Grandway®

Shanghai Grandway Telecom Tech.Co.,Ltd

Grandway

Fiber Optic Testing Instrument

Established in 1996, Grandway Telecom Tech., has been focusing on telecom industry in the past 29 years.

Thanks to the efforts of each colleague, our instruments and FTTH ODN solutions are recognized by world's leading telecom operators, ISP, and telecom solution providers over 80 countries.

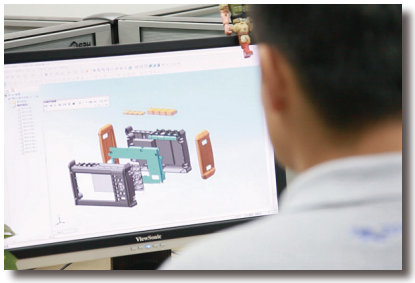
“Let’s go in the Grandway!”

Located in Haining Science and Technology Oasis, Zhejiang Province, Grandway factory has a total area of 4559.05 square meters.

For the hardware, our production and testing lines are equipped with high accuracy process and test instruments, and our advanced warehouse management system also helps us to store and deliver the goods fast and well.

For the manufacture team, we have hundreds of experienced workers, whose average education level is above senior high school, and have worked in electronics areas for over 5 years.

All of these, guarantee our production capacity to 300000-400000 sets/year with high quality, and easy to operate.



Certificate CN16/20677

The management system of

Shanghai Grandway Telecom Tech. Co., Ltd.

Unified Social Credit Code: 91310000607490704F
Business Registration Address: Room E-112, No. 63, Lane 919, Zhaojiang Road, Baihe Town, Qingpu District, Shanghai, P.R. China
Business Operation Address: 6F, Building 13, No. 99, Tianzhou Road, Xuhui District, Shanghai, P.R. China

has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities

Provision of sales and after sales services for communication equipment, apparatus, accessories, related testing instrument and optical sensors product

This certificate is valid from 10 May 2025 until 09 May 2028 and remains valid subject to satisfactory surveillance audits.

Issue 6. Certified since 10 May 2016

L. Moran

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Certificate CN19/20461

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Business Operation Address: 6F, Building 13, No. 99, Tianzhou Road, Xuhui District, Shanghai, P.R. China

has been assessed and certified as meeting the requirements of

ISO 45001:2018

For the following activities

Provision of sales and after sales services for communication equipment, apparatus, accessories, related testing instrument and optical sensors product

This certificate is valid from 23 April 2025 until 22 April 2028 and remains valid subject to satisfactory surveillance audits.

Issue 4. Certified since 23 April 2019

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Certificate CN02/00333.00

The management system of

Shanghai Grandway Telecom Tech. Co., Ltd.

Unified Social Credit Code: 91310000607490704F
Business Registration Address: Room E-112, No. 63, Lane 919, Zhaojiang Road, Baihe Town, Qingpu District, Shanghai
Business Operation Address: 6F, Building 13, No. 99, Tianzhou Road, Xuhui District, Shanghai, P.R. China

has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities

Provision of sales and after sales services for intelligent communication terminal, intelligent maintenance terminal, communication equipment, apparatus, accessories, related testing instrument, optical sensors product and optical distribution network equipement and equipement involved in fiber-to-the-home
Design and manufacture of optical fiber communication equipment related testing instruments
Manufacturing of intelligent communication terminals and intelligent maintenance terminals

This certificate is valid from 08 April 2025 until 07 April 2028 and remains valid subject to satisfactory surveillance audits.

Issue 17. Certified since 27 June 2002
Multiple certificates have been issued for this scope, the main certificate is numbered CN02/00333.00
Certified activities performed by additional sites are listed on subsequent pages.

