability	≤0.2dB (500times)
Operating temperature stability	≤0.3dB (-40°C ~ +85 °C)

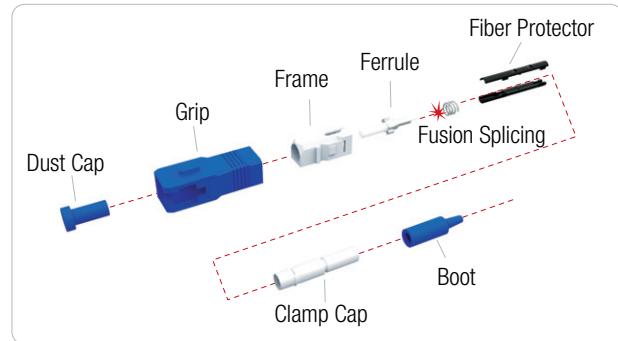
Ordering Information



① Mating Connector	② Sleeve	③ Color	X-Slot width
S1 : SC Simplex	L1 : LC Simplex	Z : Zirconia	W : 2.15mm ~ 2.20mm
SV : SC Duplex vertica	L2 : LC Duplex horizontal	B : Bronze	N : 2.03mm ~ 2.08mm
SH : SC Duplex horizontal	M1 : MU Simplex	O : option	* Only FC type
S4 : SC Quadplex	M2 : MU Duplex horizontal		
FR : FC Simplex round	MR : MT-RJ		
FQ : FC Simplex square	SS : SC to ST		
FF : FC Simplex flange	FS : FC to SC		
ST : ST Simplex			

Fiber Connecting Products

09 Splice Assembly Connector



Description

Fiber optic patch cords are the simplest elements in optical network but they have strong effect on the overall performance.

Despite of the strength, only manufacturers that have production facilities have been able to produce them. However, what if there is a type of connector that almost assembled, pre-polished, no adhesive required and only thing you need to do is splicing?

There will be no need for manufacturers to have production facilities, special equipments, skilled workers...etc. This is the idea that led NWC to design and develop SAC

It is mixture of the quality of fusion splicing and the easy of field installable connector.

Recommended tools for assembly

- Furukawa Electric FITEL S178 with customized fiber holders.
- NWC high precision Cleaver OFC-C1
- Frame-Stopper connecting tool

Specifications

Description	Value
Connector type	SC, LC, FC, ST
Applicable fibers	3mm, 2mm, 0.9mm
Polish type	APC, UPC
Joint loss	<0.4 dB
Return loss	>65 dB / APC >55 dB / UPC
Tensile strength	66.6N or more
Operating temperature	- 40°C ~ + 75°C

Features

- Easy Assembly
- High Optical Performance
- Low Price
- Lower manufacturing cost than that of conventional patch cord
- No adhesives, polishing are required
- Less effort to manage and plan for inventory and purchasing.
- No skilled workers required
- Permanent Termination
- Complete Connectorization in less than 3 Minutes



Frame-Stopper
connecting tool



Fiber holder

Ordering Information



① Type	② Fiber	③ Cable Type
SC	SM : 9/125 μ m	25 : 250 μ m
LC	MM : 50/125	09 : 0.9mm
FC	HMM : 62.5/125	24 : 2.4mm
ST		30 : 3.0mm

Fiber Connecting Products

10 MCP (Mode Conditioning Patch Cord & Adaptor)

Features

- Comply with : JIS C-5973, IEC, Bellcore
- Various connector and optical performance combinations

Applications

Apply for connecting between exist multi-mode (50/125,62.5/125) cable and Gigabit Ethernet 1000base Lx Router, Switch



Specifications

Characteristics	Values
Operating wavelength	1310nm
Fiber Type	SM (9/125) and MM (50/125,62.5/125)
Insertion Loss	≤ 0.2dB (against master connector)
Return Loss (End of SM)	SPC ≥ 40dB UPC ≥ 55dB APC ≥ 65dB
Optical offset	IEE802.5
Mating durability	≤ 0.2dB (500times)
Operating temperature stability	≤ 0.3dB (-40°C ~ +85°C)

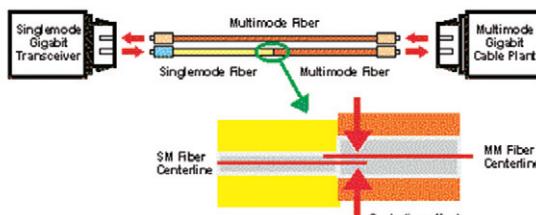
Benefits

A mode conditioning patch cord is a duplex multimode cord that has a small length of single mode fiber at the start of the transmission leg. The basic principle behind the cord is that you launch your laser into the small section of single mode fiber.

The other end of the single mode fiber is coupled to multimode section of the cable with the core offset from the center of the multimode fiber. The laser light thus misses the "dip" and this new launch condition more closely mimics a standard LED launch.

The bonus is that you still retain the speed advantages of using a laser.

Structure



1Gigabit Ethernet	50/125 μ m 500/500MHz-km	62.5/125 μ m 200/500MHz-km	62.5/125 μ m 160/500MHz-km
850nm-1000SX	550m	275m	220m
1310nm-1000LX (MCP)*	550m	550m	550m

Ordering Information

MCP ○○-○○-○/○-○/○-○○-○-○-X-XX

① ② ③ ④ ⑤ ⑥

① Fiber Type	② Length	③ Connector Type /End Shape	④ Cord Dia(mm)	⑤ Sleeve		⑥ Cord
SM : 9/125	1~20m	S : SC	09 : 0.9	B : Blue	R : Red	DZ : Duplex
MM : 50/125		F : FC	16 : 1.6	K : Black	W : White	zipcord
HMM : 62.5/125		T : ST	20 : 2.0	G : Green	O : option	
		L : LC	24 : 2.4	Y : Yellow		
		M : MU	30 : 3.0			
		R : MT-RJ				

Fiber Connecting Products

11/ QUICK ASSEMBLY CONNECTOR



SF-QAC



NS-QAC



S-QAC (FC)



NL-QAC



W-QAC



C-QAC

NWC Patented Quick Assembly Connector

can provide a quick and easy termination of fibers in the field. Both SC single mode and multi mode connector options are available for 900 micron and 3mm drop cable application allowing the installer to terminate and make connection in 3 minutes in the field.

This connector system doesn't need any requirement such as epoxy, adhesive and costly curing ovens. NWC Field installable SC connector features that installer can easily recognize the installation status by NWC termination tool.

Features

- Field installable, Cost effective, User friendly
- No epoxy and polishing required
- Quick and easy fiber termination in the field
- Visual indication of proper termination
- Reliable and superior optical performance

Specifications

Parameter		Specification
Connector Type		SC Type
Insertion Loss		(Max 0.5dB)
Reflection		Typical < -40 dB
Tensile Strength	900 μ m	5N
	3mm	30N
Connector Durability		< 0.2 dB (After 200 mating)
Operating Temperature		-40°C ~ +75°C

Ordering Information



① Type	② Connector	③ Fiber	④ Cable Type
NS	SC	SM : 9/125 μ m	25 : 250 μ m
W		MM : 50/125	09 : 0.9mm
NL		HMM : 62.5/125	24 : 2.4mm
SW			30 : 3.0mm
C			08 : Figure 8
SF			
S	FC		

12/ EXTENSION BOX

Cable Connection System using Quick Assembly Connectors

Specifications

Dimension	140L×24W×19H (mm)	
Material	PC (polycarbonate)	
Test Condition		
Rain Test	IP54	
	Assembly Product	
Tension Test	Load	5kg
	Period	Two Weeks



Features

- High performance water protection (bubble tight)
- High quality tensile strength
- Easy assembling & disassembling
- Perfect protection from foreign materials

Fiber Connecting Products

13/ DROP ASSEMBLY CONNECTOR

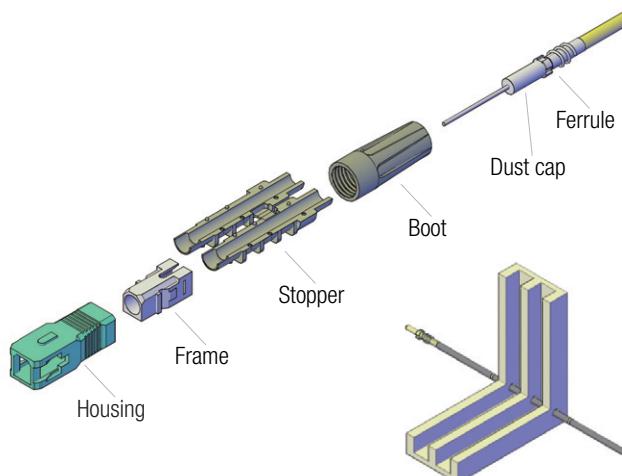


Features

- Only 4.5mm hole required
- Quick and easy assembly in the field
- High stable mating and de-mating characteristics
- Designed for variable cable
- Comply with : JIS C-5973, IEC, Bellcore

Specifications

Characteristics	Values
Structure	Satisfied Telcordia GR-326-CORE
Fiber Type	SM (9/125), MM (50/125, 62.5/125)
Insertion Loss	≤ 0.2dB (against master connector)
UPC	≥ 55dB
APC	≥ 65dB
Mating durability	≤ 0.2dB (500times)
Operating temperature stability	≤ 0.3dB (- 40°C ~ + 75°C)



Ordering Information

DAC



① Fiber Type	② Length	③ ④ Connector Type /End Shape	⑤ Cord Dia(mm)	⑥ Cord	X-Housing color
SM : 9/125	1~99m	S : SC	U : UPC	20 : 2.0	SP : Simplex
MM : 50/125			A : APC	30 : 3.0	B : Blue(PC)
HMM : 62.5/125					G : Green(APC)
OM3 : 50/125					GR : Gray(MM)

Cable Preparation Tools

14 STRIPPER



Specifications

APPLICABLE FIBERS

COATING MATERIAL	UV cured resin
Coating /	Drop Cable: Ø3mm / Ø250um / 125um
Cladding diameter	Flat Cable : Ø250um / Ø125um

Specifications

Stripping length (125um)	Type-1 : 18mm, Type-2 : 24mm
Dimensions	100L×30W×31H (mm)
Weight	70g

