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## Optical Power Meter-----JW3211 Series

### JW3211 optical power meter

Is a handheld optical power meter, newly released in 2007, which can be used for absolute optical power measurements as well as for relative loss measurements in optical fibers. A Ø1.0mm photosensitive area photodiode is used to significantly improve the stability and the reliability. It features ingenious appearance, a wide range of power measurement, high accuracy, an user self-calibration function and a reference power level storage.

### Features

- Wide dynamic measurement range (**up to 80dB**)
- Reference power level storage(**Ref Setting**)
- User self-calibration function
- Comfortable LCD display and backlight LCD display supports night operation.
- Power measurements in dBm or mw and insertion loss in dB
- 10 minutes Auto-off function can be open or shut off.
- AA alkaline batteries can last more than 140 hours, AC adaptor also available
- Low battery power indication



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of Optical Fibers

Other Fiber Optic Measurements

### Specifications

MODEL	JW3211A	JW3211C
Wavelength(nm)	800~1700nm	
Detector Type	InGaAs	
Detector Size	Ø 1.0mm	
Measurement Range (dBm)	-70~+10	-50~+30
Uncertainty	±5%	
Calibrated Wavelength(nm)	850,1300,1310,1490,1550,1625	
Resolution(dB)	0.01	
Optical Connector	FC(interchangeable SC,ST) / as well as 2.5mm universal	
Power Supply	Alkaline Battery(3 AA 1.5V batteries); AC Adaptor(9V)	
Battery Operating Time	140 h with 1.5V Battery(3pcs)	
Operating Temperature(°C)	-10 ~ +60	
Storage Temperature(°C)	-25 ~ +70	
Relative Humidity	0 to 95% (non-condensing)	
Dimension(mm)	190X100X50	
Weight(g)	370	

### Standard Packages

MODEL	INCLUDES
All JW3211 Models	JW3211 Optical Power Meter, 3pcs 1.5V batteries, AC Adaptor, Instruction Manual, Cotton Tampon and Soft carrying case.

## Optical Power Meter-----JW3208 Series

### JW3208 handheld optical power meter

is a compact and an easy-to-use testing instrument for optical fiber networks, which can be used for absolute optical power measurements as well as for relative loss measurements in optical fibers. It features ingenious appearance, wide range of power measurement, high accuracy and user self-calibration function with high performance-to-price ratio.

### Features

- User self calibration function
- Comfortable LCD display and **optional** backlight LCD display supports night operation
- Power measurements in dBm or mw and insertion loss in dB
- Low battery consumption, more than 240 hours continual operation time for three 1.5V alkaline batteries
- 10 minutes Auto-off function can be open or shut off.



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW3208A	JW3208C
Wavelength(nm)	800~1700nm	
Detector	InGaAs	
Measurement Range (dBm)	-70~+3	-50~+26
Uncertainty	±5%	
Calibrated Wavelength(nm)	<b>850,980,1300,1310,1490,1550</b>	
Resolution(dB)	0.01	
Optical Connector	FC(interchangeable SC,ST) / as well as 2.5mm universal	
Power Supply	Alkaline Battery(3 AA 1.5V batteries)	
Battery Operating Time	240 h with 1.5V Battery(3)	
Operating Temperatruer(°C)	-10 ~ +60	
Storage Temperatruer(°C)	-25 ~ +70	
Relative Humidity	0 to 95% (non-condensing)	
Dimension(mm)	175x82x33	
Weight(g)	310	

### Standard Packages

MODEL	INCLUDES
All JW3208 Models	JW3208 Optical Power Meter, Protective Rubber Boot, 3pcs 1.5V batteries, Instruction Manual, Cotton Tampon and Soft carrying case.

## Optical Power Meter-----JW3206 Series

### JW3206 intelligent handheld power meter

is a perfect testing instrument for both laboratory and field applications in optical fibers. It features friendly User Interface with menu operation, automatic frequency identification, large LCD display with backlight and dual-way powering system. The internal microprocessor and linear amplifier technology ensure the long-term accuracy. In addition, JW3206 has a memory capacity of 240 records and can transfer the measurement data through a RS232 communication port to a PC for printing or editing. Moreover, it can also perform on-line data upload after programme control.

### Features

- Memory capacity of 240 data items; enables data transfer to a PC via RS232 communication port.
- High accuracy and wide dynamic range
- Automatic frequency identification
- Power measurements in dBm or mw and insertion loss in dB
- Low battery indication
- Energy-saving design, 10 minutes Auto power off function

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements



### Specifications

Type	JW3206A	JW3206C
Wavelength(nm)	800~1700nm	
Detector	InGaAs	
Measurement Range (dBm)	-70~+6	-50~+26
Uncertainty	±5%	
Communication interface	RS232	
Date storage capacity	240 records(Contains Measurement wavelength, Testing value and Time)	
Identification Frequency Range	10Hz~60KHz	
Calibrated Wavelength(nm)	<b>850,980,1300,1310,1490,1550</b>	
Resolution(dB)	0.01	
Optical Connector	FC(interchangeable SC,ST) / as well as 2.5mm universal	
Power Supply	Rechargeable Battery + Power Supply Adaptor	
Battery Operating Time	21 hours	
Operating Temperature(°C)	-10 ~ +60	
Storage Temperature(°C)	-25 ~ +70	
Relative Humidity	0 to 95% (non-condensing)	
Dimension(mm)	210X115X55	
Weight(g)	520	

### Standard Packages

MODEL	INCLUDES
All JW3206 Models	JW3206 Optical Power Meter, Protective Rubber Boot, Rechargeable battery, Power Supply Adaptor, Software disk, Data transfer cable(RS232), Instruction Manual and Cotton Tampon. Rigid hard carrying case can be optional.

## Optical Power Meter-----JW3205 Series

### JW3205 mini handheld optical power meter

is the most lightweight and compact in size testing instrument. It features ease-of-use and economy advantages and can be used for absolute power measurement in optical fibers. JW3205 in combination with the JW3110 mini handheld light source become the most portable and advantageous testing pair.

### Features

- The most compact in Size, ideal for field operation
- Power measurements in dBm and mw.
- Energy-saving design, 10 minutes Auto-off function

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements



### Specifications

Type	JW3205A	JW3205B	JW3205C	JW3205D
Wavelength(nm)	800~1700nm			
Detector	InGaAs			
Measurement Range (dBm)	-60~+3	-50~+10	-40~+20	-30~+30
Uncertainty	±5%			
Calibrated Wavelength(nm)	850,980,1310,1550nm			
Resolution(dB)	0.01			
Optical Connector	FC(interchangeable SC,ST) / as well as 2.5mm universal			
Power Supply	Alkaline Battery			
Battery Operating Time	360 hours with three 1.5V batteries			
Operating Temperature(°C)	-10 ~ +60			
Storage Temperature(°C)	-25 ~ +70			
Relative Humidity	0 to 95% (non-condensing)			
Dimension(mm)	115X60X20			
Weight(g)	105			

### Standard Packages

MODEL	INCLUDES
All JW3205 Models	JW3205 Optical Power Meter, Alkaline battery, Instruction Manul, Contton Tampon and Protective Holster.

## PON Optical Power Meter-----JW3212

This new PON power meter aims at the FTTx application and maintenance which can be used to test and estimate the signals of the voice, data and video at the same time. It is an essential and ideal tool for the construction and maintenance of the PON projects.

### Features

- Providing simultaneous measurement at all three wavelengths on the fiber (1490nm, 1550nm,1310nm )
- Used in Burst mode measurement of 1310nm upstream
- USB communication port enables data transfer to a PC
- 1000 measurement items can be saved in JW3212 PON power meter or computer for data review.
- JW3212 PON power meter offers up to 10 different threshold sets in total; Three status LEDs represents different optical signal conditions of **Pass, Warn and Fail** respectively.
- **User self-calibration** can be performed and “**Factory Default**” mode can be retrieved in computer through the software.
- PON SC standard connector, easy to test
- Backlight LCD display supports night operation.
- **Optional 10** minutes auto-off function and low battery indication.



### Specifications

Item	Specifications
<b>1310nm upstream measurement</b>	
Pass zone (nm)	1260~1360
Isolation @1490/1550nm(dB)	>40
Measurement Range (dBm)	-40~+10
<b>1490nm downstream measurement</b>	
Pass zone (nm)	1470~1505
Isolation @1550nm(dB)	>30
Isolation @1310nm(dB)	>40
Measurement Range (dBm)	-40~+10
<b>1550nm downstream measurement</b>	
Pass zone (nm)	1535~1570
Isolation @1490nm(dB)	>40
Isolation @1310nm(dB)	>40
Measurement Range (dBm)	-40~+20
<b>Measurement Accuracy</b>	
Connatural Uncertainty (dB)	±0.5
Linearity (dB)	+0.1
Passing through insertion Loss (dB)	<1.5
<b>General Information</b>	
Display	Graphic display. Resolution is : 128*64
Measurement Unit	DBm, dB, mW, and uW
Resolution	0.01dB
Fiber Type	9/125um
Input Power Range	DC 6.5V~8.5V
Rechargeable Battery	7.4V
AC adaptor	8.4V
Operating Temperature	-10°C ~ +60°C
Storage Temperature	-25°C ~ +70°C
Dimensions	210X115X55

### Ordering Information

MODEL	INCLUDES
JW3212	JW3212 PON Power Meter, Protective Rubber Boot, Rechargeable battery, Power Supply Adaptor, Instruction Manual and Cotton Swabs, USB Cable, Rigid carrying case can be optional.

## Optical Light Source-----JW3111 Series

### JW3111 optical light source

Is a handheld optical light source, newly released in 2007. It can provide **1 to 6** wavelengths output to satisfy specific requirements including the 650nm visible light source and the 1310/1550nm wavelengths for single mode fiber or the 850/1300nm wavelengths for multimode fiber, as well as other wavelengths according to customer's needs. Together with the JW3211 optical power meter, it is a perfect solution for fiber optic network applications.

### Features

- Provides 1~6 wavelengths output which can be optional according to customers' needs
- CW, 2Hz modulation output at 650nm, and CW, 270Hz,1KHz,2KHz modulation output at other wavelengths.
- High stability of the output power
- Stable output wavelength
- Backlight LCD display supports night operation
- Low battery power indication



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW3111
Wavelengths(nm)	Provides 1~6 Wavelengths according to needs.
Emitter Type	FP-LD,LED
Typical Output Power(dBm)	0@650nm / -7 @1310nm,1550nm, -20dBm for LED
Spectral Width(nm)	≤ 10
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours
Modulation Frequencies	<a href="#">CW,2Hz@650nm</a> / CW,270Hz,1KHz,2KHz@1310nm,1550nm
Optical Connector	FC/PC(Other type adapters can be required)
Power Supply	Alkaline Battery(3 AA 1.5V batteries); AC Adaptor(9V)
Battery Operating Time(hour)	45
Operating Temperature(°C)	-10~+60
Storage Temperature(°C)	-25~+70
Dimension(mm)	190X100X50
Weight(g)	370

### Joinwit Recommendation

**JW3111** Handheld Light Source is designed for optimal use with **JW3211** Optical Power Meter for measuring optical loss on both single mode and multimode fiber cable.

### Standard Package

MODEL	INCLUDES
All JW3111 Models	JW3111 Optical Light Source, 3pcs 1.5V batteries, AC Adaptor, Instruction Manual, Cotton Tampon and Soft carrying case.

## Optical Light Source-----JW3109 Series

**JW3109 optical light source** can provide 1 to 4 output wavelengths to meet specific requirements, including the 650nm red source and the 1310/1550nm wavelengths for single mode fiber or the 850/1300nm wavelengths for multimode fiber, as well as other wavelengths according to customer needs. Together with the JW3208 optical power meter, it is a perfect solution for the fiber optic network characterization.

### Features

- Provides 1~4 output wavelengths which can be optional according to customer's needs
- CW, 2Hz modulation output at 650nm, and CW, 270Hz, 1KHz, 2KHz modulation output at other wavelengths.
- High stability of the output power
- Stable output wavelength
- Backlight LCD display supports night operation
- Compact size and decent appearance
- Large LCD, easy operation



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW3109			
Wavelengths(nm)	650	1310/1550	850/1300	850/1300/1310/1550
Emitter Type	FP-LD, LED or others please specify			
Typical Output Power (dBm)	0	-7dBm for LD, -20dBm for LED		
Spectral Width(nm)	1. ≤10			
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours			
Modulation Frequencies	CW, 2Hz	CW, 270Hz, 1KHz, 2KHz		
Optical Connector	FC/ universal adaptor	FC/PC		
Power Supply	Alkaline Battery(3 AA 1.5V batteries)			
Battery Operating Time(hour)	45			
Operating Temperature(°C)	-10~+60			
Storage Temperature(°C)	-25~+70			
Dimension(mm)	175x82x33			
Weight (g)	295			

### Joinwit Recommendation

**JW3109** Handheld Light Source is designed for optimal use with **JW3208** Optical Power Meter for measuring optical loss on both single mode and multimode fiber cable.