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9001
14001
45001

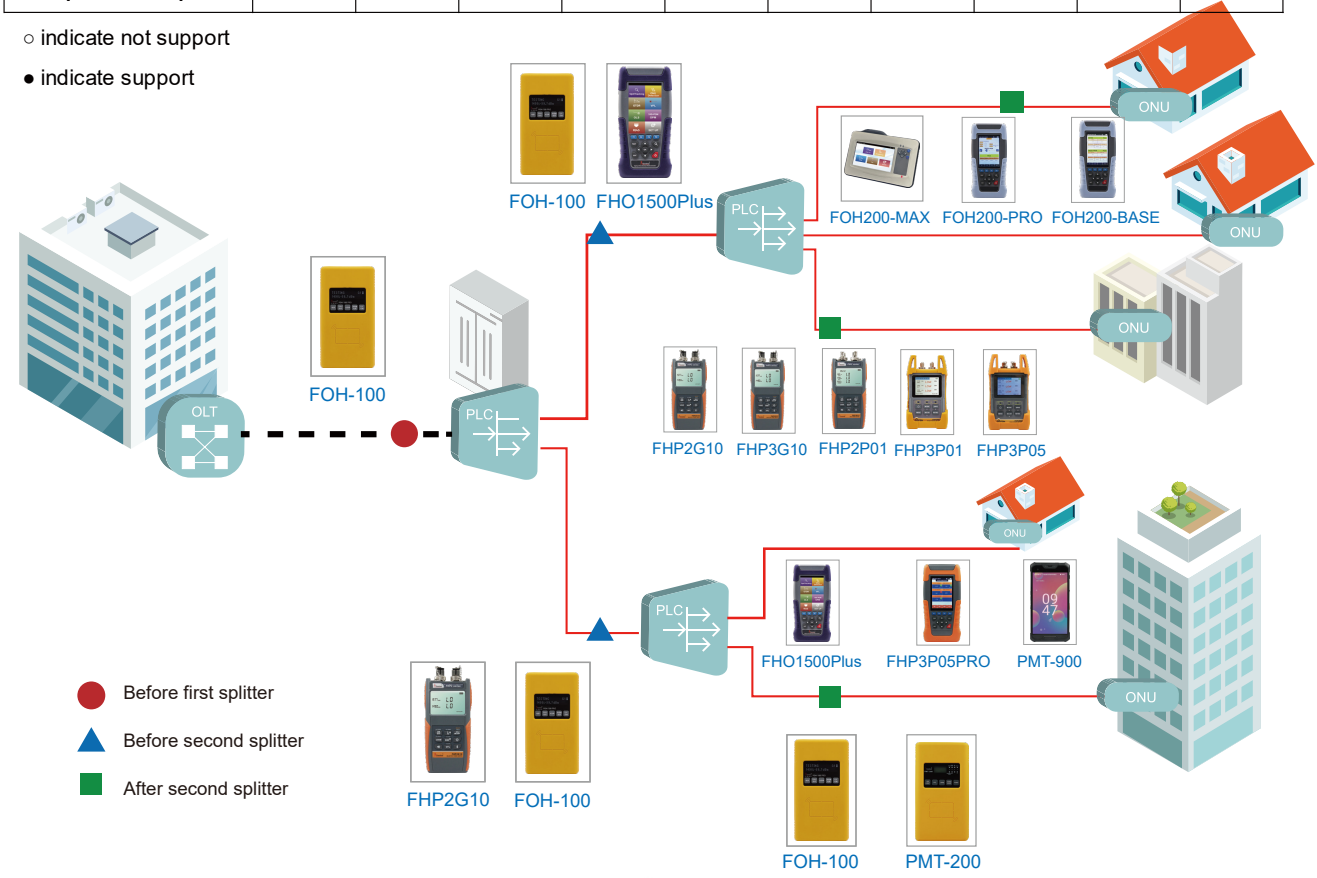
Contents

PON Installation and Maintenance Solution

Model	FHP2P01	FHP2G10	FHP3G10	FHP3G25	FHP3P05 PRO	FOH-100	PMT-200	FOH-200XGS BASE	FOH-200XGS PRO	FOH-200XGS MAX
Picture										
Applicable Network	G/E-PON RF CATV	G/E-PON XG(S)-PON 10G-EPON	G/E-PON XG(S)-PON 10G-EPON RF CATV	G/E-PON XG(S)-PON 10G-EPON 25G PON	G/E-PON XG(S)-PON 10G-EPON RF CATV	G/E-PON	GPON	G-PON XG(S)-PON	G-PON XG(S)-PON	G/E-PON XG(S)-PON 10GE-PON
Downlink Power Measure (nm)	1490/1550	1490/1577	1490/1577/ 1550	1490/1577/ 1358	1490/1577/ 1550	1490	1490	1490/1577	1490/1577	1490/1577
Uplink Power Measure (nm)	1310	○	○	○	1270/1310	1310	○	○	1270/1310	1270/1310
PON ID	○	○	○	○	○	●	●	●	●	●
ODN LOSS	○	○	○	○	○	●	●	●	●	●
ONU ID/SN	○	○	○	○	○	●	○	○	●	●
Pass/Fail	●	●	●	●	●	●	●	●	●	●
ONU Status detection	○	○	○	○	○	●	○	○	●	●
Offline ONU detection	○	○	○	○	○	•(PRO)	○	○	○	●
PON Resource mapping	○	○	○	○	○	•(PRO)	○	○	●	●
OTDR function	○	○	○	○	○	•(PRO)	○	○	○	●
Bluetooth	●	●	●	●	○	●	WIFI	●	●	●
Export PDF Report	●	●	●	●	●	●	●	●	●	●

○ indicate not support

● indicate support



NEW!

PMT-900 Series PDA

- Android13 operating system and support 5G/4G network
- Dual 2.5G RJ45 Ethernet network ports, speedtest>2200Mpbs
- Support 160MHz WiFi6 speed measurement (WiFi7 is optional)
- Support install Google play store and APK files
- Built-in VFL, 10G PON selective OPM, HDMI simulation, IPTV test, network test, etc
- OTDR function can be achieved by installing BJ100 back module
- PDF report generation is available on PMT-900 OTDR application
- Rechargeable 6000mAh polymer battery

Items	Specifications	
Model	PMT-900S	PMT-900
Device Performance		
Operating system(OS)	Android 13	