Ordering Information

NST



① TYPE

② STRIPPING LENGTH

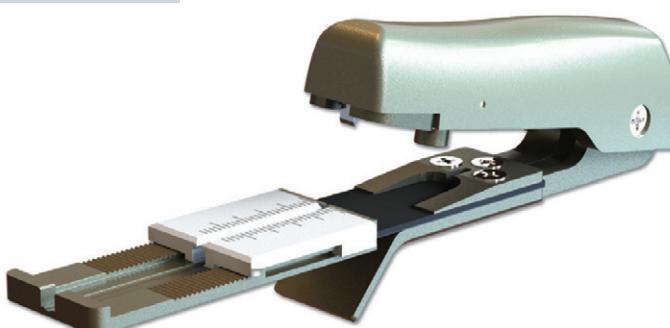
D C : Drop Cable

18

F C : Flat Cable

24

15 CLEAVER



Specifications

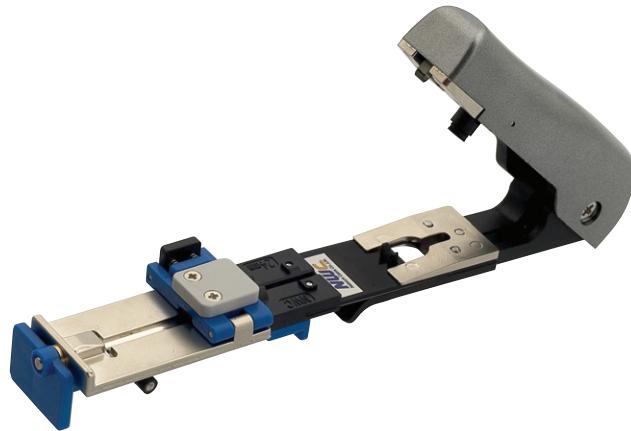
Parameter	Specifications	
Cable Type	Single core for 250 μ m/900 μ m/3mm/Figure eight	
Cladding Diameter	125 μ m	
Cleave Length	Single fiber: fixed length 10-18mm, 10-24mm adjustable/variable Figure eight fiber: fixed 10mm	
Dimensions (L×W×H), mm	Cleaver Slide (10-18) Slide (10-24)	140×23.5×40 28×26×4.2 31.4×26×4.2

Ordering Information

CLV-A01

Cable Preparation Tools

16 / OPTIC FIBER ANGLED CLEAVER



Product Profile

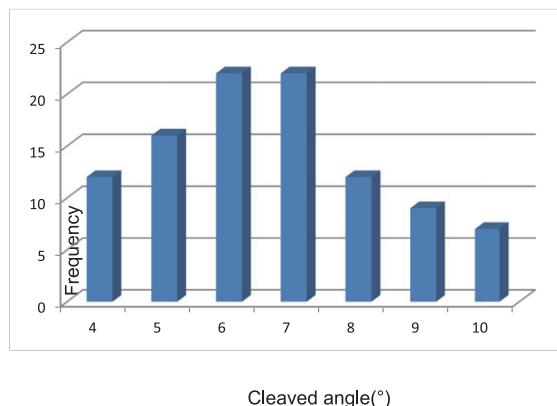
- Specially designed for minimizing return loss of APC QAC by cutting an angled optic fiber on lead cable.

Features

- Made of the diamond blade with high strength and stability
- Quick and easy to use in the field
- Light weight and portable
- Not required additional tool

Specifications

Cable types	Drop(3mm) , Flat(3mm × 2mm)
Cleaving angle	4° ~ 10°
Blade material	Diamond
Cleave Length	10mm(Ø0.125) - 18mm(Ø0.250) 10mm(Ø0.125) - 24mm(Ø0.250)
Dimensions	155L×66W ×29H (mm)
Weight	73g



Ordering Information

OFC-C1

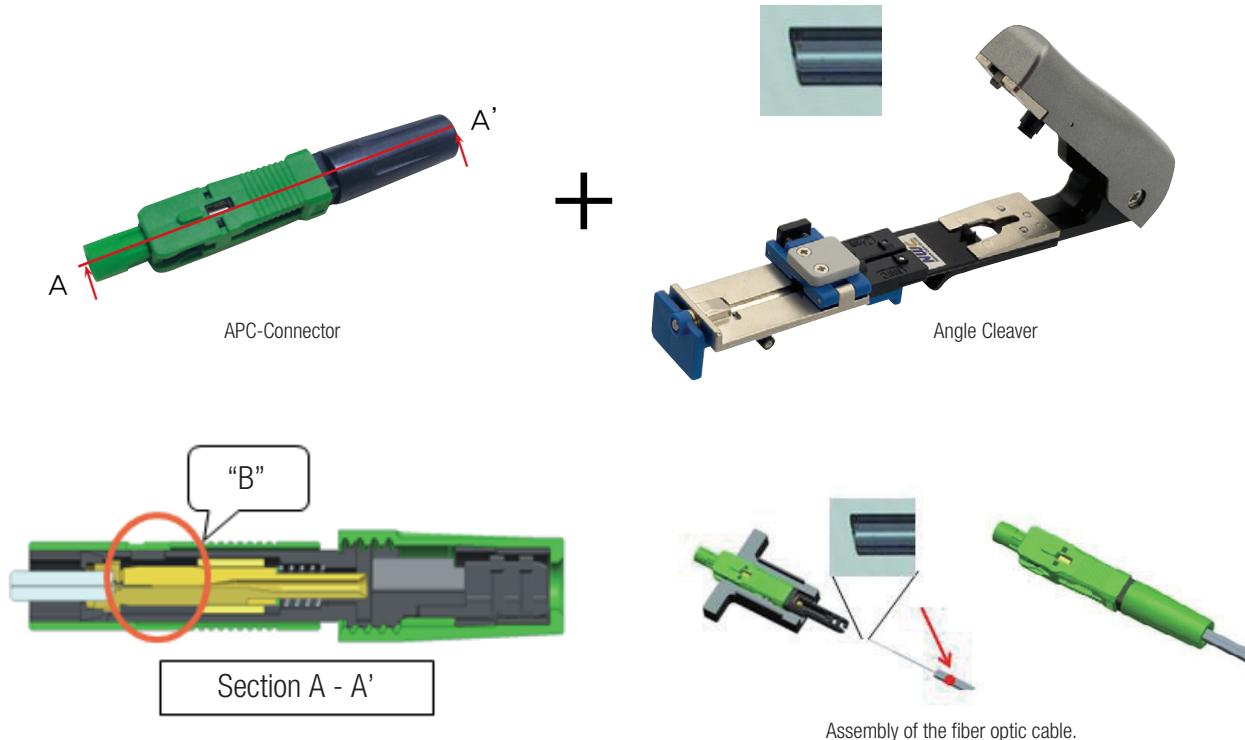
Cable Preparation Tools

17 / REAL APC

What is The Real APC Field installable Connector?

Cutting the surface with Angle of the Drop cable to minimize Return Loss of QAC.

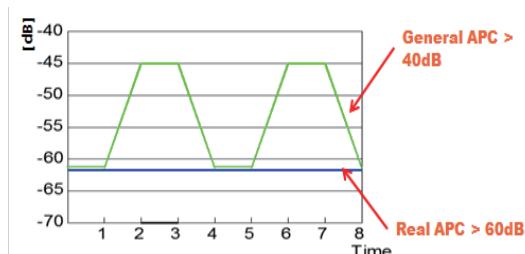
Temperature cycle -40°C ~ 75°C => **Return Loss < -60dB**



Superiority of Real APC

Real-APC "B"	Gerneral-APC "B"
<p>Field, Angle fiber into connector</p> <p>Angled fiber inside connector</p> <p>Index Matching Gel</p> <p>Return Loss < -60dB</p>	<p>Field, Flat fiber into connector</p> <p>Angled fiber inside connector</p> <p>Index Matching Gel</p> <p>Return Loss < -55dB</p>

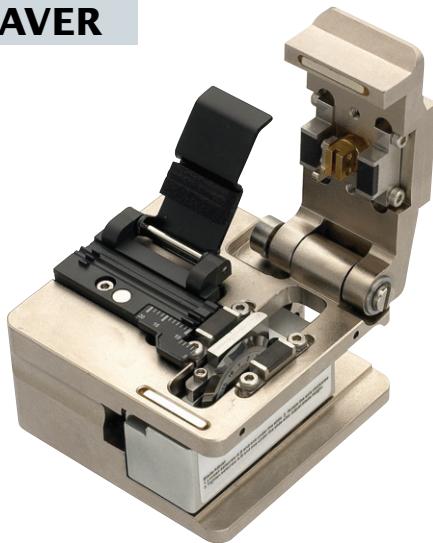
Return loss graph



Thermal cycle profile -40°C ~ 75°C

Cable Preparation Tools

18 / HIGH PRECISION CLEAVER



Product Profile

- High Precision Cleaver is a perfect tool for high precision fiber cutting.
- It is compact and light, making it ideal for both the 250 μm fiber and the 900 μm coated fiber.
- It is also suitable and easily adaptable for ribbon fiber cleaving (2-12 counts). selection.
- The blade provides over 48,000 cleaves by easy and simple blade position.

Features

- Smart design of pressure pads to prevent the fiber from being damaged by return of the blade carriage.
- Each point of the blade can be used over 3000 times and each blade has the 16 cutting points, providing over 48,000 cleaves.
- Made of Magnesium alloy materials with high strength and stability. Compact size and light weight.