### Standard Packages

MODEL	INCLUDES
All JW3109 Models	<b>JW3109 Optical Light Source, Protective Rubber Boot, 3pcs 1.5V batteries, Instruction Manual, Cotton Tampon and Soft carrying case.</b>



## Optical Light Source-----JW3108 Series

### JW3108 advanced stability handheld optical light source

Is designed specially aim at users with high requirements. With features of durable structure, large LCD display with backlight and friendly operation interface, the JW3108 advanced stability handheld optical light source provides a lot of convenience for your field work. High stability of output power and quite stable output wavelength, it is an ideal instrument for optical network installation, trouble shooting, maintenance and other optical fiber related systems.

#### Features

- Provides dual-wavelengths output and wavelengths can be optional according to customer's needs
- CW, 270Hz, 1KHz, 2KHz modulation frequency output
- High stability of the output power
- Stable output wavelength
- Backlight LCD display supports night operation
- Large LCD, easy operation



#### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

#### Specifications

Type	JW3108	
Wavelengths(nm)	1310/1550	850/1300
Emitter Type	FP-LD	
Output Power(dBm)	-7~-6	
Spectral Width(nm)	≤10	
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours	
Modulation Frequencies	CW、2Hz、270Hz、1KHz、2KHz	
Optical Connector	FC/ PC	
Power Supply	Rechargeable battery + Power Supply Adaptor	
Battery operating time(hour)	15	
Operating Temperature(°C)	-10~+60	
Storage Temperature(°C)	-25~+70	
Dimension(mm)	210x115x55	
Weight (g)	515	
<b>Joinwit Recommendation</b>		
JW3108 Handheld Light Source is designed for optimal use with JW3206 Intelligent Optical Power Meter for measuring optical loss on both single-mode and multimode fiber cable and aim at the high requirements of the users.		

#### Standard Packages

MODEL	INCLUDES
All JW108 Models	JW3108 Optical Light Source, Protective Rubber Boot, Rechargeable battery, Power Supply Adaptor, Instruction Manul and Contton Tampon. Rigid hard carrying case can be optional.

## Optical Light Source-----JW3110 Series

### JW3110 Mini optical light source

is the most rugged small size instrument in the industry. It integrates super small size and strong function in one unit. With 3 pieces of 1.5V alkaline batteries, it can work continuously for more than 40 hours. The total weight is only 110g. Together with the JW3205 Mini optical power meter, it provides an excellent solution for fiber optic network and for field work.

### Features

- High stability of the output power
- Economic type, easy to use
- Matched with the JW3205 mini power meter, it constitutes the smallest optical loss test kit, perfect for field testing

### Applications

Maintenance in Telecom Maintenance CATV  
Test Lab of optical fibers  
Other Fiber Optic Measurements



### Specifications

Type	JW3110
Wavelengths(nm)	1310 or 1550
Emitter Type	FP-LD
Output Power(dBm)	-7~-6
Spectral Width(nm)	≤10
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours
Optical Connector	FC/PC
Power Supply	3pcs 1.5V alkaline batteries
Battery operating time(hour)	40
Operating Temperature(°C)	-10~+60
Storage Temperature(°C)	-25~+70
Dimension(mm)	115X60X20
Weight (g)	110
<b>Joinwit Recommendation</b>	
JW3110 Handheld Light Source is designed for mini portfolio with JW3205 Optical Power Meter for measuring optical loss on both single mode and multi mode fiber cable.	

### Standard Packages

MODEL	INCLUDES
All JW3110 Models	JW3110 Optical Light Source, Alkaline battery, Instruction Manul, Contton Tampon and Protective Holster.

## Visual Fault Locator(VFL)-----JW3105

### JW3105 Visual Fault Locator

is used for the measurement in single-mode or multi-mode fibers. It features a rugged design, an universal connector and an accurate measurement. The JW3105 visual fault locator easily identifies the cutting, micro-bending of the optic fiber, passes through the jacket fiber and performs an end-to-end fiber identification. Its measurement range is up to 5km. It is an ideal tool for the examination of all kinds of patch cords and ribbon or bunched pigtailed in the installation and maintenance of fiber optic networks.

### Features

- Detects breaks, micro-bends even through jacketed fibers
- End-to-end visual fiber identification
- Locates faults up to 5km along the fiber.
- Mechanical fusion splice optimization
- Compact size and light weight, suitable for field testing

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements



### Specifications

Type	JW3105
Wavelengths(nm)	650±10nm
Fiber Model	SM,MM
Output Power	1mw
Spectral Width(nm)	≤5
Emission	CW, 2Hz can be optional
Optical Connector	FC/ Universal 2.5mm adaptor
Power Supply	2pcs AA alkaline batteries
Battery Operating Time	30 hours
Operating Temperature(°C)	-10~+60
Storage Temperature(°C)	-25~+70
Dimension(mm)	100X50X25
Weight (g)	50

**Remark: Pen-type VFL can be provided!**

Standard PackagesMODEL	INCLUDES
JW3105	JW3105 Visual Fault Locator, Alkaline battery, Instruction Manul, Contton Tampon and Protective Holster.

## Pen-type Visual Fault Locator (VFL)-----JW3105P

The JW3105 Pentype VFL is specially designed for field personnel who need an efficient and economical tool for fiber tracing, fiber routing and continuity checking in optical network. It includes:

- Finding the breakpoint, poor connections, bending or cracking in fiber optic cables.
- Finding the faults of OTDR dead zone
- End-to-end visual fiber identification

*Colors can be customized when meets certain qty!*

### Features

- 2.5mm universal connector, for 1.25mm connectors, FC (Male)-LC (Female) convertor can be provided on requests.
- Operates either in CW or Pulsed
- Constant output power
- Lower Battery warning
- Long battery life (up to 60 hours)
- Crash-proof and dust-proof design for laser head
- Laser case ground design prevents ESD damage
- Burning testing to ensure the reliability.
- Portable and rugged, easy to use
- Guarantee to CE standards include EMC, EMI, ROHS



### Specifications

Type	JW3105 Pen-type Visual Fault Finder
Central Wavelength	650nm±10nm (635nm can be required on request)
Emitter Type	FP-LD
Output Power	Optional choice for <b>1mw, 3mw, 5mw,10mw</b> on actual needs
Optical Connector	2.5mm universal connector For 1.25mm connectors, FC (Male)-LC (Female) convertor can be optional on customer requests
Operating Model	Both CW and Pulse available
Pulse Frequency	2~3Hz
Power Supply	2 AA alkaline batteries
Battery Operating Time	650nm@1mw ≥65hour 650nm@3mw ≥50hour 650nm@10mw≥15hour Test with Panasonic LR6 AA ALKALINE battery
Operating Temperature	-10~+45 (°C)
Storage Temperature	-40~+70 (°C)
Dimension (mm)	∅ 15X180
Weight	120g(Without battery)

**Remark: Colors can be customized on request when meets certain qty!**

### Standard Packages

MODEL	INCLUDES
JW3105 P	Main Unit (Original color), 2pcs Alkaline battery, Manual, Cotton swabs and Soft Carrying case.

## Optical Multi-meter-----JW3207 Series

### JW3207 handheld optical multi meter

integrates the functions of an intelligent optical power meter module and of a highly stable light source module in one unit which can perform closed-loop tests by incorporating both modules. Individual regimes of operation can also be manually chosen using menu operation to switch functions. A perfect combination to make your optical fiber tests a lot more convenient.

### Features

- Includes all the outstanding functions of handheld intelligent power meter(JW3206)
- Includes all the outstanding functions of handheld stable light source(JW3108)
- Switching of the power meter function and that of the light source by menu operation
- Different light sources and power meters can be built into JW3207



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW3207A	JW3207C
<b>Optical Power Meter Module</b>		
Detector Type	InGaAs	
Measurement Range(dBm)	-70~+6	-50~+26
Uncertainty	5%	
Calibrated wavelengths(nm)	<b>850,980,1300,1310,1490,1550</b>	
Rosolution(dB)	0.01	
Data Storage Capacity	240 data items	
Identification Frequency Rang	10Hz~60KHz	
Optical Connector	FC(interchangeable SC,ST)	
<b>Optical Light Source Module</b>		
Emitter Type	FP-LD	
Wavelengths	1310/1550(other wavelengths can be optional)	
Ouput Power(dBm)	-7	
Spectral Width	≤10nm	
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours	
Modulation Frequencies	270Hz, 1KHz, 2KHz	
Optical Connector	FC/ PC	
<b>General Specifications of Multi Meter</b>		
Power Supply	Rechargeable Battery + Power Supply Adaptor	
Communication Interface	RS232	
Battery Operating Time	≥6 hours(Both Power Meter and Ligh Source are working) ≥28hours(Only Power Meter is working)	
Auto-off time	10mins	
Operating Temperature(°C)	-10~+60	
Storage Temperature(°C)	-25~+70	
Dimension(mm)	210x115x55	
Weight (g)	540	

### Standard Packages

MODEL	INCLUDES
JW3207 Models	JW3207 Multimeter Protective Rubber Rechargeable battery Power Supply Adaptor Software Disk Data upload Cable RS232 Instruction Manul Contton Tampon Rigid hard carrying case can be optional

## Optical Multi-meter-----JW3204 Series

### JW3204 Handheld Optical Multi Meter

integrates both an optical power meter module and an optical light source module and can perform closed-loop tests by using both modules, and can also work individually. It is specifically designed for technical support personnel to test a variety of instruments with a single meter and thus satisfy the user by providing a choice of greater convenience and more advantages.

### Features

- Includes all the outstanding functions of the handheld power meter (JW3203R)
- Includes all the outstanding functions of the handheld stable light source (JW3104)
- Perfect combination to make your fiber measurements more convenient.
- Different light sources and power meters can be built into JW3204



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW3204A	JW3204B	JW3204C	JW3204D
<b>Optical Power Meter Module</b>				
Detector Type	InGaAs			
Measurement Range(dBm)	-70~+3	-60~+10	-30~+20	-20~+30
Uncertainty	5%			
Calibrated wavelengths(nm)	<b>850,980,1310,1550nm</b>			
Resolution(dB)	0.01			
Optical Connector	FC(interchangeable SC,ST)			
<b>Optical Light Source Module</b>				
Emitter Type	FP-LD			
Wavelengths	1310/1550(other wavelengths can be optional)			
Output Power(dBm)	-7			
Spectral Width	≤10nm			
Output Stability	±0.05dB/15mins; ±0.1dB/ 8hours			
Optical Connector	FC/ PC			
<b>General Specifications of Multi Meter</b>				
Power Supply	Rechargeable Battery + Power Supply Adaptor			
Battery Operating Time	≥4 hours(Both Power Meter and Light Source are working) ≥28hours(Only Power Meter is working)			
Auto-off time	10mins			
Operating Temperature(°C)	-10~+60			
Storage Temperature(°C)	-25~+70			
Dimension(mm)	180X85X30			
Weight (g)	340			

### Standard Packages

MODEL	INCLUDES
All JW3204 Models	JW3204 Optical Multimeter, Protective Rubber Boot, Rechargeable battery, Power Supply Adaptor, Instruction Manual and Contton Tampon.

## Optical Cable Fault Locator (Fiber Ranger) -JW3304

### The JW3304 Fiber Optical Cable Fault Locator

is just like the simplified OTDR, It's designed for the identification of fault locations(distance from the fiber-start point) and fault types(i.e. reflection or attenuation). With features of quick response, portable size, easy to use, large and comfortable LCD with adjustable brightness of backlight, data storage with USB communication port and power-saving design, JW3304 Fiber Ranger is an excellent essential instrument for installation, construction and maintenance of the optical fiber networks.