Communication mode	5G/4G/3G/2G	5G/4G/3G/2G
CPU	UNISOC UMS9620 8-Core Main frequency@2.2GHz	UNISOC UMS9620 8-Core Main frequency@2.7GHz
Memory	4G+64G	6G+128G
Screen	5.5 inch IPS LCD Resolution: 1920*1080	6 inch IPS LCD Resolution: 2160*1080
Camera	Front camera: 8 million pixels Rear camera: 16 million pixels	
Main Functions		
Wired Speedtest	Dual 2.5G port, speedtest>2200Mbps	
WiFi Speedtest	Support IEEE 802.11 a/b/g/n/ac/ax, WiFi supports 2.4G and 5G dual band	
	Support 160MHz WIFI6 test, speedtest>1800Mbps	
IP Address acquisition method	DHCP, Static IP, PPPoE dial-up	
VLAN	Support	
HDMI TV simulation	Connect TV signal through HDMI interface, simulate TV display output	
LAN Test	Ping, Ipconfig, Route, Tracert, etc	
OPM function		
Wavelength ranage	800~1700nm	
Calibrated wavelength	850/1270/1300/1310/1490/1550/1577/1625nm	
10G PON OPM	Support 1490nm/1577nm selective power test	
Test range	-45~+20dBm	
VFL		
Working wavelength	650nm±20nm, 10mw, CW/2Hz mode	

OTDR(Optional)	
Model	BJ100 OTDR
Test mode	1: OTDR trace 2:FTTx Last mile fiber map 3:Offline ONU detection
Wavelength	Single 1550nm (1625nm or 1650nm is available)
In service test	Support
Dynamic range	18dB
Deadzone	1m/4.5m
Test range	500m~60km
Pulse width	3ns~10us
OTDR size	130L×60W×30Hmm
Installation method	PDA Back installation
OTDR interface	SC/APC or SC/UPC
Others	
Optical port	OPM/VFL: 2.5mm universal port
Electric port	Dual 2.5G port, Dual SIM card slot, HDMI interface, Type-C port, 3.5mm earhpone
Wireless	WiFi+Bluetooth
WiFi	2.4G+5G
Power supply	Input: 100-240 AC; Output: 5V/2A DC
Battery	Rechargeable polymer battery 6000mAh
Protection level	IP65
Working conditions	-10℃~+60℃; 20%~95%(No condensation)
Size/Weight(with battery)	168*82*22.2/29.65mm; approx.410g