Specifications

Fiber Type	Single core or for 2-12 ribbon fibers
Cladding Diameter	125 μm
Coating Diameter	Single fiber 250 μm /900 μm , Ribbon fiber (0.3-0.4mm)
Cleave Length	Single fiber: fixed length 10mm and 16mm, 3-20mm adjustable/variable Ribbon fiber: fixed 10mm
Cleave Angle	0.5°
Size	56W × 55D × 48H (mm)
Weight	265g
Life of Blade	48,000 fiber cleaves

Ordering Information

CLV-A01

Test Equipment

19 QOP™ (QAC™-Tester-OTDR-Power meter)

This QAC Tester as portable device is optimized for evaluating insertion loss and reflection loss of optical connectors or locating the failures of fiber links in the field



Features

- Ideally suited to QAC™ inspection
- Portable
- Easy to measure optical loss of QAC™ by plug and click
- Measure optical loss
- Display optical loss 0.01dB resolution
- Available PC type and APC type (2 models)
- Dust pollution alarm function

Specifications

LOSS-OTDR	
Wavelength	1310±20nm
Dynamic Range	24dB
Fiber Type	Single mode
Pulse Widths	10ns to 5us
Measuring Range	LOSS : 13m to 20km OTDR : 13m to 80km
Event dead zone	5m
Attenuation Dead Zone	10m
Optical Power Meter	
Calibrated Wavelengths	850, 1300 1310, 1490, 1550, 1625 nm
General Specification	
Size	210×120×54mm
Weight	500g
Operating Temperature	-10°C ~ +50°C
Storage Temperature	-20°C ~ +60°C
Power	Three AA

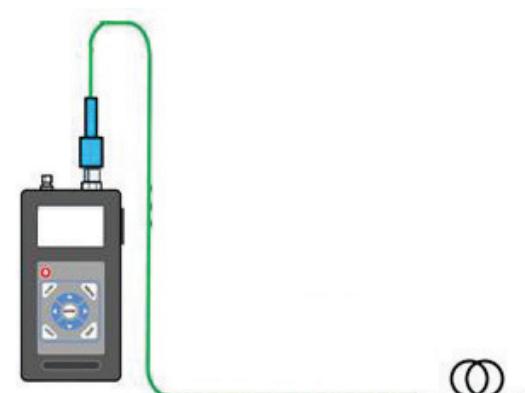


Fig. How to use the QOP

Ordering Information

QOP PC
QOP APC

Test Equipment

20 PON ONT SIGNAL TESTER Series



PST™ (Pon Signal Tester)



PST-CW™ (Pon Signal Tester With CWDM)

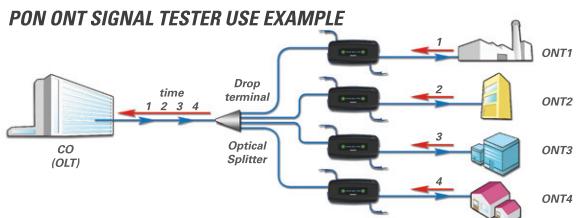
PST-WP™ (Pon Signal Tester With Power meter)

Features

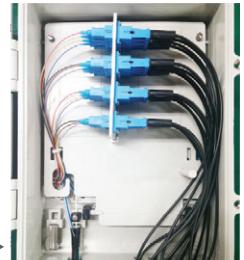
- Easy to check ONT in use at FTTH Drop Terminal Side.
- Check unused ports.
- Portability & Universal adapter applied.
- Dust protection with Silicone materials
- Support to recharge by USB port.

Specifications

	PST™	PST-WP™	PST-CW™
Adapter type		Universal Adapter	
Fiber type		Single-mode	
Calibrated Wavelength		1310nm (ONT) & 1490nm (OLT), Bi-directional	
PD Type	InGaAs Pin-PD		
Power meter	None	1310, 1490 & 1550nm	1310, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 & 1610nm
Display	2color LED	LCD w/LED backlight 2color LED (OLT & ONT Indicator)	
Battery type		Li-ion rechargeable	
Charging		Micro-USB power cable	
Size & Weight		54.5 × 107 × 25 mm & 100g	



◀ BEFORE



AFTER ▶

Ordering Information

PST

PST-WP

PST-CW

Test Equipment

21 SIGNAL CONNECTION TESTER



OCT™ (ONT Connection Tester)

Product Profile

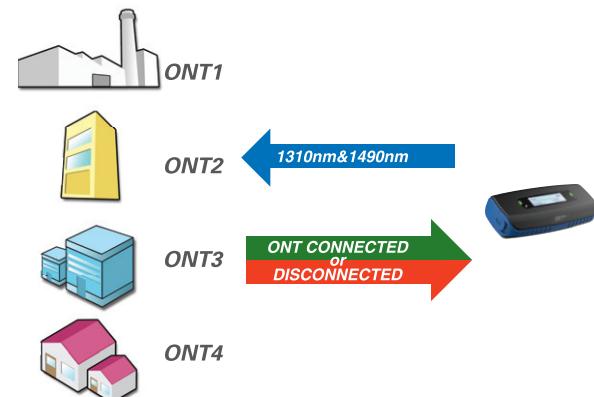
- Specially designed for distinguishing the signal connection status of ONT by own light Source of this device regardless of "On/Off" of the ONT power

Features

- Easy operation
- Dust protection with Silicone materials
- Portability
- Support to recharge by USB port.

Specifications

Adapter type	FC / PC (SC/PC Converting Code included)
Fiber type	Single-mode
Calibrated Wavelength	1310nm & 1490nm
PD Type	InGaAs Pin-PD
Display	LCD w/LED backlight 2color LED (ONT Indicator)
Battery type	Li-ion rechargeable
Charging	Micro-USB power cable
Size & Weight	54.5 × 107 × 25 mm & 100g

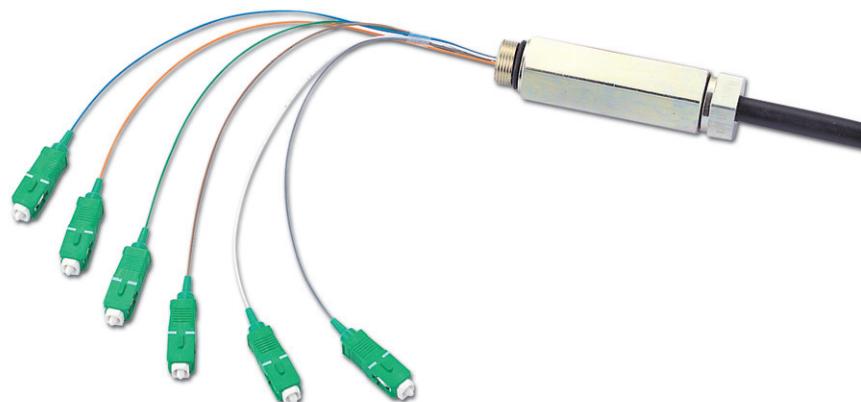


Ordering Information

OCT

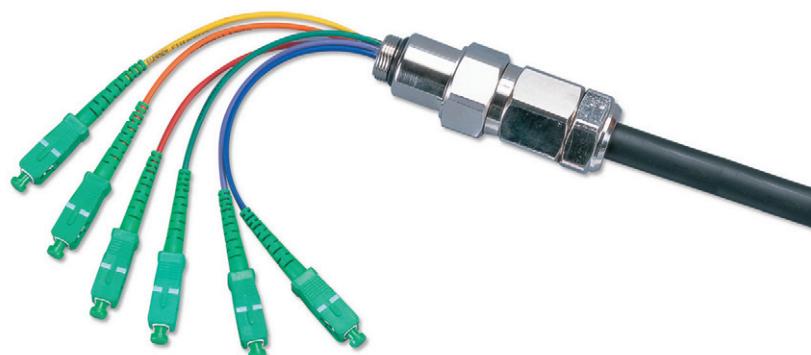
Fiber Optic Cable Assemblies

22/ ONU CABLE (Optical Network Unit)



Features

- Customized configurations.
- Installed hard-line entry connector
- Hinder water-migration
- Individualized serial numbering
- Two to Eight fibers available
- Durable and easy to handle



Specifications

Characteristics	Condition	Values
Insertion Loss		≤0.3dB
Return Loss	≥40dB(SPC), ≥55dB(UPC), ≥ 65dB(APC)	
Vibration	10~55Hz(2Hr)	< 0.3dB
Impact	1.5m drop, 8cycle	< 0.02dB
Straight Pull Test	4.5Kg load	< 0.2dB
Temperature cycling	- 40°C ~ + 75°C	< 0.3dB

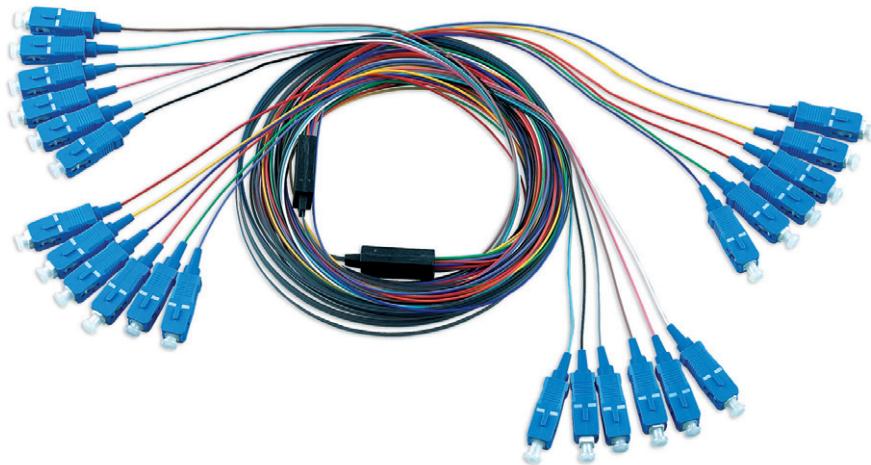
Ordering Information



① Connector Type /End Shape	② Pigtail Cord Length / Cord Dia	③ Cable Length	④ Fiber Count
S : SC	S : SPC	01 : 1m	Ex)
F : FC	U : UPC	02 : 2m	004 : 4fibers
T : ST	A : APC		
L : LC			
M : MU			

Fiber Optic Cable Assemblies

23 FAN-OUT PATCH CORD

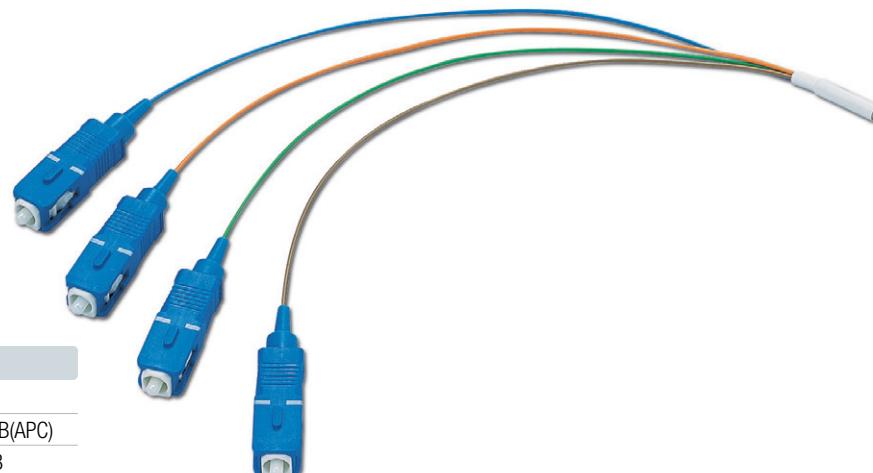


Features

- Easy to connect & distribute.
- Compact and coordinated design.
- High Performance in IL & RL

Applications

- Fiber block for DWDM
- Ribbon splitter(AWG)
- Telecommunication network with ribbon cable