### Specifications

Light Source		1550±20nm LD
Fiber Type		9/125um SM fiber
Connector Type		FC/PC
Sensor Type		InGaAs
Maximum Output Power		100mw
Max. Displaying Distance	Reflection Event	80km
	Non-Reflection	40km
Measurement Unit		Meter(m)
Data Storage Capacity		500 Groups
Reflection Event Dead Zone		10m
Non-reflection Event Dead Zone		20m
Distance accuracy(Reflection Event)		$\pm (2m+2*10^{-3}*Distance)$
Power Supply		DC 6V~9V
Battery operating time		Enables 10, 000 times measurement
Temperature		Operating-10~+60℃,Storage: -25~+70℃
Humidity		0~85% ( non-condensation )
Communication Port		USB
Supply		Rechargeable battery and <b>AC</b> power adaptor
Dimensions(mm)		210X115X55
Weight(g)		555



### Standard Package

MODEL	INCLUDES
All JW3304	JW3304 Fiber Ranger, Protective Rubber Boot, Rechargeable battery, Power Supply Adaptor, Software disk, USB Cable, Instruction Manul, Contton Tampon Rigid Carrying case

## Optical Fiber Identifier (OFI)-----JW3306A

### JW3306A Optical Fiber Identifier

is an essential installation and maintenance instrument. By inserting the fiber into its adapter head, it can identify SM optical fibers without any damage by detecting the optical signals being transmitted through them so as to avoid the opening of the fiber at the splice point for identification and thus avoids the interruption of the service. In the presence of traffic, the intermittently audible tone is activated. The JW3306A optical fiber identifier also allows relative core power display and identification of the 270Hz, 1kHz and 2kHz frequencies. When they are used to detect the frequency, the continuously audible tone is activated. There are four types of adapter heads available: Ø0.25, Ø0.9, Ø2.0 and Ø3.0. The JW3306A optical fiber identifier is powered by a 9V alkaline battery.

### Features

- Efficiently identifies the traffic direction and frequency tone (270Hz, 1KHz, 2KHz) without any damage of the fibers.
- Displays the core power of the fibers (-50~+0dBm)
- Low bending loss and highly efficient output
- Easy-to-replace adaptors (Ø0.25, Ø0.9, Ø2.0, Ø3.0 to match various optical cables)
- Mechanical damp design of adapter heads to ensure the fiber without damage.
- "ONE KEY" operation design, easy-to-sue

### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW3306A
Identified Wavelength Range	800-1700 nm
Identified Signal Type	CW, 270Hz±5%, 1kHz±5%, 2kHz±5%
Detector Type	Ø1mm InGaAs 2pcs
Adapter Type	Ø0.25 (Applicable for Bare Fiber) Ø0.9 (Applicable for Ø0.9 Cable ) Ø2.0 (Applicable for Ø2.0 Cable ) Ø3.0 (Applicable for Ø3.0 Cable )
Signal Direction	Left & Right LED
Optical Power Reading	-50~+0dBm
Signal Frequency	270Hz, 1kHz, 2kHz
Power Supply	One 9V Alkaline battery
Operating Temperature	-10—+60℃
Storage Temperature	-25—+70℃
Dimension (mm)	195X30X27
Weightht (g)	235



### Standard Packages

MODEL	INCLUDES
JW3306A	JW3306A Optical Fiber Identifier, 4pcs adapter heads, Alkaline battery, Instruction Manul, Contton Tampon and Soft Carrying case.



## Optical Talk Sets-----JW4103

### JW4103 Optical Talk Set

is an intelligent and efficient instrument that combines in one set the functions of both a digital optical phone and a stabilized light source. It is widely used in operations of installation, optical testing, maintenance and fiber attenuation value testing in data network, CATV and Telecommunication network. The JW4103 Talk Set can carry out full-duplex communication with high quality connection and not be affected by distance.

### Features

- Full-duplex digital communication with high quality conversation connection and low background noise
- Together with Optical Clip-on Coupler, enables on line communications available
- Combining functions of both a digital optical phone call and a stabilized light source.
- Large LCD display with backlight
- Low battery power indication



### Applications

Maintenance in Telecom

Maintenance CATV

Test Lab of optical fibers

Other Fiber Optic Measurements

### Specifications

Type	JW4103
Wavelength(nm)	1310/1550
Emitter Type	FP-LD
Transmission Distance	≥80km
Dynamic Range	40dB
Output Power	-5~-7dBm(9/125um), CW or 2KHz, 1KHz, 270Hz Modulation
Output Stability	±0.1dB/±0.25dB(1/8hrs) CW
Power Supply	Rechargeable Battery + Power Supply Adaptor
Battery Operating Time	5 hours
Optical Connector	FC/PC
Operating Temperature(°C)	-10 ~ +60
Storage Temperature(°C)	-25 ~ +70
Dimension(mm)	215X115X55
Weight(g)	520

**Remark:** Joinwit also provides Fiber Optic Clip-on Coupler device according to customers needs.

### Standard Packages

MODEL	INCLUDES
JW4103	JW4103 Optical Talk Set(pair), Protective Rubber Boot, Headset, Rechargeable battery, Power Supply Adaptor, Instruction Manul, Contton Tampon and soft carrying case.

## Optical Variable Attenuator (OVA) -----JW3303

### Specification:

JW3303 handhold optical variable attenuator is used for continuously variable optical signal attenuation. As the attenuator is used in the laser system for the on-line testing, there, therefore JW3303 can be used in the digital system of communication devices (such as:

PHD, SDH) and also in the system of adopting analog modulation (CATV)

### Application

- Telecom Maintenance
- CATV Maintenance
- Comprehensive cable construction system
- Optical instruments research and development
- Optical communication education and lab testing
- Other optical project

### Features

- stepwise attenuating by circumgyrated dial: attenuating step 0.05dB
- Provide with the function of displaying dB and dBm attenuating value
- Alternative function of 10 minutes Auto-off without operation
- After off the instruments, the system will have the memorizing of the attenuating value and the attenuating step, in order to restore the system back to the previous shut down state when open the instruments next time



### Specification

Type	JW3303
Attenuating wavelength Range	1260~1650nm
Fiber Model	9/125um SM
Optical Connector	FC/PC
Calibrated wavelengths	1310/1490/1550/1625
Measurement Range	2.5~60dB
Resolution	0.05dB
Minimize Insertion Loss	<2.5dB
Linearity	±0.5dB
Repeating	±0.2dB
Attenuating Accuracy	±0.8dB
Back Reflection	>35dB (typical value40dB)
Max input	+20dBm
Displaying type	lattice 128*64 black and white, white back ground light
Rechargeable batteries	7.4V
Power supply adaptor	7~8.5V
Operation temperature	0~40℃
Storage temperature	-10~60℃
humidity	0~85% (non- condensation)
Weight	450g

### Standard Packages

MODEL	INCLUDES
JW3305 all models	JW3303 Optical Variable Attenuator, Protective Rubber Boot, Rechargeable battery, Power Supply Adaptor, Instruction Manual and Cotton tampon. Rigid carry case can be optional.

## ***JWD1000 Min Series Optical Power Meter***

**JWD1000 Min Series Power Meter** equips with wide angle detector, replaceable attenuator and various fiber adapters, which can be connected directly with the computer with USB or RS232 communication port. It is an intelligent but economical test device and **very suitable for optical power measurements from Passive Components Producers, Research Lab and University Lab.**



Various optical fiber adapters and attenuation chips can be used upon actual requirements.

### ***Product Features***

- **Wide angle Si、Ge detectors can be alternative**  
The JWD 1000 min series OPM can support the detector size up to 5mm for Ge detector and 10mm for Si detector. The measurement wavelength range is from 400~1100nm for Si detector and 800~1600 for Ge detector, with dynamic ranger of 60dB.
- **Compensation of the detector temperature**  
JWD1000min series OPM can calibrate the value of the testing result trough the detector temperature compensation; this will lessen the reading value offset caused by the external temperature change
- **Various Optical Fiber Adaptors can be required**  
JWD1000min series OPM provide the FC, SC, ST, LC and other kind of changeable optical fiber adaptors, can adapt for all kinds of the need of the optical fiber connection.
- **User-self Calibration Function**  
Any wavelength can be calibrated by user independently (up to 9 wavelengths calibration can be supported). The device do not need to send back to the original factory for recalibration, it can be deal with in the local Measurement Bureau for the annually calibration.
- **Attenuation Chips can be changeable**  
JWD1000min series OPM support 10,100 and 1000 absorbability attenuation chips, for the convenience of users' variable attenuation requirements.
- **WIN32 API Support**  
JWD1000 min series OPM provide various API ports based on WIN32, so that the user can develop its own software according to its actual requirements, which includes:
  - 1) **Data Reading**  
Read the current wavelength power value (also can customize the relative log, absolute log, and linearity), also can read the detector temperature
  - 2) **Calibration**  
Calibrate the current wavelength, zero calibration, and adjust the compensation temperature
  - 3) **Setting**  
Setting the wavelength, Setting the measurements mode (manual, Auto), Setting the ranger, Setting the filter speed, Setting Units, Setting the reference value

## JWD1000 Min Series Optical Power Meter

### Product Specifications

<b>Model</b>	<b>JWD1000 mini Series OPM</b>
Wavelength (nm)	<b>400~1100(Si); 800~1600(Ge)</b>
Pre-determined calibrated wavelength (nm)	850/980/1300/1310/1490/1550/1625 ( Ge Detector ); 660/780/820/850 ( Si Detector )
Self-calibration wavelength qty	9 Max
Uncertainty ( Full rang )	5%
Dynamic Rang ( dB )	70
Unit	Linear: nw、uw、mw、w Log: dB、dBm
Displaying speed ( Data average )	SLOW: 960ms ( 16 times on average ) MEDIUM: 480ms ( 8 times on average ) FAST: 60ms ( uneven )
Resolution	0.001
Communication Port	Standard RS232 Port or USB port
Cable length	1.5m ( Standard ) or Customized
Operation temperature (°C)	+10~+40
Storage temperature(°C)	- 20~+60
AC adaptor	9V DC/RS232 or supply by USB cable
Warm-up time	20Min.
Weight(kg)	<200g
Dimensions(mm)	Ø45×40

### Ordering Information

<b>Model</b>	<b>JWD1000-A-B-C-D-E mini Power Meter</b>
Detector Type (A)	1) 3mm Ge -60~0dBm 2) 5mm Ge -60~0dBm 3) 5mm Si -60~0dBm 4) 10mm Si -60~0dBm
Communication port (B)	1) RS232 2) USB
Cable Length (C)	1) 2m (Standard) 2) 5m (Optional)
Attenuator type (D)	1) 10 time absorbability attenuation chips (+10~-60dBm) 2) 100 time absorbability attenuation chips (+20~-50dBm) 3) 1000 time absorbability attenuation chips (+30~-40dBm)
Adaptor Type (E)	1) FC 2) SC 3) ST 4) LC 5) Bare Fiber

Remark: 1、 Each attenuation chip is unique relative to the detector.

2、 Extra calibration service can be optional on customer requirements

### Standard Packages

Model	include
JWD1000 mini series Optical Power Meter	Main Unit, RS232 communication cable, FC Adaptor, A piece of Attenuator, AC adaptor, Software CD, Cotton Tampon, User manual.

## ***JW3201N Bench-top optical Power Meter***

**JW3201N Bench-top Optical Power Meter** is a high precision and wide measurement range test instrument which designed specially aim at passive components factories, R&D institutions and universities. With features of accurate measurements, durable use and easy operation, JW3201 N Bench-top Optical Power Meter becomes a perfect test equipment in fiber optic works which can instead the advanced imported products with its high cost-performance ratio.



### ***JW3201N External Detectors Introduction (Refer to right pictures)***

- **JW3201N1 Horizontal detector:**  
With **2.0mm** Photosensitive area, **0dB InGaAs**
- **JW3201N2 Vertical detector:**  
With **3.0\*4.0mm** Photosensitive area, **0dB TO detector**
- The only tip for bare fiber can be optional
- Different external detector can be used on customer requirements



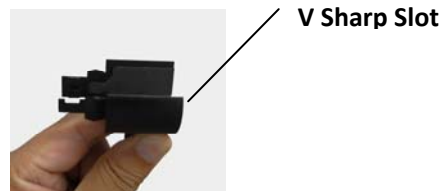
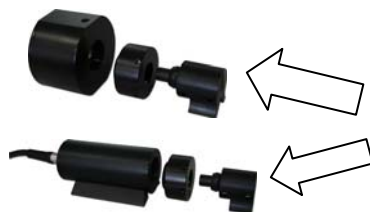
**JW3201N1 Horizontal detector**



**JW3201N2 Vertical detector**

### ***The only Tip for bare fiber***

**JW-430 bare fiber tip** have a V sharp slot, the bare fiber can pull in and out and orientation repeatedly. And it can protect the fiber against the pressure from outside, to avoid fiber tortuosity that will cause the polarization dependent loss. JW-430 can fully encircle the bare fiber, to against the surrounding light come into the fiber, to make the test result more precisely.