BJ100 OTDR Installation rendering:

FHO1500PLUS Optical Explorer

- FTTX last mile fiber troubleshooting
- First connector loss and ONU/Splitter connectivity state is measurable
- ONU status identification
- Accurate optical fiber testing capability over 60km
- 1650nm OTDR with filter support live fiber test
- Built-in 20dB OTDR,10mw VFL, stable laser source, 10G PON OPM and RJ45 cable test
- Bluetooth and mobile phone app function
- Standard dynamic range is 20dB, and 30dB can be customized

Items	Specifications
OptiTracking Function	
Test Mode	Normal mode: fiber link map function Last Mile Test Direction : 1) Splitter → ONU (Test from splitter towards ONU) 2) ONU → Splitter (Test from ONU towards splitter) First connector insertion loss and the ONU/Splitter connectivity state can be tested
ONU Detection Function	
ONU Status Type	ONU Online, ONU Offline, No ONU, Rogue ONU
OTDR Module	
Wavelength	1650nm
Dynamic Range	20dB
Deadzone①	Event deadzone: 1m, Attenuation deadzone: 4m
Test Range	500m~120km
Pulse Width	3ns~20us
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution) (excluding IOR uncertainty)

Optical Power Meter Module	
10G PON OPM	Support downlink 1490nm and 1577nm optical power testing separately Support uplink 1270nm/1310nm optical power testing Test range：-40~+10dBm Test accuracy：±0.35dB
Stable Laser Source Module	
Wavelength	Consistent with OTDR
Output Power	>-12dBm
Working Mode	CW/270Hz/1kHz/2kHz
VFL Module	
Wavelength	650nm±10nm
Output Power	10mw
Working Mode	CW/1Hz/2Hz
RJ45 Cable Test	
Line Sequence Standard	TIA-568A or TIA-568B standard
Others	
Optical Interface	2*SC port, 1*2.5mm universal port
Electric Interface	2*RJ45 port, RJ45 remote module, Type-C charging/data port
Wireless	Bluetooth connection with Android phone app
Display	3.5inch color LCD
Data Storage	Pluggable 16GB micro SD card
Battery	5000mAh lithium battery
Working Temp	-10℃~+50℃
Humidity	0~85% (Non condensing)
Dimension	192.9L×93.8W×47Hmm
Weight	0.58kg

Notes：

1: Deadzone test conditions: event deadzone return loss>-45dB, attenuation deadzone return loss >-55dB.

NEW!

M350 Mini Optical Explorer

- FTTX last mile fiber troubleshooting
- First connector loss and ONU/Splitter connectivity state is measurable
- Offline ONT identification (ONU connected or NO ONU)
- Support 1650nm or 1550nm live OTDR test with >60km high precision detection
- Downstream 1490nm/1577nm selective OPM for GPON&XGSPON combo network
- Multi-functional integration: VFL, OLS, selective&normal OPM, flashlight
- 4-inch capacitive touch screen, compact and portable
- Bluetooth and Android phone app is optional, PDF report generation is available on phone app

Items	Specifications
Fiber Link Map	
Normal Mode	Wavelength: 1650nm (1550nm optional), Support live test Dynamic range: 20dB Event deadzone: 1m, Attenuation deadzone: 4m
Last Mile Troubleshooting	Test Settings 1) ONU End (Test from splitter towards ONU) 2) Splitter (Test from ONU towards splitter) First connector insertion loss and the ONU/Splitter connectivity state can be tested
Offline ONU Status Detection	Results 1：ONU 2：NO ONU
OTDR Module	
Wavelength	1650nm (1550nm optional), support live test
Dynamic Range	20dB
Deadzone①	Event deadzone: 1m, Attenuation deadzone: 4m
Test Range	500m~120km
Pulse Width	3ns~10us
Test Mode	Auto, Manual, Realtime
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution) (excluding IOR uncertainty)