Specifications

Characteristics	Condition	Values
Insertion Loss		$\leq 0.3\text{dB}$
Return Loss		$\geq 40\text{dB}(\text{SPC}), \geq 55\text{dB}(\text{UPC}), \geq 65\text{dB}(\text{APC})$
Vibration	10~55Hz(2Hr)	$< 0.3\text{dB}$
Impact	1.5m drop, 8cycle	$< 0.02\text{dB}$
Thermal Age	85°C(336hr)	$< 0.3\text{dB}$
Temperature cycling	-40°C ~ +75°C(336hr)	$< 0.3\text{dB}$

Ordering Information

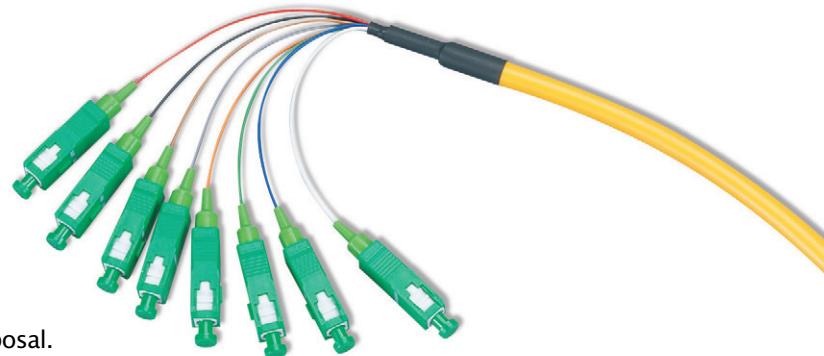
FOP



① Fiber Type	② Ribbon Length(m)	③ Fiber count(fibers)	④ Connection End Shape	⑤ Pigtail cord Length(m)	⑥ Cord Dia.(mm)
SM : 9/125	01 : 1	4:4	S : SC	S : SPC	010 : 1
MM : 50/125	99 : 99	8:8	F : FC	U : UPC	015 : 1.5
HMM : 62.5/125		12:12	T : ST L : LC M : MU	A : APC	020 : 2

Fiber Optic Cable Assemblies

24 / MULTI FIBER ASSEMBLED INDOOR CABLE



Features

- Optical performance 100% factory tested.
- Precision ceramic ferrule with end face geometry IEC proposal.
- Environmentally stable.



Specifications

Characteristics	Condition	Values
Insertion Loss		$\leq 0.3\text{dB}$
Return Loss		$\geq 40\text{dB}(\text{SPC}), \geq 55\text{dB}(\text{UPC}), \geq 65\text{dB}(\text{APC})$
Durability	500 matings	$< 0.3\text{dB}$
Temperature cycling	$-40^\circ\text{C} \sim +75^\circ\text{C}(336\text{hr})$	$< 0.3\text{dB}$

Ordering Information

MFAIC



① Fiber Type	② Fiber count(fibers)	③ Connector type		④ Cable Length(m)	⑤ Pigtails cord Length(m)	⑥ Cord Dia.(mm)
SM : 9/125	4	S : SC	S : SPC	01 : 1	010 : 1	09 : 0.9
MM : 50/125	6	F : FC	U : UPC	99 : 99	015 : 1.5	20 : 2.0
HMM : 62.5/125	8	T : ST	A : APC		020 : 2	24 : 2.4
RIBBON	12	L : LC				
	24	M : MU				

Fiber Optic Passive Devices

25 WDM (Wavelength Division Multiplexer)

Features

- Low excess loss and high performance
- High isolation
- Low polarization dependent loss
- Passed Telcordia GR-1221-CORE and 85C 85%RH test up to 1500hours



Applications

- Telecommunication Network
- Cable television networks
- Test equipment
- Fiber optic sensor



Specifications

Model	NWC01021		NWC01022		NWC01023				NWC01034
Configuration	1 × 2		1 × 2		1 × 2				1 × 3
Wavelength (nm)	980/1550		1480/1550		1310/1550				1310/1490/1550
Wavelength range	965~990/ 1527~1566				+/-5		+/-15		+/-5
Grade	P	S	P	S	Normal		HI-WDM		P
					P	S	P	S	
Ma. Insertion Loss (dB)	0.2	0.3	0.25	0.35	0.25	0.35	0.35	0.50	0.8
Min. Isolation (dB)	18	17	16	16	18	17	34	32	20
PDL(dB)	0.15	0.20	0.15	0.15	0.2		0.3		0.15
Return loss (dB)	$\geq 55\text{dB}(\text{UPC})$								
Operating temperature	- 20°C ~ + 75°C								

Ordering Information

WDM



① Configuration	② Wave length	③ Cable Dia.	④ Cord Length	⑤ Package	⑥ Connector Type / End Shape (A&B)
0102 : 1×2	1 : 980/1550	25 : 250	1 ~ 99m	C : Cylinder	S : SC
0103 : 1×3	2 : 1310/1550	09 : 0.9mm		A : Aluminum case	F : FC
	3 : 1480/1550	20 : 2.0mm			U : UPC
	4 : 1310/1490/1550	30 : 3.0mm			N : None
					A : APC

Fiber Optic Passive Devices

26 PLC SPLITTER



1x8 PLC Splitter



1x16 PLC Splitter

Description

NWC PLC splitter is key component in FTTH and is responsible to distribute optical signals from input port to multiple outputs port. NWC PLC splitter performs superbly across temperature and wavelength providing low insertion loss, low PDL, excellent uniformity and low return loss in configuration of 1x2, 1x4, 1x8, 1x16 and 1x32.

Features

- Low insertion loss, PDL, Return Loss
- 1x2, 1x4, 1x8, 1x16, 1x32 configurations available
- Stable optical performance
- Compact size
- Wideband operation 1260nm~1650nm
- Customized Packaging available

Specifications

Model	Unit	1x2	1x4	1x8	1x16	1x32
Insertion Loss	dB	≤4.1	≤7.8	≤10.8	≤14.0	≤17.3
Uniformity of I.L	dB	≤0.6	≤0.6	≤0.8	≤1.0	≤1.3
PDL	dB	≤0.2	≤0.2	≤0.2	≤0.3	≤0.3
Return Loss	dB			≥55		
Directivity	dB			≥55		
Operating Wavelength	nm			1260 ~ 1650		
Operating Temperature	°C			-40 ~ +85		
Dimension (HxWxL)	mm	40x4x4			50x7x4	
Dimension Including Branch part (HxWxL)	mm	40x4x4		50x7x4	60x12x4	80x20x6

* Without connector

* Premium grade splitter available upon request

* Networkcable reserves the right change any specification without prior notice.

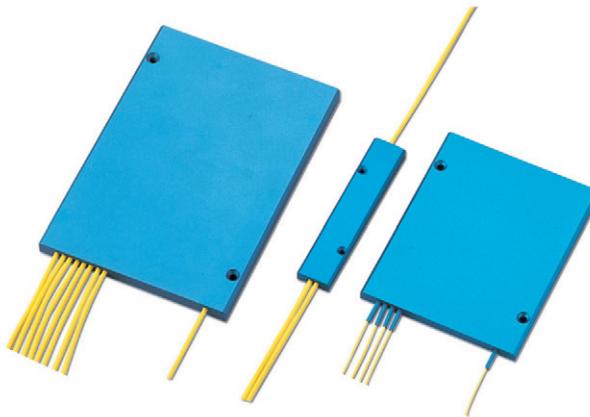
Ordering Information



① Configuration	② Fiber Type	③ Pigtail Length (Input part)	④ Ribbon/Breakout Length (Output part)	⑤ Connector Type
0102 : 1x2	1 : 250um	05 : 0.5meter	05/05 : 0.5meter/0.5meter	0 : None 5 : LC/UPC
0104 : 1x4	2 : 900mm	10 : 1meter	10/10 : 1meter/1meter	1 : SC/UPC 6 : LC/APC
0108 : 1x8	3 : Ribbon	20 : 2meter...	20/20 : 2meter/2meter	2 : SC/APC 7 : MU
0116 : 1x16				3 : FC/UPC
0132 : 1x32				4 : FC/APC

Fiber Optic Passive Devices

27 FBT COUPLER



Features

- Low excess loss and high performance
- PCB mountable
- Excellent uniformity
- Low polarization dependent loss
- Coupling ratio of 50:50 or customer ordered

Applications

- Telecommunication Network
- Cable television networks
- Test equipment
- Fiber optic sensor

Specifications

Standard Fiber Coupler 1x2

Wavelength (nm)	1310, 1550, 1310&1550							
Bandwidth (nm)	+/-20, +/-40							
Coupling ratio	50/50		40/60		20/80		10/90	
Grade	P	S	P	S	P	S	P	S
Max. Insertion loss (dB)	3.4	3.6	4.4/2.6	4.6/2.8	7.5/1.2	8.0/1.3	11.0/0.65	12.0/0.8
Max. Uniformity (dB)	0.5	0.7	/	/	/	/	/	/
Max. PDL (dB)	0.15	0.2	0.2	0.25	0.2	0.25	0.2	0.3
Return loss (dB)	$\geq 50\text{dB}$							
Operating temperature (°C)	- 20°C ~ + 75°C							

Standard Fiber monolithic coupler 1xN

Wavelength (nm)	1310, 1550 or on request			
Bandwidth (nm)	+/-20			
Con	1/3		1X4	
Grade	P	S	P	S
Max. Insertion loss (dB)	5.4	5.7	7.0	7.4
Max. Uniformity (dB)	0.8	1.2	1.2	1.5
Max. PDL (dB)	0.2	0.3	0.2	0.3
Return loss (dB)	$\geq 50\text{dB}$			
Operating temperature (°C)	- 20°C ~ + 75°C			

Ordering Information

FC



① Fiber Type	② Configuration	③ Wave Length	④ Coupling Ratio	⑤ Cord Dia(mm)	⑥ Cord Length	⑦ Package	⑧ Connector Type / End Shape	⑨ Grade	⑩ Bandwidth
SM : 9/125	0102 : 1x2	A : 1310nm	U : Uniform output	09 : 0.9	1~99mm	C : Cylinder	S:SC F:FC	S:SPC	P : Premium
MM : 50/125	0104 : 1x4	B : 1550nm	S : Specified by	30 : 3.0		A : Aluminum	T:ST L:LC	U:UPC	S : Standard
HMM : 62.5/125	0108 : 1x8	C: 1310nm & 1550nm	customer			case	M:MU N:None	A:APC	W: Wide