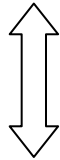
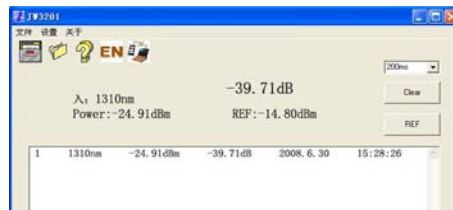
**N1 type detector or N2 type detector can be matched with JW-430 bare fiber tip**

### ***Product Features***

- External detector makes the testing operation more convenient.
- **850~1700nm** wide wavelength range, wavelength can be **adjustable** in 1nm increments.
- High accuracy, the uncertainty is  $\pm 3\%$
- Display resolution 0.01dB
- Wide Power Measurement range (**+5~-75dBm**)
- User self-calibration function
- **"Ref" setting** enables the user to retrieve and display the measurement that has been stored as a reference. Link loss test result obtained automatically without any manual calculation.
- Adopt the new Data Acquisition technology to ensure optimum signal-noise ratio.
- Use the bare fiber tip to realize power measurement with bare fiber
- Enables data transfer to a PC via RS232 communication port as well as data storage automatically.

Through communication with RS232 port and PC, can realize the optical power monitoring without people, as well as displaying the data on the instrument and the PC at the same time

PC Displaying Interface



Instruments Displaying Interface



**Product Specifications**

Type	JW3201N
Wavelength Range(nm)	850~1700 (in 1nm increments)
Calibrated Wavelength(nm)	850, 980, 1300, 1310, 1480, 1490, 1550, 1625
Photo Detector	In GaAs
Measurement Range (dBm)	+5~-75dBm (other measurement range can be customized)
Intrinsic Uncertainty	±3%
Communication interface	RS232
Resolution(dB)	0.01dB
Optical Connector	FC
Power Supply	AC90~260V, 50Hz
Operating Temperature (°C)	-10~+40
Storage Temperature (°C)	-25~+70
Dimension(mm)	260*190*120
Weight (kg)	2.75

**Ordering Information**

Model	Description
JW3201N-X	1. JW3201N 1 Horizontal detector 2. JW3201N 2 Vertical detector
JW-430	JW-430 Bare Fiber Tip

**Standard Packages**

Model	Standard Package List
JW3201N1 Bench-top Power Meter	Main Unit, JW3201N1 horizontal detector, RS232 data transfer cable, Power supply Adaptor, Software CD, Cotton Tampon, User Manual
JW3201N2 Bench-top Power Meter	Main Unit, JW3201N1 horizontal detector, RS232 data transfer cable, Power supply Adaptor, Software CD, Cotton Tampon, User Manual

## JWD1100 Bench-top Optical High Stable Light Source

The JWD1100 series high stable light source are microprocessor controlled laser diode sources which can support the variety of emitters such as: DFB,FP,PUMP,SLED etc. It is specially used in passive components testing, power meter calibration and general laboratory uses.

### Features

- Provides 1~3 wavelength channels, any wavelength(s) can be optional

- High Stability and Reliability

Stability:  $\pm 0.005$  dB@15 min &  $\pm 0.05$  dB@24 hour

Accurate internal temperature control ensures the constant output wavelength and low bias.

- Output power can be adjustable, the range is among 5%~100% based on the maximum output power.

JWD1100 adopts the digital adjustment of output power, to prevent the inconsistency bring from the potentiometers.

- Digital adjustment of laser emitter temperature

JWD1100 supports the digital adjustment of laser emitter temperature, so that the user can do the slight adjustment for the wavelength when in necessary.

- Over temperature protection

JWD1100 will cut off the laser emitter automatically and stop the work when the surrounding temperature over the limitation.

- Auto Fan Control

JWD1100 can sensor the temperature through the internal transducer, and it will start once the temperature over the standard, this can increase the using life of the unit.



### Specifications

TYPE	JWD1100		
Operating Wavelength(nm)	850,980,1300,1310, 1480,1550, 1625 ect.	1310/1550,1310/1480, 1480/1550,980/1550 etc.	1310/1490/1550 or others
Optical Connector	FC/APC(Other type adapters can be customized)		
-3dB Spectral Width(nm)	<0.1		
-20dB Spectral Width(nm)	<0.5		
Side mode suppression ratio(dB)	>35(DFB)		
Maximum Output Power(mw)	$\geq 1$ ; $\geq 2$ ; $\geq 5$ ; $\geq 10$ (others please specify)		
Output power stability in 15 minutes(dB)	$\pm 0.005$		
Output power stability in 24 hours(dB)	$\pm 0.05$		
Digital Internal Modulation	1Hz~20KHz		
Digital External Modulation	0Hz~20KHz		
TEC stability	$\pm 0.01^{\circ}\text{C}$ @15 minutes; $\pm 0.05^{\circ}\text{C}$ @ 24 hours		
Power Supply	110V or 220V (50Hz~60Hz)		
Operating Temperature	10~+50 $^{\circ}\text{C}$		
Storage Temperature	-10~+60 $^{\circ}\text{C}$		
Warm Up Time(hour)	0.5		
Dimensions(mm)	280*260*120		
Net Weight(kg)	4.7		

**Remark:** All specifications stated here are depend on DFB laser, Specifications like emitter types, central wavelength, output power on demand.

### Standard Packages

MODEL	INCLUDES
JWD1100	JWD1100 High Stable Light Source, Power Supply Cord, Fuze, Instruction Manul and Cotton tampon.

## ASE Broadband Light Source-----JW3107

### JW3107 ASE (Amplified Spontaneous Emission) broadband light source

is designed specially for manufacturing of passive optical components and for testing in lab research. The main body of the light source is composed of high-powered pump laser and erbium doped fiber. Inimitable ATC and APC circuits are used to ensure the stability of the output power. The output power can be adjustable in a certain range by adjusting the APC. The JW3107 broadband ASE light source can operate in the C band, the L band as well as in the C+L band.

### Features

- High output power, the max. power can be 100 mw.
- Wide operating bandwidth, covering C-band and/or L-band
- Excellent flatness within spectrum range
- Intelligent micro processing system and long distance control
- High stability and reliability
- Highly accurate ATC and APC control electrocircuit

### Applications

Manufacturing and Testing of Passive Optical Components

WDM Testing

Manufacturing and Testing of EDFA

Lab Testing and Fiber Optic Sensor Systems

Other Optical Fiber Engineering Applications



### Specifications

MODEL	JW3107
Wavelength Band	<b>C+L Band</b>
Operating wavelength	1525~1610nm
Output power	>17dBm
Spectrum Density Stability	±0.05dB/15min
Output power stability in 15 minutes	±0.02dB/15min
Output power stability in 8 hours	±0.05dB/8hour
Flatness	10dB
Output return loss	>45dB
TEC stability	±0.1℃
TEC operating range	25±5℃
Operating Voltage	85~264VAC
Power Consumption	<15W
Operating Temperature	0~45℃
Storage Temperature	-40~+80℃

### Standard Packages

MODEL	INCLUDES
JW3107 all models	JW3107 ASE Broadband Light Source, Power Supply Cord, Fuse, Instruction Manual and Cotton tampon.



## Insertion Loss and Return Loss Test Station----JW3307A

### JW3307A Insertion Loss/Return Loss Test Station

is a high performance loss test station that is designed specially for Optical Passive Components production Test and Lab Test. It combines three different working modes as a return loss meter, optical power and loss meter and a stable laser source in one test station. It features:

- High measurement accuracy
- Accurate analysis to wide dynamic ranager and weak signal
- Two LCD displays used, efficiently reduced eye strain of operators
- Leakage design of optical power meter module and light source module, obviously reduced operation procedures.
- Movitable optical connector set design, easy to clean
- USB Port design, enables data trasfer to a PC via USB port .



### Specifications

Model	JW3307A
<b>Optical Return Loss Test</b>	
Wavelength	1310/1550nm
Optic Connector	FC/APC
Return Loss measurement Range	0 ~ 75dB
Calibrated wavelength	850/1300/1310/1550nm
Output Stability of laser source	0.05dB(1 hour@250C)
Measurement accuracy	0.25dB
Resolution	0.01dB
<b>Optical Power and Loss Test</b>	
Wavelength Range	800~1700nm
Calibrated wavelength	850/1300/1310/1550nm, more other wavelengths can be optional
Optic Connector (Power Meter)	Interchangeable FC/SC/ST/2.5mm Universal /1.25mm adaptors
Photo detector	InGaAs
Display modes	dBm/dB/xW
Measurement range	+3 ~ -80 dBm
Resolution	Non-linear 0.001dB ; Linear: 0.001nw/μW/mW
Measurement accuracy	0.25dB
<b>Other Specification</b>	
Communication Port	USB
Power Supply	AC 90-260V, 50~60Hz
Operation Temperature	-5℃~+55℃
Storage Temperature	-25℃~+70℃
Dimensions	300X260X120mm
Weight(kg)	3

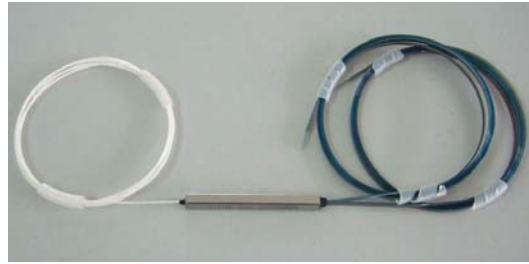
### Standard Packages

MODEL	INCLUDES
JW3307A	JW3307A Main Body, Power Supply Cord,FC Adaptor,SC Adaptor, ST Adaptor, 25mm Universal, 1.25mm Universal Adaptor,Instruction Manual,FC/APC-FC/APC patch cord FC/APC-FC/PC patch cord, Cleaning Cotton Swab, Fuse, USB Cable(Optional), PC software (Optional), Foot Peda (Optional)

## PLC Optical Splitter

### Features

- Low Insertion Loss
- Low PDL
- High Return Loss
- Uniform Power Splitting
- Wide Operating Wavelength
- Wide Operating Temperature
- Good Environmental Stability
- Qualified under Telcordia GR-1221 and GR-1209



### Applications:

#### FTTx System

- CATV Networks
- Passive Optical Networks (PON)
- Local Area Networks (LAN)
- Test Equipments

### Specifications:

Type	Specifications				
Operating wavelength range(nm)	1260nm-1650nm				
Port Configuration	1 x 4	1 x 8	1x16	1x32	1X64
Max. Insertion Loss(dB)*	≤7.3	≤10.6	≤13.8	≤16.5	≤21
Loss Uniformity(dB)*	≤0.5	≤0.8	≤1.0	≤1.5	≤2.7
PackageType	Customer Specify				
PDL(dB)*	≤0.2	≤0.2	≤0.2	≤0.2	≤0.3
Return Loss (dB)*	≥50				
Directivity (dB)*	≥55				
Storage Temperature (°C)	-40~85				
Operating Temperature(°C)	-40~85				
Fiber Type	SMF-28				
Connector Type	Customer specified				

**Note:** All measurements were done at room temperature, and specifications exclude connectors

### Ordering Information

PLCS	Port Type	Cable Type	Fiber Length	Connector Type	Package Style
PLC Splitter	1*4	0.25mm Bare fiber	1 meter	FC/APC	Stainless steel sleeve
	1*8	Ribbon Fiber	2 meter	FC/PC	Plastic Module
	1*16	Fan-out with 0.9mm	3 meter	SC/APC	19" 1U Rack Mount
	1*32	Loose Tube	Others specify	SC/PC	Others Specify
	1*64	2.0mm Cable		ST/UPC	
	2*32	3.0mm Cable		LC/APC	
	Others Specify			Others Specify	

## Fused Optical Couplers----SM Dual-window Optical Coupler

### Description

Joinwit adopts the FBT technique to produce the SM coupler with the high performance and liability which achieve the advanced level of similar products in the world. The extremely low excess loss greatly increases the coupler's liability and long-term stability. Joinwit adopts the unique craft to eliminate the reflection of the 1X2 coupler's spare input fiber end and ensure its long-term stability and at least 60dB directivity. Joinwit also supply the 1XN (NXN) Tree/Star type coupler by grade-connection 1X2 coupler.