Optical Power Meter Module	
10G PON Selective OPM	1490nm/1577nm, display on one screen Range: -40~+10dBm Accuracy: ±0.5dB
Normal Broadband OPM	850nm/1300nm/1310nm/1490nm/1577nm/1550nm/1625nm/1650nm Range: -40~+10dBm Accuracy: ±0.2dB
Stable Laser Source Module	
Wavelength	Consistent with OTDR
Output Power	>-12dBm
Working Mode	CW/270Hz/1kHz/2kHz
VFL Module	
Wavelength	650nm±10nm
Output Power	10mw
Working Mode	CW/1Hz/2Hz
Others	
Optical Interface	SC/UPC or SC/APC, 2.5mm universal×2
Electric Interface	USB Type-C for data transmission and charging
Display	4-inch capacitive touch screen
Data Storage	120MB
Battery	4000mAh lithium battery
Working Temp	-10℃~+50℃
Humidity	0~85% (Non condensing)
Dimension	148×85×37mm
Weight	275g

Note: Support color customization

NEW!

FOH-200XGS-BASE Tester

- Automatic PON-ID detection including OLT PON-ID, ODN class, Tx power, and ODN link pass/fail per ITU-T
- Downlink 1490nm/1577nm selective optical power measurement
- Bluetooth connection with phone app
- Low power consumption for extended continuous use, support 20W quick charger
- Support generating test reports on site

Items	Specifications
Applicable Network	GPON+XG(S)PON
PON Data Parsing	OLT information: OLT PON-ID, ODN class, Tx power, ODN loss
Power Measurement	Downlink: 1490mm and 1577nm selective power measurement
Optical Interface	Single SC/APC
Charging Port	USB Type-C charging port 20W quick charge
Power Supply	5000mAh lithium battery; Input: 5V/2A
Display	3.5 inch touch color screen
Wireless	Bluetooth connection with Android phone app
Data Storage	16G TF Card
Working Temp	-10℃~50℃
Humidity	5%~95%(no condensation)
Dimension	193×94×47mm
Weight	570g

Notes：

The OLT infomration extraction needs to be activated in GPON OLT according to ITU-T G.984.3 Amd3

FOH-200XGS-PRO Tester

- Automatic PON-ID detection including OLT PON-ID, ODN class, Tx power, power level and ODN link pass/fail per ITU-T
- ONU/ONT ID and serial number, ONU status identification
- Downlink 1490/1577nm and uplink 1270/1310nm optical power measurement and judgement
- Bluetooth connection with phone app
- Low power consumption for extended continuous use, support 20W quick charger
- Support generating test reports on site
- Optional printer, supports assisting in app development to print test labels

Items	Specifications
Applicable Network	GPON+XG(S)PON
Test Mode	Series connect: Two ports pass through mode
Insertion loss	<1.5dB insertion loss
PON Data Parsing	OLT information: OLT PON ID, ODN class, Tx power ONU information: ONU ID, ONU SN
Power Measurement	Downlink: 1490mm and 1577nm Uplink: 1270nm and 1310nm
OTDR function	Optional
Optical Interface	SC/APC*2
Charging Port	USB Type-C charging port 20W quick charge
Power Supply	5000mAh lithium battery; Input: 5V/2A
Display	3.5 inch touch color screen
Wireless	Bluetooth connection with Android phone app
Data Storage	16G TF Card
Working Temp	-10℃~50℃
Humidity	5%~95%(no condensation)
Dimension	193×94×47mm
Weight	609g

Notes：

The OLT infomration extraction needs to be activated in GPON OLT according to ITU-T G.984.3 Amd3

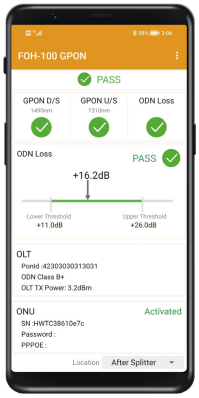
FOH-200XGS-MAX Tester

- Automatic PON-ID detection including OLT PON-ID, ODN class, Tx power, power level and ODN link pass/fail per ITU-T
- ONU/ONT ID and serial number, ONU status identification(Including detection of Offline ONU and NO ONU)
- PON resource check and mapping function
- Support 20dB OTDR and FLM function(Optional)
- Downlink 1490/1577nm and uplink 1270/1310nm power measurement and judgement
- Compatible with GPON, EPON, XG(S)-PON, 10G EPON and automatic recognition of network types
- Bluetooth connection with phone app
- Low power consumption for extended continuous use, support 20W quick charger
- Support generating test reports on site
- Optional printer, supports assisting in app development to print test labels