Fiber Optic Passive Devices

28 CWDM (Coarse Wavelength Division Multiplexer)

Features

- High isolation
- Low insertion loss
- Low polarization sensitivity
- Wide passband
- Excellent stability and reliability



Applications

- WDM systems for metro/access network
- Telecommunications
- Optical add/Drop multiplexing
- Network monitoring

Specifications

Parameter	Unit	Performance Specifications		Remark
Center Wavelength	nm	1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610		-
Insertion Loss	CWDM CH	dB	2.4 max	2.95 max
Isolation	Adjacent channel	dB	25.0 min	25.0 min (Demux Drop Only)
	Non-adjacent channel	dB	50.0 min	50.0 min (Demux Drop Only)
Return Loss		dB	45.0 min	45.0 min
Directivity		dB	60.0 min	60.0 min
PDL		dB	0.2 max	0.2 max
OperatingTemperature	°C	-5 ~ +65	-5 ~ +65	-
Storage Temperature	°C	-40 ~ +85	-40 ~ +85	-
Package Specifications				
Package size	mm		T.B.D	-
Fiber Length	m		T.B.D	-
Fiber Type			T.B.D	-
Connector Type			T.B.D	-

Ordering Information

CWDM		①	②	③	④	⑤	⑥
① Channel	② Mux						
04	MU : MUX			1 : 250um	S : SC		1 ~ 99m
08	DE : DEMUX			2 : 900um	F : FC		
				L : LC	U : UPC		
				M : MU			
				N : None	A : APC		

Fiber Optic Passive Devices

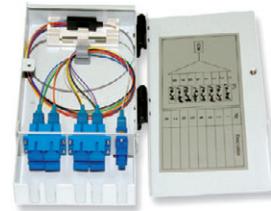
29 PLC SPLITTER OFD & MODULE



Splitter OFD



Splitter Module(Slot type)



Splitter Module(Wall type)

Description

NWC PLC splitter OFD and Module can provide connections between the distribution cable and subscriber's cable with PLC splitter. The OFD can accommodate 1×8 , 1×16 , 1×32 PLC splitter in 1U rack mount module and the PLC splitter module is available in 1×4 , 1×8 . The moderate design provide simple installation, reasonable price, high quality and reliability. All PLC splitter OFD and Module are tested prior to shipment to meet optical performance.

Features

- $1 \times 4 / 8 / 16 / 32$ Configurations with SC / LC connectors (Other connector Options)
- Easy to install in existing infrastructure
- Wideband operation 1260nm~1650nm
- 19" Rack mountable
- Low insertion loss

Specifications

Model	Unit	1X4	1X8	1X16	1X32
Maximum Insertion Loss	dB	7.5	11.0	14.5	17.4
Typical Insertion Loss	dB	7.3	10.8	14.2	17.0
Uniformity	dB	≤ 0.8	≤ 1.0	≤ 1.5	≤ 1.5
Operating Wavelength	nm		1260 ~ 1650nm		
Maximum	dB	0.1	0.2	0.3	0.3
Return Loss	dB		≥ 55		
Directivity	dB		≥ 55		
Operating Temperature	°C		-40 ~ +85		

Type	Splitter Shelf	Splitter Module (Slot)	Splitter Module (Wall)
Dimension(W×D×H)	480×310×44.4mm	72×79×25mm	110×200×36mm
Fiber Type		G652D	
Connector Type		SC/APC Standard (Other connector Options)	

Ordering Information



① Type	② Output Port	④ Connector Type / End Shape		
OFD	0104 : 1×4	S : SC	L : LC	
SLOT	0108 : 1×8	F : FC	M : MU	
WALL	0116 : 1×16	T : ST		
	0132 : 1×32			

Fiber Optic Splice Closures

30 IN-LINE CLOSURE



Features

- Closure provides perfect solution for the protection of the junction point of optical fiber cable from environment.
- Silicone gasket is used to seal closure and provide a long term reliability.
- Closures have two or three cable entrance ports on each end.
- Closures can be installed at temperatures between -40~176°F (-40°C ~ 80°C)
- Closures are compact and lightweight.
- Its installation is very easy due to applied minimum bolts.

Structure, Dimension and Weight

Model	Ports	In-Let Cable Size (mm)	Dimensions (L×W×H), mm	Weight with box
FOC-SS	3-3 ports	Min. Ø8 ~ max. Ø19	355×195×128	3.9 kg
FOC-S	2-2 ports	Min. Ø8 ~ max. Ø29		
	2-3 ports	Min. Ø8 ~ max. Ø29		
	3-3 ports	Min. Ø8 ~ max. Ø24		
FOC-M	2-2 ports	Min. Ø8 ~ max. Ø29	454×187×130	5.0 kg
	2-3 ports	Min. Ø8 ~ max. Ø29		
	3-3 ports	Min. Ø8 ~ max. Ø24		
FOC-C	3-3 ports	Min. Ø3.5 ~ Max. Ø16	324×198×130	1.8 kg
FOC-A	4-4 ports	Ø3.5 Only	200×178×79	0.95 kg
FOC-L	3-3 ports	Min. Ø8.0 ~ Max. Ø24	510×240×141	6.0 kg
FOC-R	3-3 ports	Min. Ø8.0 ~ Max. Ø32	597×296×213	9.5 kg

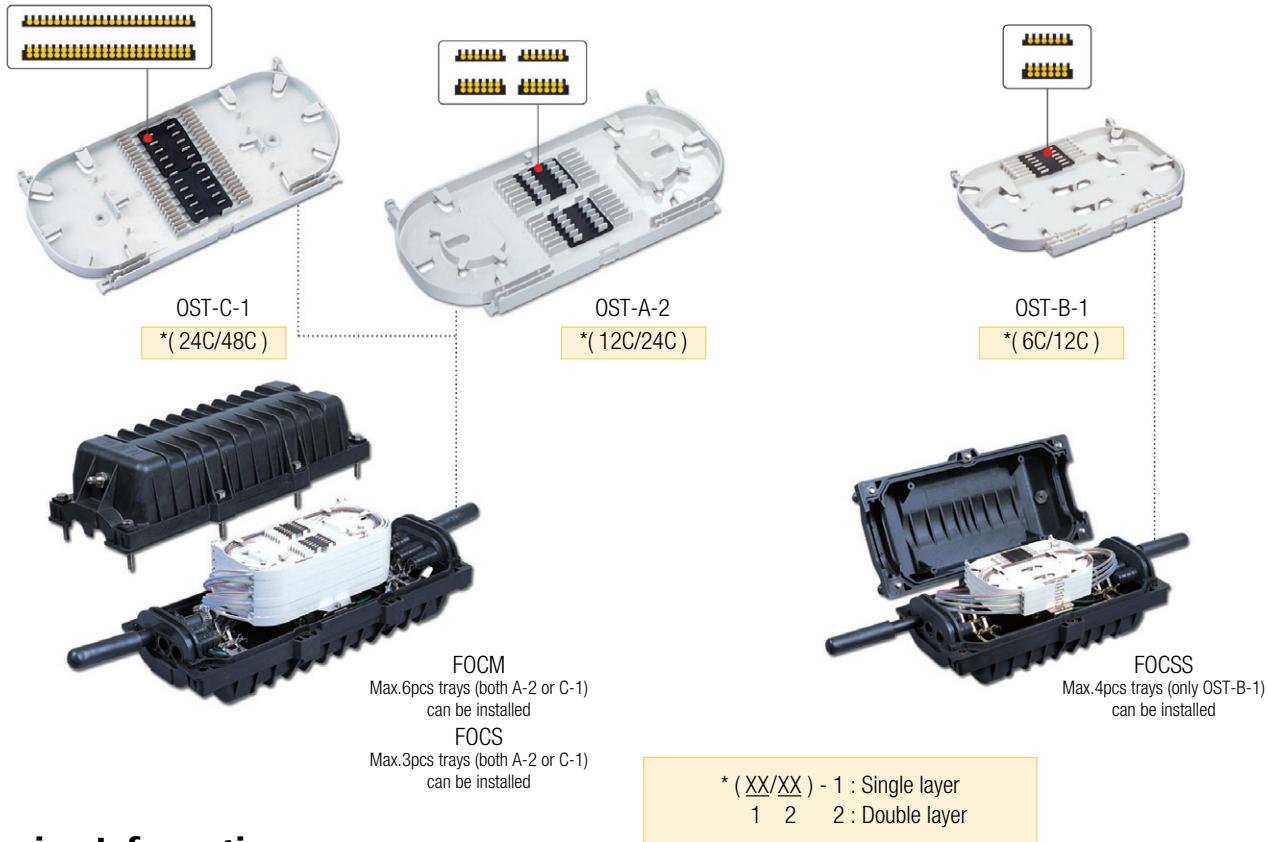
Capacity

Items	Max. Capacity			
	Single Core	2-Core Ribbon	4-Core Ribbon	8-Core Ribbon
FOC-SS	48 core	48 core	80 core	128 core
FOC-S	72 core	72 core	144 core	192 core
FOC-M	144 core	144 core	288 core	384 core
FOC-C	96 core	96 core		
FOC-A	32 core	32 core		
FOC-L	288 core	288 core		
FOC-R	288 core	288 core	288 core	576 core

Applications

- Telecommunication Networks
- CATV Networks
- Local Area Networks
- Underground, Aerial, Buried
- Vault and Building environments

Fiber Optic Splice Closures



Ordering Information

FOC



Option 1 - SB : Support Bracket for aerial & duct application

N : None

Tray type: A : 12/24 core for FOCS & FOCM only

B : 6 /12core for FOCSS type only

C : 24/48 core for FOCS & FOCM only

F: 12/48core for FOCS & FOCM

12U: 12/24 core for FOCC Type Only

8U: 8/16 core for FOCA Type Only

H48: 24/48 core for FOCL Type Only

R: 24/48 core for FOCR Type Only

Number of Optical Fibers : 12 : 12 fiber

Note : 1 upto 288 fibers available

The entrance port type- 1 : 2-2Ports 2: 2-3Ports 3 : 3-3Ports

Note : 2 Port - Max. Cable Dia : 29mm

3 Port - Max. Cable Dia : 24mm, others:19mm

3 Port - Max. Cable Dia : 19mm for only FOCSS use

In case of using A type tray except FOCSS
Model- M : Loose tube Cable (1~Max.144Core)
S : Loose tube Cable (1~Max.72Core)

In case of using C type tray except FOCSS
M : Loose tube Cable (1~Max.288 Core)
S : Loose tube Cable (1~Max.144 Core)

C: Loose tube Cable (1~Max. 96Core)
A: Loose tube Cable (1~Max. 32Core)
L: Loose tube Cable (1~Max. 288Core)
R: Loose tube Cable (1~Max. 576Core)

SS : Loose tube Cable (1~Max.48Core)

Optical Fiber Closure

EX) FOC-M-3-48-A-N : Optical fiber closure, Medium type, 3 : 3port,48 core, A type tray, None support bracket.