### Features

- Low PDL
- Low Excess Loss
- Good Directivity
- Good environmental Stability
- Standard/Flattened/Broadband/Star/Tree

### Applications

- Optical Fiber Communication Systems
- Optical Fiber CATV
- Passive Optical Network (PON)
- Optical Amplifiers
- Optical Access Networks/LAN
- Monitoring Systems
- Optical Fiber Sensor

### Specifications

Type	Standard	Dual-window Brad	Single-Window Broadband
Central Wavelength(nm)	1310nm or 1550nm	1310nm and 1550nm	1310nm or 1550nm
Bandwidth(nm)	±20	±40	±40
Star Structure	4*4 8*8 16*16	4*4 8*8 16*16	4*4 8*8 16*16
Tree Structure	1*4 1*8 1*16	1*4 1*8 1*16	1*4 1*8 1*16
Typical Insertion Loss(dB)	6.3 9.5 13.0	6.6 9.6 13.2	6.6 9.6 13.2
Uniformity(dB)	0.7 1.0 1.3	1.5 2.2 3.0	0.9 2.8 3.7
PDL(dB)	0.10		
Mini. Directivity(dB)	60		
Operating Temperature(°C)	-40~+75		
Storage Temperature(°C)	-40~+85		
Packing Type	Customer Specify		
Industry Standard	Telcordia GR-1221-CORE		
Selectable Packing Size	① ∅ 3.0X50 (Stainless steel sleeve packing) ② 90X20X9 ③ 100X80X10 ④ 120X80X18 ⑤ 140X114X18		



## Fused Optical Couplers----PON Optical Coupler

### Description

Joinwit adopts unique bandwidth extension techniques (asymmetric craft) for the tri-windows couplers to change the characteristic of the wavelength and make tri-windows at 1310/1490/1550nm wavelength meet the precision requirements of the coupling ratio. This unit specially applies for the low-cost solution of “ 3 in 1 network” and tri-wavelength bi-direction transmission with a single fiber in FTTx network.



### Features

- Low PDL
- Low Excess Loss
- Good Directivity
- Good environmental Stability
- Tri-operating windows

### Applications

- Optical Fiber Communication Systems
- Optical Fiber CATV
- Passive Optical Network (PON)
- FTTx

### Specifications

Type	Standard Tri-window Optical Couplers			
Central Wavelength/Bandwidth(nm)	1310±40, 1490±10, 1550±40			
Coupling Ratio (%)	1~50			
Typical Excess Loss(dB)	0.15			
Typical Insertion Loss(dB)	3.6			
PDL(dB)	0.10			
Directivity(dB)	55			
Temperature Coefficient(dB/°C)	0.002			
Operating Temperature(°C)	-40~+70			
Storage Temperature(°C)	-40~+85			
Max Operating Power(mw)	300			
Max Tensile Strength(N)	5			
Max Insertion Loss(dB)	1*4	1*8	1*16	1*32
	7.0	10	13.5	17.0
Insertion Loss Uniformity(dB)	1*4	1*8	1*16	1*32
	1.6	1.8	2.4	3.0
Industry Standard	Telcordia GR-1221-CORE			

## ***Fused Optical Couplers----Multi-Mode Optical Coupler***

### **Description**

Joinwit adopts the FBT technique to produce the basic 1X2 coupler unit with the high-level performance. By grade connecting the basic 1X2 coupler unit, the Star/Tree coupler eliminates the component pattern sensitivity. It is widely used in the LAN, PON, other optical fiber communication systems and optical fiber sensor systems.

### **Features**

Low PDL

Low Excess Loss

Good environmental Stability

### **Applications**

Optical Fiber Communication Systems

Optical Fiber CATV

Optical Amplifiers

Optical Access Networks/LAN

Monitoring Systems

Optical Fiber Sensor

### **Specifications**

Type	Multi-Mode			
Wavelength(nm)	850/1300			
Star Structure	2*2	4*4	8*8	16*16
Tree Structure	1*2	1*4	1*8	1*16
Typical Excess Loss(dB)	0.7	1.5	2.0	3.0
Max Insertion Loss(dB) @50/50	3.9	8.4	11.8	16.0
Uniformity(dB)	0.5	1.0	1.5	2.0
Fiber Type	Coring 50/125 or 62.5/125			
Operating Temperature(°C)	-40~+75			
Storage Temperature(°C)	-40~+85			
Packing Type	Customer Specify			
Industry Standard	Telcordia GR-1221-CORE			
Selectable Packing Size	① $\phi$ 3.0X50 (Stainless steel sleeve packing) ② 90X20X9 ③ 100X80X10 ④ 120X80X18 ⑤ 140X114X18			



## ***Fused Optical Couplers----19" Rack Type Optical Coupler***

### **Features**

19" 1U standard type

Adapter or pigtail output

Optical Connector FC/PC,FC/APC,SC/PC,ST etc.

Applicable for various kinds of optical coupler

Applicable for WDM



## Fused WDM---1310/1550nm Standard WDM

### Description

Joinwit produce a variety of WDM with the different isolation by basic unit or basic unit grade-connection methods. It is widely used in upgrade, expansion or introduction of new business of the optical fiber networks. The experiment and practice show its good quality and high performance.



### Features

- Low Insertion Loss
- High Isolation
- Low PDL
- Good directivity
- Good environmental Stability

### Applications

- Optical Fiber Communication Systems
- Optical Fiber CATV
- Optical Fiber Test Equipment
- Optical Fiber Access Networks
- Optical Fiber Sensors

### Specifications

Type	Multiplexer	Demultiplexer		
		Standard	High Isolation	Ultra Isolation
Wavelength(nm)	1310/1550nm			
Bandwidth(nm)	± 15			
Max Insertion Loss(dB)	0.35	0.35	0.75	1.0
Mini Wavelength Isolation(dB)	18	18	30	40
± 10nm bandwidth Typical Isolation(dB)	20	20	37	45
Directivity(dB)	>60			
PDL(dB)	<0.1			
Max bearing power(mw)	300			
Max Tensile Strength(N)	5			
Operating Temperature(°C)	-40~+70			
Storage Temperature(°C)	-40~+85			
Packing Type	Customer Specify			
Industry Standard	Telcordia GR-1221-CORE			
Selectable Packing Size	① ∅ 3.0X50 (Stainless steel sleeve packing) ②90X20X9 ③100X80X10 ④120X80X18 ⑤140X114X18			

## Micro Optics Products----1310/1550nm WDM

### Features

- Wide Operating Wavelength Range
- Low insertion loss
- Ultra Flat Wide Passband
- High channel isolation
- High stability and reliability
- Epoxy free on optical path

### Applications

- System Monitoring
- WDM system
- Transmitters and Fiber lasers
- Fiber optic amplifier
- Fiber optic Instruments



### Specifications

Parameter		MWDM-35/53
Pass Channel Wavelength Range (nm)		1520~1600(or 1250~1350)
Reflect Channel Wavelength (nm)		1250~1350(or 1520~1600)
Insertion Loss (dB)	Reflect Channel	≤0.5
	Pass Channel	≤0.6
Insertion Loss Variation (dB)		<0.3
Isolation	Reflect Channel	>12
	Pass Channel	>30
Insertion Loss Temperature Sensitivity(dB/°C)		<0.005
Polarization Dependent Loss (dB)		<0.1
Polarization Mode Dispersion (ps)		<0.1
Directivity (dB)		>60
Return Loss (dB)		>50
Power Handling (mW)		300
Operating Temperature (°C)		0~+70
Storage Temperature (°C)		-40~+85
Fiber Type		Corning SMF-28
Package Dimension (mm)		φ5.5×L34 (L38 for 900um Jacket)

### Ordering Information

Micro-WDM	Wavelength	Fiber Type	Fiber Length	In/Out Connector
	35=1310 pass/1550 reflect	1=Bare Fiber	1=1 Meter	0=None
	53=1550 pass/1310 reflect	2=900um Jacket	2=2 Meter	1=FC/APC
		3=3mm Cable		2=FC/PC
				3=SC/APC
				4=SC/PC
				5=ST
				6=LC

## Micro Optics Products ----FTTx 1310/1490/1550nm WDM

### Features

Low insertion loss  
Ultra Flat Wide Passband  
High channel isolation  
High stability and reliability  
Epoxy free on optical path  
Bi-Directional



### Applications

ONU, OLT Equipments  
Fiber-to-Home, Premises  
Transmitters and Fiber lasers  
WDM system  
CATV system

### Specifications

Parameter	FTTH	
Pass Channel Wavelength Range (nm)	1550+/-10	
Reflect Channel Wavelength (nm)	1310±50/1490+/-10	
Insertion Loss (dB),	Reflect Channel	≤0.4
	Pass Channel	≤0.6
Insertion Loss Variation(dB)	< 0.2	
Isolation	Reflect Channel	> 20
	Pass Channel	>30
Directivity (dB)	>55	
Return Loss (dB)	> 50	
PDL(dB)	<0.1	
PMD(ps)	<0.1	
Power Handling (mW)	300	
Operating Temperature (°C)	0~+70	
Storage Temperature (°C)	-40~+85	
Package Dimension (mm)	Φ5.5 × L34 (L38 for 900um Jacket)	

### Ordering Information:

FTTH WDM	Wavelength	Fiber Type	Fiber Length	In/Out Connector
	15=1550 pass/1310&1490 reflect 34=1310&1490 pass/1550 reflect	1=Bare Fiber 2=900um Jacket 3=3mm Cable	1=1 Meter 2=2 Meter	0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC



## Micro Optics Products ---CWDM Moudule

### Features:

- Low insertion loss
- Wide pass band
- High isolation
- High stability and reliability
- Epoxy free on optical path

### Applications:

- CWDM systems
- Line Monitoring
- Fiber Optical Amplifier
- CATV Fiber Optic System



### Specifications:

Type		4 Channels	8 Channels
Insertion loss (dB)		≤2.0	≤3.5
Central wavelength (nm)		1271, 1291, 1311, 1331, 1351, 1371, 1391, 1411, 1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611	
Channel space (nm)		20	
Channel bandwidth (nm)		$\lambda_c \pm 6.5$	
Channel flatness (dB)		≤0.4	
Channel uniformity (dB)		≤1.0	
Isolation (dB)	Demux adjacent channel	≥30	
	Demux non-adjacent channel	≥40	
	Mux	≥15	
Directivity (dB)		≥55	
Return loss (dB)		≥50	
PDL (dB)		≤0.15	
PMD (ps)		≤0.1	
Wavelength thermal stability (nm/°C)		≤0.003	
Insertion loss thermal stability (dB/°C)		≤0.005	
Power handling (mW)		≤500	
Operating temperature (°C)		0 ~ +70	
Storage temperature (°C)		-40 ~ +85	

**Note:** The above specification is without connector  
Other specifications can be made on customer request

### Ordering Information

CWDM	Type	Port Number	Operating wavelength	Pigtail Type	Connector Type	Package Size
	M=MUX	1X2	1471nm	0=250um	FC/APC	Black Case
	D=DMUX	1X3	1491nm	1=900um	SC/APC	Module
		1X4	1511nm	2=2mm	LC/PC	LGX Box
			etc.	3=3mm	etc.	Others specify
				4=other		

## Micro Optics Products ---Isolator (ISO)

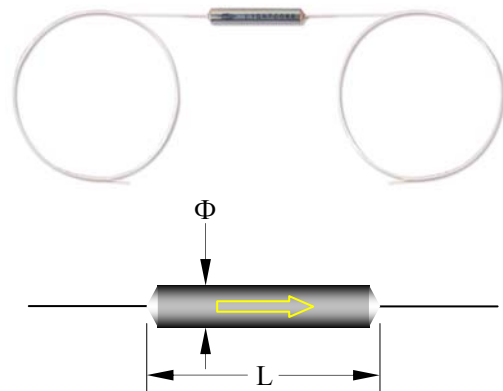
### Features

isolation  
insertion loss  
return loss

### Applications

EDFA  
Communication Systems  
Testing Instruments

### Specifications



High  
Low  
High

Type	Normal Size				Mini Size	
	Single Stage		Dual Stage		Single Stage	Dual Stage
Operating Wav. (nm)	1310±15 or 1550±15					
Grade	P	A	P	A	A	A
Peak Isolation (dB)	42	40	56	53	≥40	≥50
Minimum Isolation (dB)	32	30	52	50	≥30	≥46
Insertion Loss (dB)	≤0.4	≤0.6	≤0.6	≤0.8	≤0.6	≤0.8
PDL(dB)	≤0.05	≤0.1	≤0.1	≤0.15	≤0.1	≤0.1
PMD(ps)	≤0.2	≤0.25	≤0.05	≤0.07	≤0.25	≤0.07
Return Loss (dB)	65/60	60/55	65/60	60/55	55/55	55/55
Power Handling(mw)	≤500					
Operating Temperature℃	0~+70					
Storage Temperature℃	-40~+80					
Dimensions (mm)	Φ5.5× L30				Φ3.0× L26	

**Note:** The above specification is without connector  
Other specifications can be made on customer request

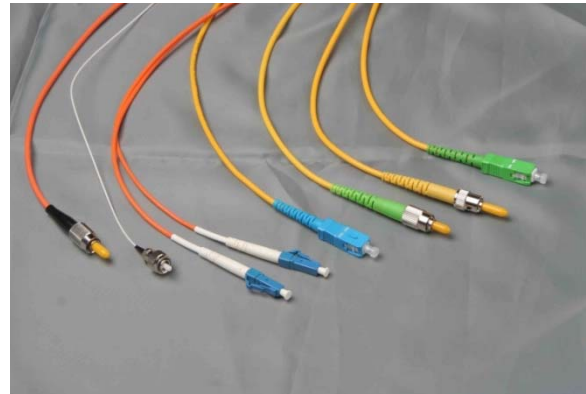
### Ordering Information

ISO	Type	Grade	Operating wavelength	Pigtail Type	Fiber Type	Connector Type	Package Size
	S=Single Stage D=Dual Stage	P=Perfect A=Average	10=1310nm 50=1550nm and etc.	1=250um 2=900um	SMF-28 HI1060 50/125 62.5/125 Others Specify	FC/UPC FC/APC etc.	N=Normal Size (Φ5.5×L30) M=Mini Size (Φ3.0×L26)

## Optical Cable Patch Cords & Pigtails

### Description

The optical Fiber Connectors (Commonly we call Patch Cords) is a length of optical cable with connectors fixed on two ends to realize the optical path active connection. Pigtail is a length fiber cable with only one connector fixed on one end. If both sides of the connector or its end-face are different, we call it hybrid patch cord. According to the transmission medium, it divides Single Mode and Multi Mode; according to the connector structure type, it divides FC,SC,ST,MU,D4,E2000,LCetc.;according to the polished ceramic end-face, it divides PC,UPC and APC.