Items	Specifications
Applicable Network	XG(S)-PON, GPON, 10G-EPON, EPON (Support automatic recognition of network types)
Test Mode	Series connect: Two ports pass through mode
Insertion loss	<1.5dB insertion loss
PON Data Parsing	OLT information: OLT PON ID, ODN class, Tx power ONU information: ONU ID, ONU SN
Power Measurement	Downlink: 1490mm and 1577nm Uplink: 1270nm and 1310nm
OTDR function (Optional)	Dynamic range: 20dB; Wavelength:1650nm(1550nm is optional) Deadzone:1m/4m
Optical Interface	SC/APC*2
Charging Port	USB Type-C charging port 20W quick charge
Power Supply	5000mAh lithium battery; Input: 5V/2A
Display	5 inch touch screen
Wireless	Bluetooth connection with Android phone app
Data Storage	16G TF Card
Working Temp	-10℃~50℃
Humidity	5%~95%(no condensation)
Dimension	195×141×44mm
Weight	900g

Notes：

The OLT infomration extraction needs to be activated in GPON OLT according to ITU-T G.984.3 Amd3



FOH-100 Series G/EPON Tester

- OLT and ONU identification (PON ID,Class level and ONU SN/Password/PPPOE account/LOID/MAC
- Automatic power level 1490nm/1310nm measurement and certification
- In-service fiber qualification according to ODN total loss
- ONU status identification
- Fast identification and location of rogue ONU in PON network
- High precision OTDR for the measurement of the last mile of optical fiber(FOH-100 PRO)
- Optional printer, supports assisting in app development to print test labels

Items	Specifications	
Model	FOH-100	FOH-100 PRO
Applicable PON network	GPON+EPON	
Test Mode	Series connect: Two ports pass through mode	
Insertion loss	No insertion loss, the optical signal power will be enhanced 3~10dB when FOH-100 series connect to the PON network	
Wireless	Bluetooth connection with Android phone app	
PON Data Parsing	OLT information: PON ID, OLT Tx power and class level *1 ONU information: Online ONU SN, Password, PPPOE account, LOID, Mac address	
ONU Status Identification	Online, ONU unregistered, Rogue ONU, Offline	Online, ONU unregistered, Rogue ONU(100% accuracy) Offline, No ONU, Fiber break（90% accuracy）*2
High-precision OTDR	-	Working wavelength:1550nm Deadzone:2/6m, Dynamic range: >10dB Max. test distance: >20km
Rogue ONU detection	Support fast identification and location of rogue ONU	
PON Power Meter	1310nm: -30~+5dBm; 1490nm: -30~+5dBm	
Optical Interface	SC/UPC*2 or SC/APC*2	
Charging Port	USB Type-C charging port	
Power Supply	7000mAh lithium battery; Input: 5V/2A	
Working Temp	-10℃~50℃	
Humidity	5%~95%(no condensation)	
Dimension	175×94×46.5mm	
Weight	700g	

Notes：
1: The OLT infomration extraction needs to be activated in GPON OLT according to ITU-T G.984.3 Amd3
2:The FOH-100 PRO can further analyze whether an offline ONU is power off, or no ONU connected, or the drop cable fiber is broken. The comprehensive accuracy is >90%.

PMT-200 PON Installation Tester

- GPON ONU emulation to extract PON ID, OLT Tx power, ONU Rx power, ODN loss, ONU activation status
- Easy operation on mobile phone software via WiFi connection
- Support OPM and VFL function
- 7000mAh lithium battery support long working hours

Items	Specifications
GPON ONU Emulation	
GPON ONU Emulation	GPON SFP
Optical Interface	SC/APC or SC/UPC
Test Result	OLT PON ID, OLT Tx power, ONU Rx power, ODN loss, ONU activation status
Others	
VFL	Output power: 10mw
	Working wavelength: 650±10nm
	Working mode: CW/2Hz
OPM	Calibrated wavelength: 850/1300/1310/1490/1550/1577nm
	Testing range:-70~+10dBm
Optical Interface	1*SC PON port
	1*2.5mm universal VFL port
	1*2.5mm universal OPM port
Wireless	WiFi connection with Android phone app
Power Supply	7000mAh lithium battery
Working Temp	0~45℃
Dimension	175x94x46.5mm
Weight	577g