Fiber Optic Splice Closures

31 SPLICE TRAY



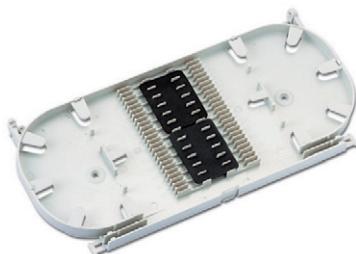
OST-A-2

Dimensions (mm) : 225 (L) × 108 (W) × 12 (H)



OST-B-1

Dimensions (mm) : 168 (L) × 119 (W) × 9 (H)



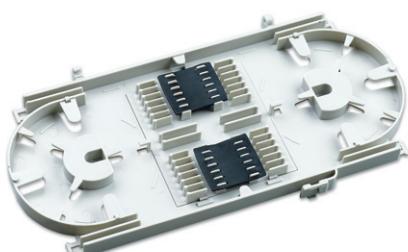
OST-C-1

Dimensions (mm) : 246 (L) × 112.5 (W) × 12 (H)



OST-D-1

Dimension(mm):227(L) × 98.5(W) × 12(H)



OST-F-1

Dimension(mm):245(L) × 112(W) × 12(H)

Features

- Compact yet spacious
- Multi-entry points
- Loose tube, ribbon fiber and mechanical splice are applicable
- Easy to install the cable

Capacity

Items	Max. Capacity			
	Single Core	2-Core Ribbon	4-Core Ribbon	8-Core Ribbon
OST-A-2	24 core	24 core	48	96
OST-B-1	12 core	12 core	24	48
OST-C-1	48 core	48 core	96	192
OST-D-1	24 core	24 core	96	96
OST-F-1	24 core	24 core	48	96

Ordering Information

OST



① Tray Type

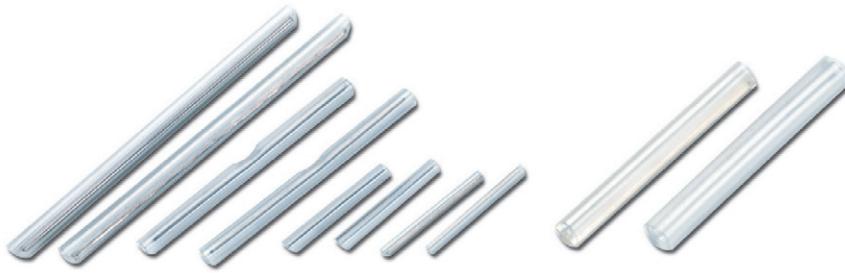
- A : 24core
B : 12core
C : 48core
D : 24core

② Holder

- 1 : Including Rubber holder
2 : Excluding Rubber holder

Fiber Optic Splice Closures

32 HEAT SHRINKABLE SLEEVE



Specifications

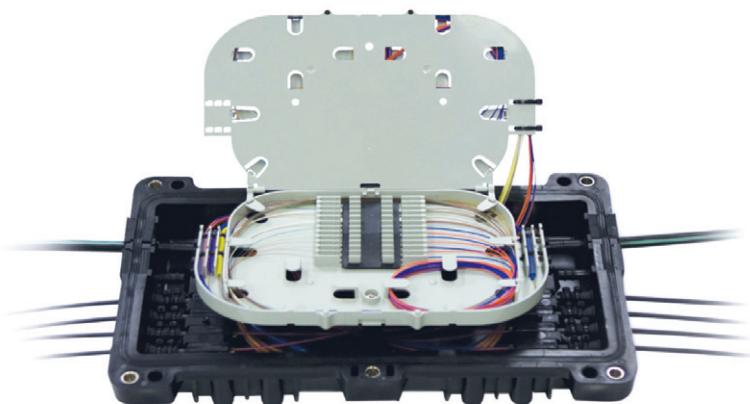
Shrinking Temperature (°C)	90 ~120
Radial Shrinking Rate(%)	>50
Axial Shrinking Rate(%)	<3
Low Temperature Property	No Crack at -55°C lasting 4 hours
Operation Temperature (°C)	-40 ~ +65
Operation Humidity	≤90%
Spark-over-Strength (kV/mm)	≥20
Tensile Strength (Mpa)	20
Loss at -40°C	0.01dB
-40≤Loss at +60°C , RH95%	0.01dB

Ordering Information

HST	①	②	③
① Type	② Length(mm)	③	
10 : Strength Member Dia 1.0mm	Ex) 60mm		
15 : Strength Member Dia 1.5mm	40mm		
R4 : 4-Ribbon Fiber	30mm		
R8 : 8 or 12 Ribbon Fiber	15mm		
M : Micro sleeve			

Fiber Optic Splice Closures

33 RN FIBER OPTIC CLOSURE FOR FTTH



Description

NWC RN Fiber Optic Closure is designed to be comprised of PLC splitters allowing optical power to be split into 16 channels.

The easy-to-sure gasket sealing system further simplifies the installation process and provides superior protection from the external environments. The unit can support up to 8 drop cables in FTTH applications and shall be served with all of the mechanical requirement such as waterproof, impact resistance and securing feeder and drop cables. Included two optical splice trays shall be used for PLC splitter installations and drop cable splicing.

Features

- Can accommodate up to 1×16 PLC splitter on one splice tray
- Up to 8 FTTH drop cables
- Special drop grommet for cable
- compact size, light-weight
- High impact resistant and UV resistant thermoplastic for long life
- Hinged tray structure
- Bending radius: 15mm for RN Tray(1×4,1×8,1×16 splitter available)
- Easy to assemble

Specifications

ITEM	VALUE
Dimensions(mm)	293L×183W×93H
Weight	1.6Kg
Cable input capacity & Cable size(mm)	Max 4 ports(2port for Ø3.5, 2port for Ø8)
Cable output capacity & Cable size(mm)	Max 8 ports(Ø3.5)
Max Splice capacity	32core
Operation Temperature	(-40°C~+85°C)

Capacity

1 Fiber Drop Cable	2Fiber Drop Cable	3Fiber Drop Cable	4Fiber Drop Cable
8 core	16core	24core	32core

Fiber Optic Splice Closures

34 DOME CLOSURE



FOC-GPJ-8022



FOC-GPJ-L

Features

- One-Touch Clamp for easy installation
- 100% Water proof by Heat shrinkable Tube
- Applied to Aerial, Duct, Pole and Direct buried

Structure, Dimension and Weight

Model	Max. Capacity	Tray No.	Ports	Size (mm)	Applied cable size
FOC-GPJ-8022-1	48C	Max 4pcs	4 (Main:1 / Sub:3)	435×Ø190	Sub inlets : Ø8 ~ Ø16 Main inlet: max. Ø25
FOC-GPJ-8022-2	72C	Max 3pcs	4 (Main:1 / Sub:3)	435×Ø190	Sub inlets : Ø8 ~ Ø16 Main inlet: max. Ø25
FOC-GPJ-1	120C	Max 10pcs	7 (Main:1 / Sub:6)	455×Ø220	Sub inlets : Ø8 ~ Ø20 Main inlet: max. Ø35
FOC-GPJ-2	240C	Max 10pcs	7 (Main:1 / Sub:6)	455×Ø220	Sub inlets : Ø8 ~ Ø20 Main inlet: max. Ø35
FOC-GPJ-8027-1	168C	Max 14pcs	7 (Main:1 / Sub:6)	550×Ø255	Sub inlets : Ø8 ~ Ø25 Main inlet: max. Ø40
FOC-GPJ-8027-3	576C	Max 8pcs	7 (Main:1 / Sub:6)	550×Ø255	Sub inlets : Ø8 ~ Ø25 Main inlet: max. Ø40
FOC-GPJ-8027-4	336C	Max 7pcs	7 (Main:1 / Sub:6)	550×Ø255	Sub inlets : Ø8 ~ Ø25 Main inlet: max. Ø40

Ordering Information

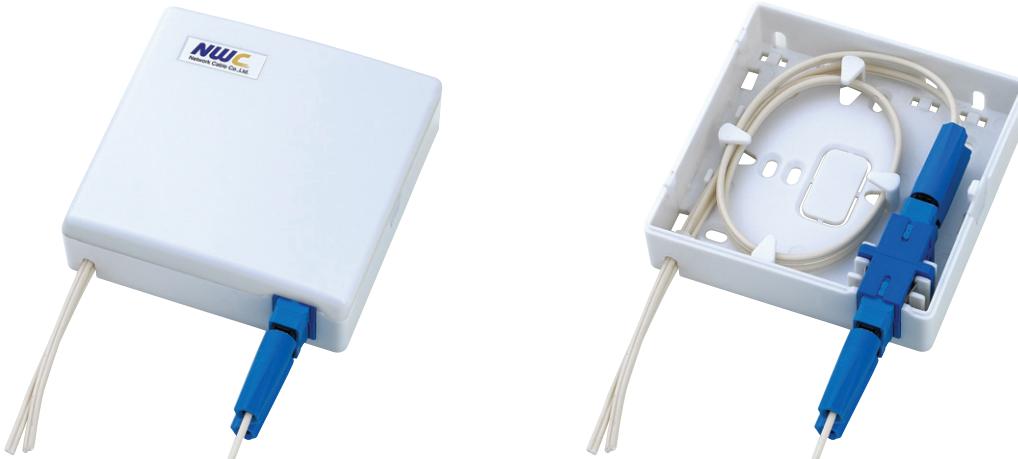
FOC-GPJ



① Type	② Fiber Count
8022	1C~576C
L	
8027	

Fiber Optic Distribution Systems

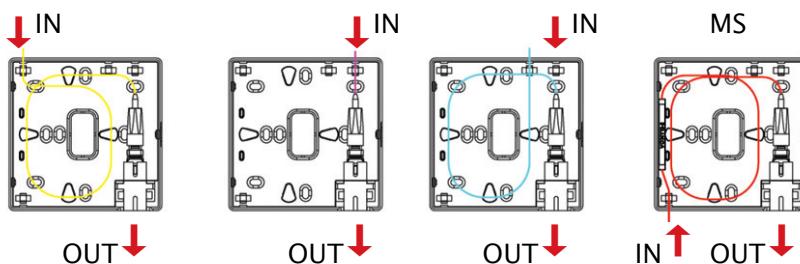
35 / OUTLET



Features

- Suitable bending radius.
- Protect optical fiber.
- Compatible with SC adapter and connector.
- Snap on cover.
- Simple and easy to use.