### Features

- Low Insertion Loss
- High Return Loss
- Good Repeatability
- Good Exchangeability
- High Temperature Stability

### Applications

- Optic-fiber Communication Systems
- Optic-fiber Data Communications
- Optic-fiber Access Networks
- Optic-fiber CATV
- LAN
- Test Equipment
- Optic-fiber Sensors

### Specifications

Item	Unit	FC,SC,ST/PC	FC,SC,ST/UPC	FC,SC,ST/APC
Insertion Loss	dB	$\leq 0.20$	$\leq 0.20$	$\leq 0.30$
Repeatability	dB	$\leq 0.10$		
Exchangeability	dB	$\leq 0.20$		
Return Loss	dB	$\geq 45(\text{SM})$	$\geq 50(\text{SM})$	$\geq 60(\text{SM})$
Fiber Type		Corning SMF-28TM, 9/125um (SM), 50/125um or 62.5/125um(MM)		
Operating Temperature	°C	-40~+80		
Storage Temperature	°C	-40~+85		
Durability	time	> 1000 times		
Industry Standard		Telcordia GR-326-CORE		

### Note:

Specifications of each type patch cord cannot be listed here one by one because of variety of different kinds of patch cords. So please kindly to contact us for any more details!

## Bunched (Ribbon) Fan-out Optical Cable Patch Cords

### Description

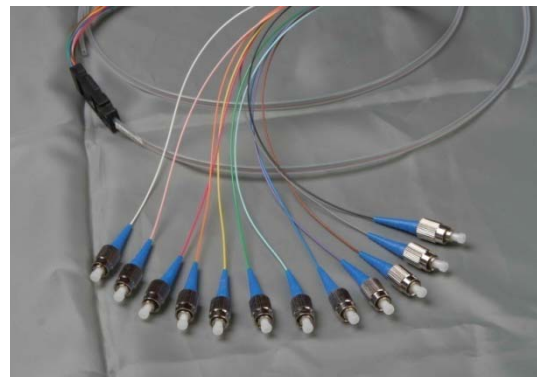
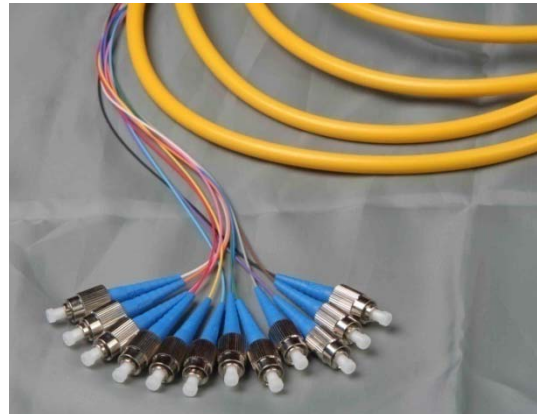
Bunched (Ribbon) Fan-out Optical Patch Cord is protected and separated fiber ribbon (general 12 cores) with connector on the end to realize the separate fiber connection with the ODF. The quality and performance is reliable and stable.

### Features

- Low Insertion Loss
- High Return Loss
- Good Repeatability
- Good Exchangeability
- High Temperature Stability

### Applications

- ODF(Optical Distribution Frame)
- Optic-fiber Communication Systems
- Computer Networks
- Optic-fiber Access Networks
- Optical Fiber Test Equipment



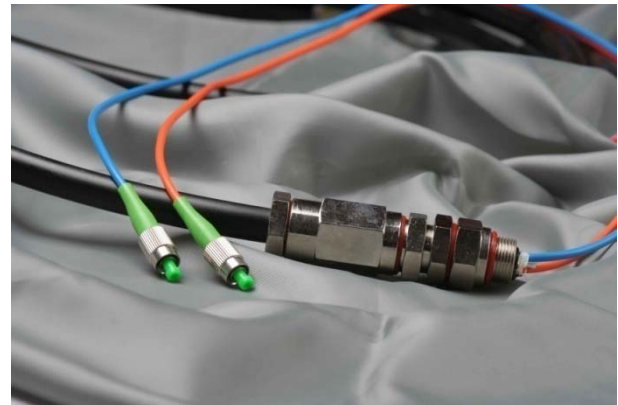
### Specifications

Item	FC, SC, ST...		
	PC	UPC	APC
End-Face Type	PC	UPC	APC
Insertion Loss (dB)	≤0.20	≤0.20	≤0.30
Repeatability (dB)	≤0.10		
Exchangeability (dB)	≤0.20		
Return Loss (dB)	≥45	≥50	≥60
Fiber Type	Corning SMF-28TM, 9/125um		
Operating Temperature (°C)	-25~+70		
Storage Temperature (°C)	-40~+85		
Durability (time)	> 1000 times		
Industry Standard	Telcordia GR-326-CORE		

## Water-proof Pigtails

### Description

Water-proof Pigtails is generally used in the severe field environment, so it greatly depends on the components' reliability. Joinwit employs the advanced technique and production equipment to ensure its good performance and environmental stability. Joinwit provides various types available for customers, including such as Simplex, Duplex and 4 cores...etc.



### Features

- High Performance
- High Tensile Strength; Anti-etched
- Waterproof and Anti-corrosive
- Easily Installed

### Applications

- Optic-fiber Communication Systems
- Optic-fiber CATV
- Connecting between Backbone Optical Cable and Receiver

### Specifications

Item	FC/APC	SC/APC
Insertion Loss (dB)	$\leq 0.30$	
Repeatability (dB)	$\leq 0.10$	
Exchangeability (dB)	$\leq 0.20$	
Return Loss (dB)	$\geq 60$	
Fiber Type	Corning SMF-28TM, 9/125um	
Operating Temperature °C	-25~+70	
Storage Temperature °C	-40~+85	
Industry Standard	Telcordia GR-326-CORE	

## Optical Fiber Adapter & Hybrid Adapter

### Description

The optical Fiber Adapter is the connection part in the active optical connectors. Joinwit provides the full range of adapters including FC, SC, ST and hybrid adapters. These adapters are widely used in ODF, optic-fiber communications equipment, optical fiber instruments etc. The performance is stable and reliable.

### Features

- Accurate Dimensions
- Good Exchangeability
- Good Repeatability
- Good wear Resistance
- Good Temperature Performance

### Applications

- Optic-fiber Communication Systems
- Optical Fiber Sensor
- Optical Fiber Test Equipment
- Optic-fiber CATV



### Specifications

Item	FC/PC	FC/APC	SC/PC	SC/APC	ST
Insertion Loss (dB)	$\leq 0.20$				
Repeatability (dB)	$\leq 0.10$				
Exchangeability (dB)	$\leq 0.20$				
Ferrule Material	Ceramic				
Operating Temperature °C	-40~+80		-25~+70		-40~+80
Storage Temperature °C	-40~+85				
Industry Standard	Telcordia TA-NWT-001209				

## ***Hybrid Adapter & Optical Bare Fiber Adapter***

### **FC(Male)-LC(Female), LC(Male)-SC(Female) Hybrid Adapter**

#### ***Description***

Joinwit design the practical and exquisite FC-LC,LC-SC hybrid adapters to meet the customers' special requests. The hybrid adapters solve the converted connection between 1.25mm and 2.5mm ferrules. In the mean time, it also solve the problem of large insertion loss and damageable disadvantage during the converted connection of optical patch cords. It is a good choice for converted connection between the optic fiber equipment and other optical fiber test instruments.



### **Optical Bare Fiber Adapter**

#### ***Description***

The bare fiber adapter is used to connect the bare end-face of the optical fiber or optical fiber cable. Together with test instruments with FC or SC connectors, they could be easily used for the intuitionistic inspection and faults identification. It is applicable for the lab research and field work.



#### ***Applications***

- Optical Fiber Communication System
- Optical Fiber Sensor
- Optical Fiber Test Equipment
- Optical Fiber CATV

## Optical Fiber Attenuators

### Fixed Attenuators

#### **Description**

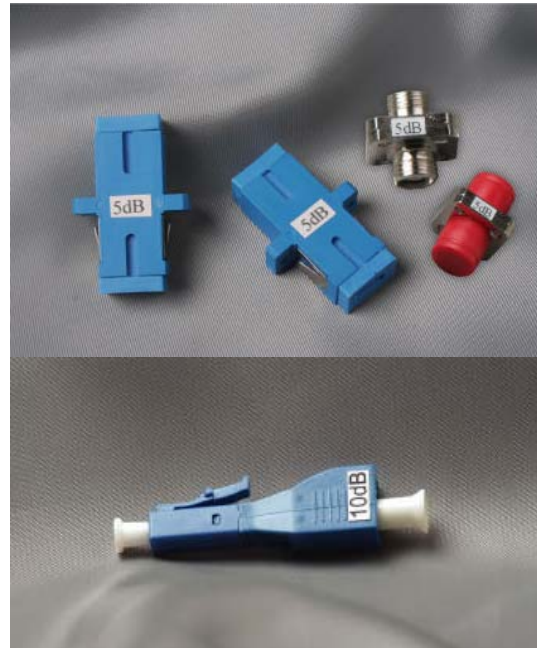
Fixed Attenuator is a precise passive component which provides different fixed attenuation value to meet optical fiber projects' demands. Joinwit's fixed attenuator is made of high precision adapter and features high attenuation precision and good performance.

#### **Features**

High Attenuation Precision  
Good Stability  
Small size

#### **Applications**

Optic-fiber Communication Systems  
Optical Fiber Sensor  
Optical Fiber Test Equipment  
Optic-fiber CATV



#### **Specifications**

Item	FC/PC	SC/PC	ST
Attenuation value (dB)	3,5,8,10,15,20		
Attenuation precision (dB)	± 10%		
Operating Temperature °C	-25~+70		
Storage Temperature °C	-40~+85		
Industry Standard	Telcordia TA-NWT-001209		



## Optical Fiber Attenuators

### In-line Fixed Attenuator

#### Applications

Optic-fiber Communication Systems  
Optical Fiber Sensor  
Optical Fiber Test Equipment  
Optic-fiber CATV



#### Specifications

Item	Standard	Wavelength Flattened	Broadband
Operating Wavelength(nm)	1310 or 1550		1310/1550
Bandwidth(nm)	±20	±40	
Attenuation value (dB)	1~30		
Return Loss (dB)	≥40		
Operating Temperature °C	-40~+85		
Storage Temperature °C	-40~+85		
Industry Standard	Telcordia TA-NWT-001209		

### Variable Attenuator

#### Description

The variable optical attenuator could continually and variably attenuate the light intensity in the optical fiber transmission.



#### Specifications

Item	Specification
Operating Wavelength(nm)	1310/1550
Attenuation value (dB)	0.5~30
Excess Loss (dB)	<0.3
Operating Temperature °C	-40~+85
Storage Temperature °C	-40~+85
Industry Standard	Telcordia TA-NWT-001209

## Optical Fiber Attenuators

### Collimator Variable Optical Attenuator

#### **Description**

The collimator variable optical attenuator is an useful attenuation tool, which the attenuation value can be adjustable by mechanical adjustment. It employs the principle of light shading between the two collimators to control the attenuation value. It features wide attenuation range, high precision, low insertion loss and compact size.