Directions for cable input



Specifications

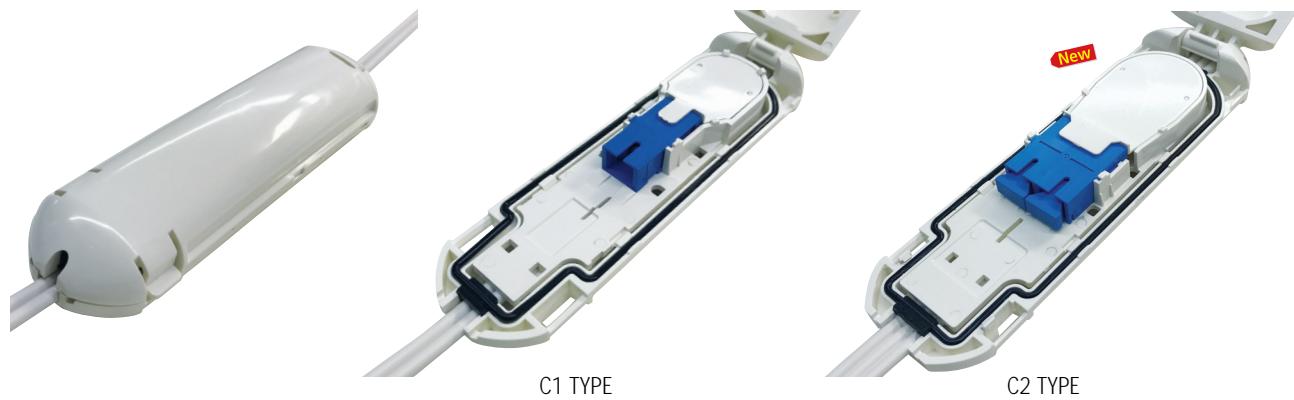
Items	value
Connection Type	SC Connector, F/S, M/S
install location	Indoor
application	SC × 1, SC × 2
Dimensions(mm)	86L × 86W × 30H
Weight	80g

Ordering Information

OLT-A10

Fiber Optic Distribution Systems

36 | MULTI DWELLING UNIT TERMINATION BOX AND CABLE



Description

MDU-TB&C is Termination Box with pre-installed Cable according to the field requirement which allowing much easier operation.

MDU-TB&C is designed to fit vary circumstance, regardless building size and structure including Multi Dwelling Unit, Large building, Row houses and others.

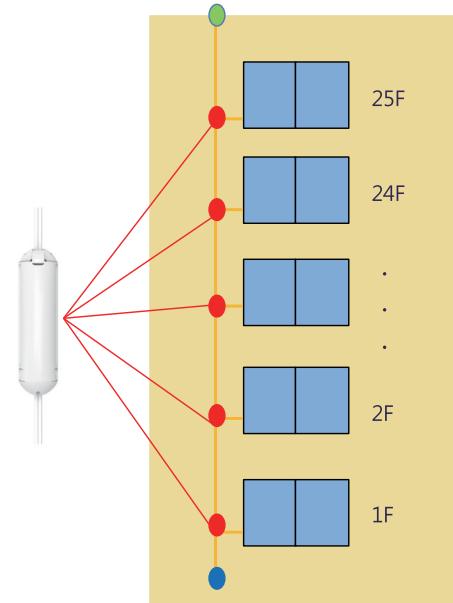
The IP44 design and UV protection material offer utilizing on exterior installation of a building.

Features

- IP, UV protection
 - High tensile force
 - Easy to connect & installation
 - Compact and streamlined shape

Specifications

Characteristics	C1	C2
Dimensions(mm)	136L × 36W × 26H	152L × 45W × 27H
Material	PC(polycarbonate)	PC(polycarbonate)
Rain Test	IP 44	IP 44
Operation Temperature	- 40°C ~ + 60°C	- 40°C ~ + 60°C
Max. capacity	25Core	50Core
Cable material	LSZH	LSZH
Cable tensile	100kg	100kg



Ordering Information

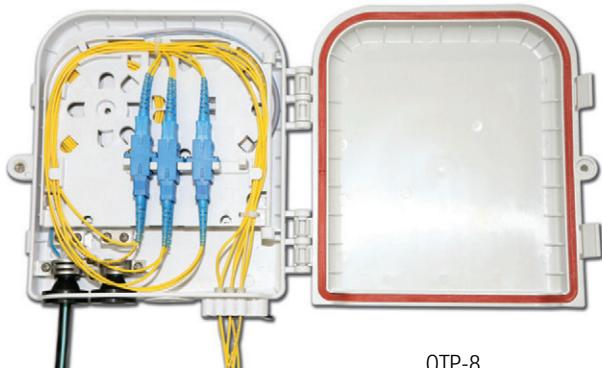
MDU-TBC C1

MDU-TBC C2

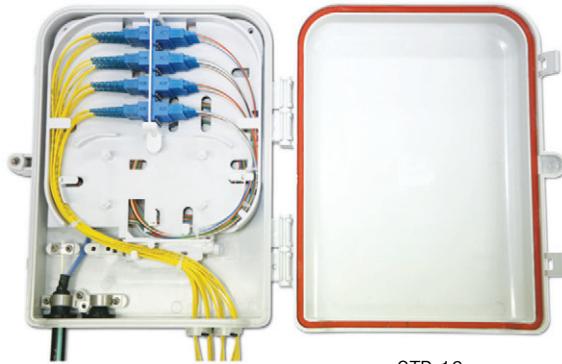
Made to order for the cable length and type

Fiber Optic Distribution Systems

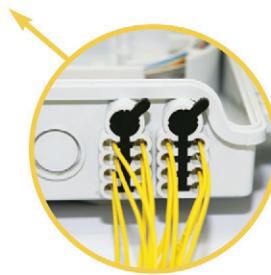
37 TERMINATION PANEL 1 (Outdoor Wall Mount)



OTP-8



OTP-16



Specifications

ITEM	OTP-8	OTP-16
Dimensions(mm)	181L × 207W × 45H	225L × 302W × 71H
Weight	0.9Kg	1.3Kg
Cable input capacity	Max 2ports (Max. dia:12mm)	Max 2ports (Max. dia:12mm)
Cable output capacity	Max 8 Ports (Max. dia:3mm)	Max 16 Ports (Max. dia:3mm)
Max. capacity	8core	16core
Operation Temperature	-40°C ~ +85°C	-40°C ~ +85°C
Tensile Strength	≥450Kg/cm ²	≥450Kg/cm ²
Impact Strength	35Kg cm /cm (nomar temp.), 10Kg cm /cm (-30°C)	35Kg cm /cm (nomar temp.), 10Kg cm /cm (-30°C)
Flexural Strength	≥450Kg/cm ²	≥450Kg/cm ²

Ordering Information

OTP



① Fiber count

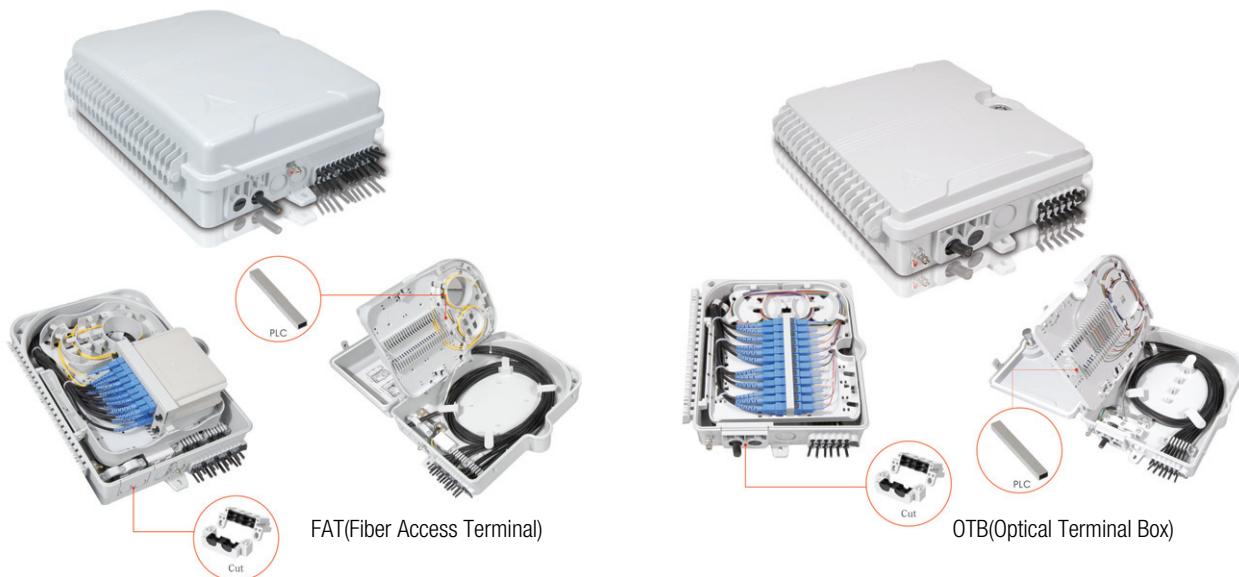
1C ~ 16C

② Adaptor type

SC

Fiber Optic Distribution Systems

38 TERMINATION PANEL 2 (Outdoor Wall Mount)



Features

- Compact size
- Locking available on front panel.
- Bottom cable entry.
- Sealed for moisture and dust resistance.
- Accommodates standard NWC connector and adapter types.
- Compact interconnect and splice housing for up to 16 optical fibers.