#### **Applications**

Optic-fiber Communication Systems

Optic Passive components test

Optics Lab Use

#### **Specifications**

Item	1310	1550	SM DW	MM SW
Wavelength(nm)	1310±40	1550±40	1310±40&1550±40	850±40 or 1310±40
Attenuation Range(dB)	0.6~60	0.6~60	0.8~60	0.8~40
Insertion Loss(dB)	0.6	0.6	0.6	0.8
Return Loss(dB)	50			30
Adjustment Precision(dB)	0.02			
Fiber Type	SMF-28			50/125 or 62.5/125 MM
PDL	0.15			
Operating Temperature °C	-25~+70			
Storage Temperature °C	-40~+85			

#### **Note:**

**Output connector type can be made on customers' request**

## Optical Fusion Splicer-----JW4105

### Features

- Both X and Y axis can be viewed
- Large multiple to ensure the fiber core can be visible
- Turn-over display screen to use conveniently
- Inner light to set fiber at night
- Core to core alignment; Align fibers Automatically/Manually
- Auto calculate splicing loss
- Alternating current / Direct Current available, suitable for various situations
- Screen menu indication and easy operation
- Small volume and light weight



### Specifications

Type	JW4105
Applicable Fibers	SM (ITU-T G.652), MM (ITU-T G.651), DS (ITU-T G.653), NZDS (ITU-T G.655) CS and ED SM core 4-14um, MM core 50, 62.5um; 125um outer diameter Fiber Cleaved Length; 16mm (Standard)
Fiber Count	Single
Standard Performance	Average splicing loss: 0.01dB MM/0.02dB SM (standard measure) Typical splicing time:10s, typical heating time:30s for 60mm sleeves, wave-return loss better than 60dB
Splicing Programs	5 units factory setting SM program, 5 units factory setting MM program,10 units user setting program(SM and MM), the user can select one of them upon its needs.
Heater	Built-in heater; Heating mode Auto/Manual
Storage of plice result	5000 results
Interface	Video out put RS232
Language Display	Simplified Chinese, Traditional Chinese, English and Korean
Display Mode	5 inches LCD monitor; Display X-axis and Y-axis at the same time, display current time and date, display current work mode
Working Mode	Program/Splicing/Heating: Automation or manual optionally
Operating condition	Temperature: -10~50℃ Storage:-40~60℃ Humidity: <95%RH (without dew) Work altitude: 0~4000 meters
Power Supply	Alternating Current: 220V±15% 50Hz 30W; Direct current:10~13V 25W Examining Power supply real time(optional)Inner Li-ion battery charger and AC adaptor
Dimensions/ Weight	172mm(length) x180mm (width) x185mm (height) / 4.6kg

### Note:

JW5001 Optical Cable Emergency Tool Kits (picture as above) for JW4105 Optical Fusion Splicer can be optional on customer request.

## OTDR-----JW3302-Platform Type

### Features

- Large colorful LCD display with auto or manual adjustment of contrast
- Backlight LCD display supports night operation
- Easy operation with trace graphic display
- Trace storage function
- RS232/USB data upload port
- PC analysis software for analyzing and reporting previously stored data
- Auto off function conserving battery life
- DC/AC power supply
- Auto charging, 5 hours operation for one charge



### Basic Applications

- Measure the length of optical fiber and cable
- Measure the distance between two points on the optical fiber and cable
- Locate faults and ruptures of optical fiber can cable
- Display distribution curve of optical fiber and cable loss
- Measure attenuation coefficient of optical fiber and cable
- Measure loss between two points on the optical fiber can cable
- Measure loss of tie-ins
- Measure reflection of reflection evens of optical fiber and cable for a specific event(transmission quality changed due to faults caused by welding,connecting, bending.



### Specifications

ITEM	JW3302-Platform
Dynamic Range(dB)	24/24
Wavelength (nm)	1310/1550±20
Fiber type	Single Mode Fiber
Emitter Type	LD
Connector Type	FC-PC(Interchangeable SC,ST)
Display Type	Colorful LCD
Selectable ranges(Km)	1.3、2.5、5、10、20、40、80、120
Selectable pulse widths	12ns、30ns、100ns、275ns、1 μ s、2.5 μ s
Event deadzone(m)	10
Attenuation deadzone(m)	25
Measurement Time	15s、30s、1min、2min、3min
Sample Range(m)	1~10
Sampling Points	16000 Points(Maximum)
Attenuation Detect Accuracy	±0.05dB/dB
Reflection Detect Accuracy	±4dB
Distance Measure Accuracy	±(1 m + 5×10 <sup>-5</sup> ×Distance + sampling space)
Data Storage	300 test traces
Data transmission	RS232/USB data upload port,
Power Supply	NiMH chargeable battery/AC adapter
Battery Operating Time	Support>= 3.8 hours continuous operation on one charge
Operating Temperature	0℃ to 50℃
Storage Temperature	-20℃ to 70℃
Relative Humidity	0 to 95%(non-condensing)
Dimensions (Platform Version)	196×100×60mm
Weight (Platform Version)	870g

### Note:

JW5002 Fiber Optic Cleaning Tool Kits (picture as above) for JW3302 OTDR can be optional on customer request.

## OTDR-----JW3302-Handheld Type

### Features:

- Handheld、 lightweight and convenience for carrying
- Advanced anti-reflective TFT LCD,visible clearly in field
- 1.6m extra-short event dead zone
- 0.25m high resolution, 65535 sampling points
- Fast auto measurement,one-button operating
- Double USB interfaces, supporting USB stick and direct cable download to PC via ActiveSync
- Supporting Bellcore GR196 file format in writing or reading
- WinCE operation system, double operating interface of Chinese and English
- Built-in lithium battery with high capacity for over 10 hours of operating life
- Universal FC/PC,FC/SC,FC/ST connector type, it's convenient for surface cleaning
- Unique function of updating system on-line, returning to factory is unnecessary
- Convenient visual fault locator(VFL) combined
- Intelligent indicating of remaining capacity of battery and low battery indication.



### Basic Applications

- Measure the length of optical fiber and cable
- Measure the distance between two points on the optical fiber and cable
- Locate faults and ruptures of optical fiber can cable
- Display distribution curve of optical fiber and cable loss
- Measure attenuation coefficient of optical fiber and cable
- Measure loss between two points on the optical fiber can cable
- Measure loss of tie-ins



### Specification:

ITEM	JW3302-Handheld
Dynamic Range	<b>28/26dB</b>
Wavelength	1310nm/1550nm/nm±20nm
Applicable Fiber	Single Mode
Distance Measurement Accuracy	±(1m + sample space + 0.003% * measurement distance)
Event Dead Zone <sup>2</sup>	≤1.6m
Sampling Resolution	0.25, 0.5, 1, 2, 4, 8, 16m
Distance Range	4, 8, 16, 32, 64, 128, 256km
Pulse width	10, 30, 80, 160, 320, 640, 1280, 5120, 10240ns
Loss threshold	0.01dB
Sampling points	Memory capacity
Linearity	0.05dB/dB
Memory capacity	≥800 Traces
IOR setting	1.00000~2.00000
Display	Color LCD (touch screen)
Interface	USB, Min-USB
VFL	650nm±10nm, 2mW(typical); CW/1Hz
Language	English
Optical Connector	FC/UPC (universal connector)
Power Supply	DC:15V~20V(3A), (AC adapter 100~240V,50/60Hz,1.5A),Built-in Lithium battery:
Dimensions	210mm*100mm*60mm
Weight	about 1kg

### Note:

JW5002 Fiber Optic Cleaning Tool Kits (picture as above) for JW3302 OTDR can be optional on customer request.

## ***Field Fiber Microscope-----JW5003***

JW5003 Field Fiber Microscope is a low cost and high quality fiber inspection tool which is available in 400X magnification and the white LED light to provide coaxial illumination to connector end-faces. This is method of illumination products high-resolution detail of end-face scratches, defects and contamination.



### **Features of JW5003 Field Fiber Microscope**

- **Portable and easy to use, ideal for field operation**
- **Magnification:400 times, can be used in both SM and MM fibers**
- **Optical Connector: 2.5mm universal adapter**
- **Color: Black or white**
- **Power Supply: AAA batteries**
- **Battery Life: 40hours**
- **A specialized design to protect the eyesight**

## Probe Fiber Microscope-----JW5005 series

**JW5005 Probe Fiber Microscopes** includes two basic parts of Fiber Inspection Probe and display (Monitor).

The Fiber Inspection Probe can offer 600 times magnification for the fibers of 125um diameter (Both SM and MM fibers are included) when work with 9 inch display. And the enlarged picture can be sent to the display through a video signal output port, so that the status of the fiber end-face will be showed clearly.



### Main Features of Inspection Probe

➤ **Convenient fiber inspection function**

Not only to inspect the fiber ends with male connectors directly, but also to inspect the fiber ends with female bulkhead adapters.

➤ **Offers different magnification when work with different monitors(Display)**

JW5005 Fiber inspection probe enlarges the picture through an optical system and output them by CCD camera. And the larger the display is, the more magnification it offers. From following list, you will see the kinds of magnification which are normally be used:

Display Index	2.5inch	3.5inch	5.6inch	9inch	15inch	17inch
Diameter (mm)	21	25	45	81	123	145
Magnification	168X	200X	360X	600X	980X	1280X

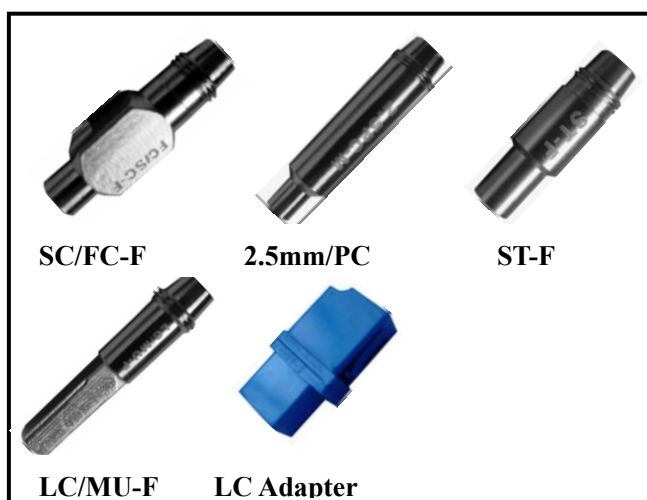
Note: 1) The data of diameters above are measured directly.

2) The magnification is calculated based on the fiber of 125um

➤ **Different tips to meet fiber inspection with different fiber connectors and adapters**

To inspect the fiber ends with different connector types, kinds of tips are needed, following are the tip pictures:

#### Tips for Standard Package



#### Optional Tips with extra cost



## Probe Fiber Microscope-----JW5005 series

### Monitors Introduction

According to actual inspection requirements, there are four type monitors normally can be required to work with the JW5005 Fiber Inspection Probe. Below are the details of those monitors.

#### 1) JW5005-V (2.5inch Display)

- Magnification: **168x**
- Resolution: **1um**
- Display type: **TFT-LCD (225000pixel)**
- Output port: **USB2.0**
- Image diameter: **21 mm**
- Memory function (SD card), 8G max capability, no need any further software, can directly be connected to PC for record、edit or distant transport.
- SD card can directly be put in for logging and recording, no need to use PC for another conversion.
- Brightness and lightness adjustable, convenient for observing.
- Voice and video recording 、playing function.
- Battery Life: 8~9 hours
- Power: lithium battery and battery charger 110~220V / 5V 2A



**JW5005-V**

#### 2) JW5005-H (3.5inch Display)

- Magnification: **200x**
- Resolution: **1um**
- Display type: **TFT-LCD (25000pixel)**
- Image diameter: **25 mm**
- Brightness and lightness adjustable, convenient for observing.
- Battery Life: 5~6 hours
- Power: lithium battery and battery charger 110~220V / 12V
- Output port: **USB2.0 (Optional)**



**JW5005-H**

#### 3) JW5005-D (5.6 inch Display)

- Magnification: **360x**
- Image diameter: **45 mm**
- Brightness and lightness adjustable, convenient for observing.
- Battery Life: 3 hours
- Power Supply: Battery and AC power supply can be alternative



**JW5005-D**

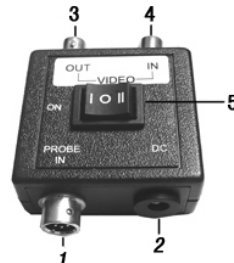


## Probe Fiber Microscope-----JW5005 series

### 4) JW5005-T (9 inch Monitor)

The image which detected by JW5005 Fiber Inspection Probe can be transmitted to desktop monitor by DM06 multi-functional convertor, in order to make the image more clearly. JW5005-T type Fiber Microscope is the most applicable in the Optical Components Producing and Inspection!

- Magnification: **600x**
- Image diameter: **81 mm**
- Power Supply: **AC Power Supply Adapter**
- **The main functions of DM06:**
  1. Input port of JW5005 Fiber Video Microscope
  2. Connection Port of DC power
  3. Video output port
  4. Input port of Video (Such as desktop Microscope)
  5. Switch Button



JW5005-T

### Ordering Information for JW5005 Series Fiber Inspection Probe

JW5005-X (Includes four choices of JW5005-V, JW5005-H, JW5005-D and JW5005-T)

#### Standard Configuration

Mode	Name	JW5005-V	JW5005-H	JW5005-D	JW5005-T
JW5005	Fiber Inspection Probe	1pcs	1pcs	1pcs	1pcs
JW25	Handheld Display(2.5inch)	1pcs			
JW35	Handheld Display (3.5inch)		1pcs		
JW56	Palm Display (5.6 inch)			1pcs	
JW90	Desktop Monitor (9 inch)				1pcs
DM06	Multi-functional Convertor				1pcs
2.5PC-M	Male Tip	1pcs	1pcs	1pcs	1pcs
LC Adapter	Male Tip	1pcs	1pcs	1pcs	1pcs
FC/SC-F	Female Tip	1pcs	1pcs	1pcs	1pcs
ST-F	Female Tip	1pcs	1pcs	1pcs	1pcs
LC/MU-F	Female Tip	1pcs	1pcs	1pcs	1pcs
Cable	USB Cable and Video Cable	1pcs each			
	Earphone	1pcs			
	SD Memory Card and Card Reader	1pcs each			
	Battery and Battery Charger	1pcs each	1pcs each	1pcs each	
	AC Power Supply Adapter			1pcs	1pcs
	Soft Carrying Case	1pcs	1pcs	1pcs	1pcs
	Instruction Manual	1pcs	1pcs	1pcs	1pcs

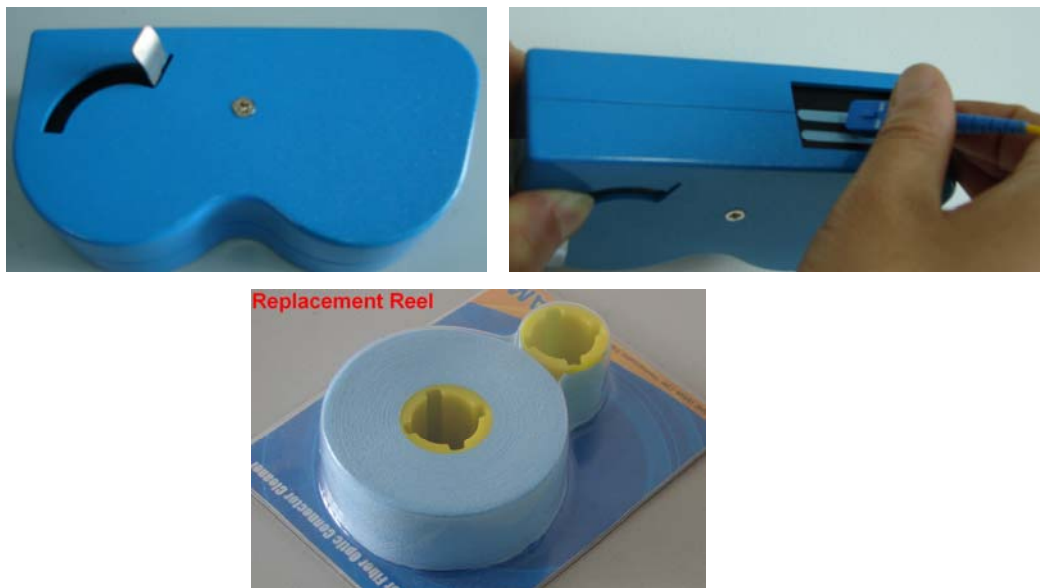
#### Optional Accessories

Model	Name	Explanation	Qty
SC-F-APC	Female Tip	To inspect APC female fiber ends of SC	1
FC-F-APC	Female Tip	To inspect APC female fiber ends of FC	1
E2000-F	Female Tip	Female Tip, to inspect PC female fiber ends of E2000	1
MU-M	Male Tip	To inspect male fiber ends of MU	1
2.5M-APC	Male Tip	To inspect APC male fiber ends of 2.5mm diameter connectors	1

## Fiber Connector Cleaner -----JW5006

### Features

- Safe and environment friendly: No chemicals and other waste such as alcohol, methanol, cotton tips or lens tissue; Safe to operator and no hazard to environment; No ESD contamination.
- User friendly: With few simple steps, ideal cleaning result can be achieved, whether the connector is contaminated by oil or dust.
- Excellent result: Fast, effective, repeatable cleanings
- Economical: New design for low cost; One unit is good for over 500 cleaning; the cartridge is replaceable; Easy to replace. Wide application areas: It can be used in lab environment. It is also suitable for fiber optic construction, maintenance, and equipment manufacture.
- Wide usability: It can be used for SC, FC, ST, D4, LC, DIN and Bionic connectors. Cleaning tape is replaceable, thus reducing long-term cost



### Specification

<b>Type</b>	<b>JW5005 Fiber Connector Cleaner</b>
Cleaning Times	Over 500 times per reel
Cleaning Result	-20 to -50 dB (Return Loss)
Operating Temperature	-10°C to +50°C
Weight	100 g

### Ordering Information

Name	Function description	Quality
<b>Standard Accessories</b>		
JW5005 Fiber Cleaner	Cleaning the fiber connector ferrule (internal reel tape is included)	1 Set
<b>Optional Accessories</b>		
Reel Tape	Replacement Reel Tape of JW5005, can be sold with extra cost	1pcs

## *Electromotive Fiber End-face Cleaner -----JW5007*

The JW5007 electromotive fiber-end face cleaner is designed not only to clean the male connector ends, but also to clean the female bulkhead adapters (Ferrule end-faces inside the adapters). It is a convenient and simple cleaning tool in fiber network maintenance and fiber components production.



### Features

- Clean fiber end-face of PC and APC ferrule in diameter 2.5mm & 1.25mm.
- Clean fiber end-face for male connector of ferrule and female connector of flange.
- Cleaning directly and without any cleaning liquids
- Only 3 seconds to finish the cleaning work and the cleaning grade up to 88%~98%
- Suitable for complex environment and field operation
- Low cost and high quality cleaning material
- Two AA batteries and continues 100 hours operation

### **Note:**

JW5007 electromotive cleaner, is an accessorial tool for the JW5005 series Fiber Microscope, It mainly used for fiber end-face besmirch cleaning. It can be used for PC, APC (female) end-face cleaning inside 2.5mm, 1.25mm deep aperture. When do cleaning, press the ON/OFF button for 3 seconds can finish the cleaning.

### Cleaning Materials Introduction

2.5mm Cleaning Swab: 500pcs/box

1.25mm Cleaning Swab: 300pcs/box

**Note:** The cleaning times for each swab cannot be more than 10 times and each cleaning time cannot be more than 3 seconds



## *Pen-style Fiber Cleaner -----JW5008*

The **JW5008 Pen-style fiber cleaner** is designed specially to only clean the female deep bulkhead adapters (Ferrule end-faces inside the adapters).It is a convenient and simple cleaning tool in fiber network maintenance and fiber components production.



### Features

- Over 500 cleaning times for fiber end-faces
- Cleaning grade up to 95%~99.9%
- For oil stain and water, the cleaning result is much better than traditional cotton swabs
- Support 1.25mm (LC, MU) and 2.5mm (SC,FC,ST)
- Pocket size and easy to use
- Low cost and high performance

## Pipeline & Cable Locator-----JW6102

### Transmitter

#### Technical specification of Transmitter:

Signal frequency:	
Router and depth mode	480Hz, 30.72 KHz
Induct mode	30.72 KHz
Output Pressure	0-500VP-P automatic/manual adjust due to the insulated instance
Output wave shape	sine wave
Power source	12VDC 4.5AH in the Ni-MH cell
Peak output power	10W
c. Inductive clamp	30.72 KHz

### Receiver

#### Technical specification of Receiver:

Power loss	<1W
Power source	12VDC 1.5AH in the Ni-MH cell or 10 alkalescency batteries
Biggest test burying depth	4.5 meters (normal instance)
The test burying depth error	$\leq 0.05h \pm 5\text{cm}$ ("h" is pipeline depth)
The test route error	$\leq 5\text{cm}$ (normal condition)
The test insulated error	$\leq 25\text{M}\Omega$
Test the route and the efficient depth with Inject method	$\geq 20\text{Km}$ (normal instance)
Test the route and the efficient depth with Induct method	$\geq 3\text{Km}$ (normal instance)

Note: The objective pipeline has no insulated failure or other interruption in the above-mentioned range in the normal instances.

#### Environmental request

Operating temperature	-20 °C ~ +50 °C
Storage temperature	-40 °C ~ +70 °C
Relative humidity	10%~90%
Atmospheric pressure	86~106KPa
Environment noise	$\leq 60\text{dB}$



## *Tools for Fiber Cable*

### ***Lengthwise Fiber Cable Stripper***

Based on lengthwise function, we increase the design of double-blade.  
It is ingenious, time saving, labor saving.  
It is an absolutely necessary tool in Optical Cable Stripping.  
Used for stripping all kinds of optical cable lengthways( $\varnothing$  10~ $\varnothing$  30mm)



### ***Across and Lengthwise Fiber Cable Stripper***

Based on lengthwise fiber cable stripper, increased across stripping function.  
It can strip both across and lengthways.  
It is an absolutely necessary tool in Optical Cable Stripping.  
Used for stripping all kinds of optical cable lengthways( $\varnothing$  10~ $\varnothing$  30mm)



### ***Side Fiber Cable Ripper***

Use for stripping the protective covering of aluminum armor plastic and nonmetallic strengthen component optical cable.



### ***Fiber optic cable jacket slitter***

Fiber Optic Cable Jacket slitter is an efficient and indispensable tool for fiber optic cable termination. It easily slits the PVC cable jacket into two halves before crimping. In both field and plant applications, time is saved and consistency is resulted with this precise and innovative tool.

Cable can be processed

$\varnothing$  1.5~1.9MM

$\varnothing$  2.0~2.4MM

$\varnothing$  2.5~2.9MM

$\varnothing$  3.0~3.3MM



## *Optical Connector Introduction (For Power Meters & Light Sources)*

### Optical Adapters for Optical Power Meter Output

#### **Option 1: FC, SC, ST Interchangeable / 2.5mm universal connector adapter Port**

is the most commonly used connector type for Joinwit Optical power meters. It features:

**a) Interchangeable FC, SC, ST connector adapters**, which means the user can choose any of the FC, SC, ST adapters to be fixed well with the connectors. Changing the adapter is very simple: unscrew one and screw in the next. Please refer to the picture below for a better understanding.

**b) 2.5mm Universal connector adapter**. After unscrewing any of the interchangeable connector adapters, the user will see a fixed 2.5mm metal plug which we call a 2.5mm universal connector adapter. It can accept most of the 2.5mm diameter ferrule connectors, such as FC, SC, ST, DIN, E2000 and SMA. It means that with one plug a variety of connectors can be connected as long as the ferrule diameter is 2.5mm. These connectors however use only a

**push/pull mechanism** and cannot to be fixed or screwed. Please refer to the right picture for a better understanding.

**Note:** Usually, if no customer special requests, we will use this type connector port as the standard adaptor for our Handheld optical power meters.



#### **Option 2: LC, SC, ST, FC Interchangeable adapters Port (No Universal Adapter Available)**

To meet the requirements of the LC connector type, we specially released the **Option 2** interchangeable connector adapters. It features:

**a) LC, SC, ST, FC connector adapters can be interchangeable**, which means the user can choose any one of LC, SC, ST and FC adapters to be fixed well with the connectors. Changing the adapter is very simple, unscrew one and screw in the next. Please refer to the picture below for a better understanding.

**b) No universal connector adapter available.**

Please refer to the pictures below for a better understanding!



### Optical Adapters for Light Source Output

#### **Option 1: FC fixed connector Port**

FC fixed connector port type is the most commonly used in Optical Light Sources with features of reliability and high accuracy in measurement!

**Note:** Usually, if no customer special requests, we will use this type connector port as the standard adaptor for our Handheld optical Light Source.

#### **Option 2: FC, SC, ST interchangeable connector Port**

**FC, SC, ST connector adapters can be interchangeable**, it means the user can choose any one of FC, SC, ST adapters to be fixed well with the connectors. Changing the adapter is very simple, unscrew one and screw in the next. Please refer to the picture below for a better understanding.

**Note:** Connecting directly with the 2.5 ceramic ferrule is not recommended in order to avoid any damage of the ceramic ferrule. Please connect with connectors after screwing the corresponding connector adapter.



To satisfy with customers' various requests for adaptors, we also can supply custom made adaptors according to customers' special requests. Detailed adapter pictures cannot be shown here individually, so please feel free to ask us if what you require is not presented here!