Applications

- Telecommunication Network
- CATV Network
- Data communication Network
- Instrumentation
- Local Area Network

Dimension Specifications

Items	Dimensions (W×L×H)	Max. Capabilities	Remark
FAT	240×320×100 mm	16 Ports & Splice	Wall & Pole Type

Dimension Specifications

Items	Dimensions (W×L×H)	Max. Capabilities	Remark
OTB	200×225×65 mm	12 Ports & Splice	Wall & Pole Type

Ordering Information

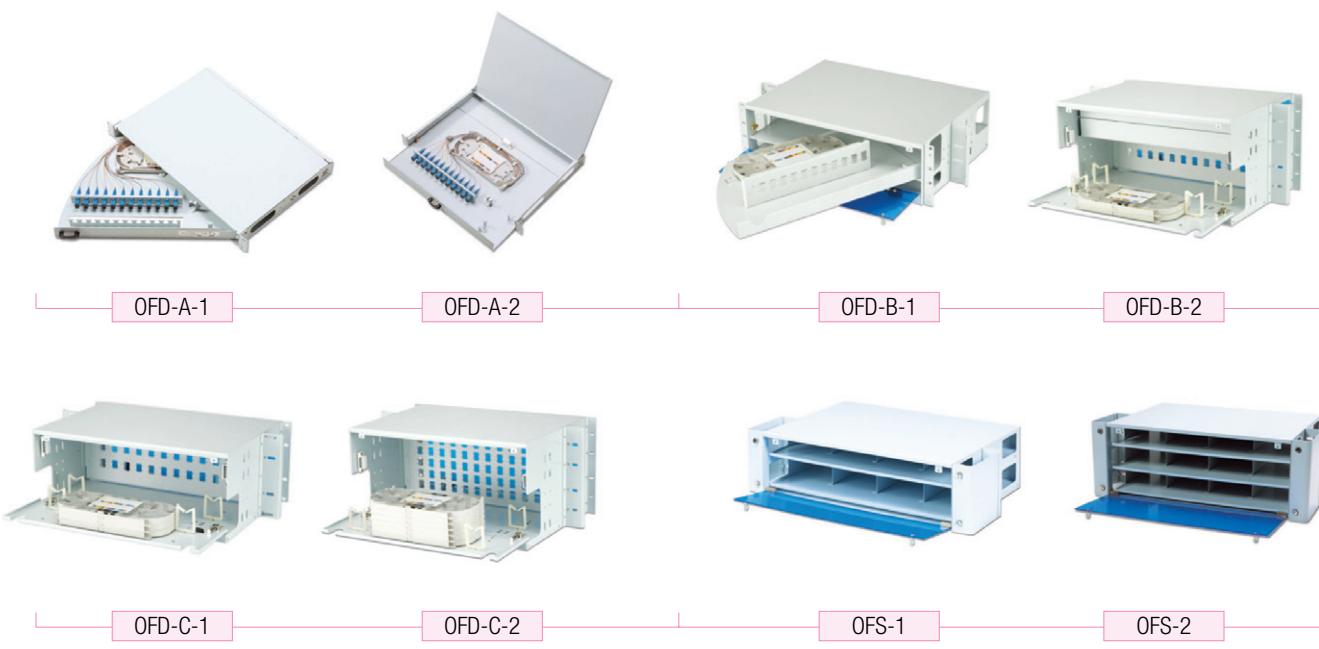
FAT		○○—○○
		① ②
① Fiber count	② Adaptor type	
1 ~ 16C	SC	

Ordering Information

OTB		○○—○○
		① ②
① Fiber count	② Adaptor type	
1 ~ 12C	SC	

Fiber Optic Distribution Systems

39 PATCH PANEL SERIES (Rack Mount)



Specifications

Items	Model	Capacity	Dimensions(W×L×H)mm	Remarks
OFD-Rack	OFD-A-1	12C(24C)	483×310×44.4	With Storage Box
	OFD-A-2	12C(24C)	483×310×44.4	
	OFD-B-1	24C	480×310×132.5	
	OFD-B-2	48C	480×310×222	
	OFD-C-1	72C	480×310×178	Without Storage Box
	OFD-C-2	144C	480×310×222	
	OFS-1	72C	480×310×132.5	Storage Box
	OFS-2	144C	480×310×178	
OFD-D	OFD-D	32C	480×310×44.4	With Storage Box

Ordering Information

OFD ○—○—X

① ②

① Type 1	② Type 2	Adaptor type
A	1	S1 : SC Simplex
B	2	L1 : LC Simplex
C		SV : SC Duplex vertical
D		L2 : LC Duplex horizontal
		SH : SC Duplex
		FR : FC Simplex round
		MR : MT-RJ
		ST : ST Simplex



Fiber Optic Distribution Systems

40 RIBBON FIBER MANAGEMENT SYSTEM



Features

- Fiber termination/Connection ports option.
- Optical Splice Capability.
- Compact Design.
- Compatible with most Cable Management System.

Specifications

Items	Model	Dimensions(W×L×H)mm	Remarks
RFMS FDF-Rack (Drawer type)	FDF-D-144C	486×310×177	Sliding and access to back for easy installation Applicable for Ribbon Fiber Cable
	FDF-D-288C	486×310×222	
	FDF-D-320C	486×310×222	
	FDF-D-432C	486×310×312	

Ordering Information

RFMS



① ②

① Type

② Core count

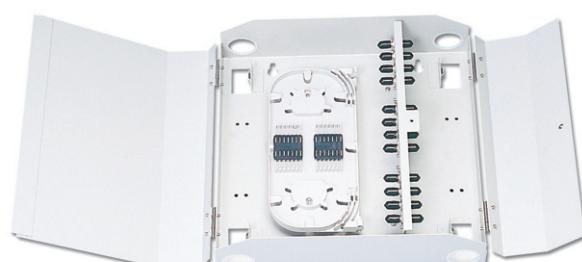
D : Drawer type

144 ~ 432

41 PATCH PANEL (Rack / Wall Mount)



FDF-Rack Type



FDF-Wall-Type

Specifications

Items	Model	Dimensions(W×L×H)mm	Remarks
FDF-Rack / Wall	FDF-FR-12C	483×320×44.4	Rack mount
	FDF-FR-24C	483×320×44.4	
	FDF-FW-12C	315×310×82	Wall mount
	FDF-FW-24C	315×310×82	
	FDF-FW-48C	315×380×110	

Ordering Information

FDF



① ②

① Type

② Core count

FR : Fixed Rack

12 ~ 48

FW : Fixed Wall

Fiber Optic Distribution Systems

42 RACK



Specifications

Items	Dimensions (W×L×H)mm	Unit (U)	Remarks
OPEN RACK	550×350×1400	28U	Small Office Distributor
	550×350×1800	37U	
	550×350×2200	46U	
CABINET RACK (MULTI RACK)	600×600×500	8U	Small Office Distributor
	600×600×750	14U	
	600×750×1000	18U	
	600×750×1200	22U	
	600×750×1800	36U	
	600×750×2200	45U	
IDC-SEVER RACK	600×750×2750	56U	Compatible with most Cable Management System. - 19" or 23" User define
	600×900×1800	36U	
	600×900×2000	40U	
	600×900×2200	45U	
MINI RACK	590×500×700	14U	Compatible with most Cable Management System. - 19" or 23" User define
	590×500×600	10U	
	590×500×500	8U	
	550×450×300	5U	

Features

- Provides greater flexibility for a variety of application.
- High density solution.
- Compact Design.
- Compatible with most Cable Management System.
- 19" or 23" User define

Ordering Information

RACK



① Items	② Width	③ Depth	④ Height	⑤ Unit
OPEN	19"	350	500	5
CABINET	23"	600	750	8
IDC		750	1800
MINI		others	others	56

Fiber Optic Distribution Systems

Standard Accessories

No	Item	Material	Q'ty (pcs)	Remark
1	Body Frame	Aluminum	4	
2	Top cover	Steel	1	
3	Top& Rear Frame	Aluminum		
4	Fan		2	
5	Mount bar	Aluminum	4	
6	Front door	5.0T Reinforced Glass	1	Key included
7	Rear door	Steel	1	Pushdown button
8	Power	15A,220v	1	10~14ways
9	Self	D400mm	1	
10	Caster		4	Lock/ Unlocking
11	Foot		4	
12	Rear Cable Bracket		2~3	
13	Cable duct		2~3	
14	Bolt		50~70	M5*L9
15	Key		2	

Detail Photos



Fan(2fan)



Power Strip(10Ways)



Side door (Slide latch type)



Caster, Foot

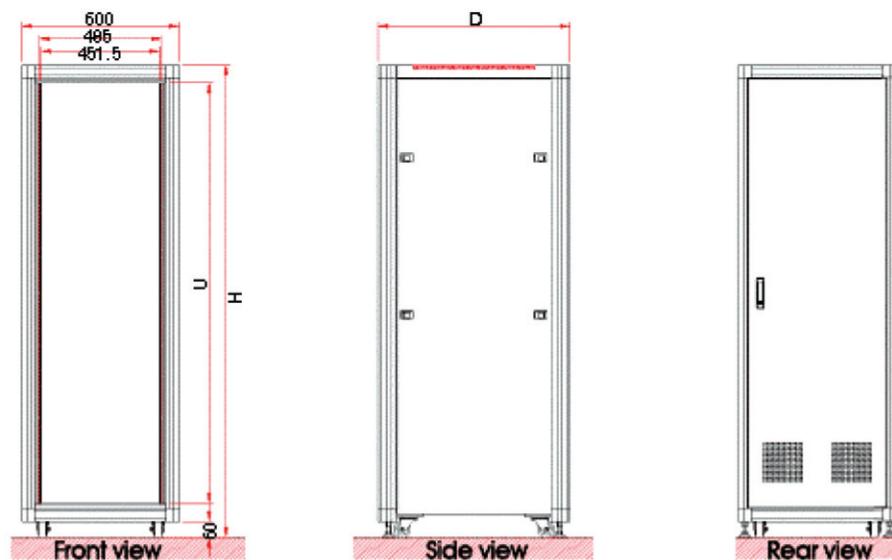


Locking with key



Logo plate

Configuration



Fiber Optic Distribution Systems

43 FDF (Fiber Distribution Frame)



Distribution Shelf



Splice Shelf



Stored Splice Shelf



Storage Shelf

Specifications

Items	SIZE(W×L×H)mm	Rack Unit	Max. Capacity
FDF Frame	900×556×2,200	43U	1,440C
FDF Door		Side 2ea, Front, Back	
FDF Distribution Shelf 72Core	483×450×132	3U	72C
FDF Splice Shelf 72Core	483×450×132	3U	72C
FDF Storage Shelf 72Core	483×469×88	2U	72C
FDF Distribution Shelf 144Core	483×450×177	4U	144C
FDF Splice Shelf 144Core	483×450×177	4U	144C
FDF Storage Shelf 144Core	483×469×177	4U	144C

Ordering Information

FDF



① Model

Frame

Door

Distribution Shelf

Splice Shelf

Storage Shelf

② Fiber count

72C

144C

288C

360C

432C