Notes：
The OLT infomration extraction needs to be activated in GPON OLT according to ITU-T G.984.3 Amd3

FHP2P01 PON Power Meter

- Support measuring upstream 1310nm and downstream 1490/1550nm optical power level
- Applicable to GPON, EPON and RF CATV network
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report
- Bluetooth is optional

Items	Specifications			
Wavelength	1310nm(Burst)	1310nm(CW)	1490nm	1550nm
Sensor Type	InGaAs			
Isolation Rate	1490nm>40dB		1310nm>40dB	1310nm>40dB
	1550nm>40dB		1550nm>30dB	1490nm>30dB
Test Range	-32~+10dBm	-40~+10dBm	-50~+13dBm	-50~+26dBm
Insertion Loss	<1.5dB			
Broadband	1260~1360nm		1480~1500nm	1539~1565nm
Accuracy	0.5dB±1nW@1550nm			
Resolution	0.01dB			
Threshold	10 groups (configured via PC software)			
Data Storage	900			
Working Temp	-10℃~+50℃			
Communication Port	Type-C USB port			
Bluetooth	Optional			
Power Supply	2*Ni-MH AA battery			
External Power Supply	5V/1A AC/DC adapter			
Dimension/Weight	160L×76W×45H(mm) / about 400g			
Accessories	Power adapter, USB cable, 2*FC adapter, 2*SC adapter, 3*ceramic sleeves, 2*Ni-MH AA battery, Test report, Quick guide, Carrying bag			

FHP3P01 PON Power Meter

- Support measuring upstream 1310nm and downstream 1490/1550nm optical power level
- Applicable to GPON, EPON and RF CATV network
- 2.8-inch TFT LCD Display with high resolution
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report
- Equipped with protective rubber

Items	Specifications			
Wavelength	1310nm(Burst)	1310nm(CW)	1490nm	1550nm
Sensor Type	InGaAs			
Isolation Rate	1490nm>40dB		1310nm>40dB	1310nm>40dB
	1550nm>40dB		1550nm>30dB	1490nm>30dB
Test Sange	-30~+10dBm	-40~+10dBm	-50~+13dBm	-50~+23dBm
Insertion Loss	<1.5dB			
Broadband	1260~1360nm		1480~1500nm	1539~1565nm
Accuracy	0.5dB±1nW@1550nm			
Resolution	0.01dB			
Threshold	10 groups (configured via PC software)			
Data Storage	1000			
Working Temp	-10℃~+50℃			
Communication Port	Type-C USB port			
Power Supply	4*Ni-MH AA battery			
External Power Supply	5V/1A AC/DC adapter			
Dimension/Weight	190L×105W×55H(mm) / about 700g			
Accessories	Power adapter, USB cable, 2*FC adapter, 2*SC adapter, 3*ceramic sleeves, 4*Ni-MH AA battery, Test report, Quick guide, Carrying bag			

FHP2G10 Selective Power Meter

- Support selective power level 1490nm/1577nm measurements separately at the same time
- Applicable to GPON&XG(S)-PON and EPON&10G-EPON co-existence PON network
- Normal broadband power meter support 1270nm/1310nm/1550nm/1625nm
- Built in 10mw VFL function
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report
- Bluetooth is optional

Items	Specifications
Optical Port	OPM: SC/UPC or SC/APC
	VFL:SC/UPC
Selective Power Measure	1490nm/1577nm
Calibrated Wavelength	Broadband channel 1: 1270nm/1310nm/1490nm
	Broadband channel 2: 1550nm/1577nm/1625nm
Test Range	-40~+10dBm
Test Accuracy	±0.5dB
Resolution	0.01
Display Unit	dBm/dB/mw
Isolation	1490nm>35dB; 1577nm>35dB
VFL	10mW, CW / 2Hz
Memory Capacity	999
Communication Port	Type-C USB port
Bluetooth	Optional
Power Supply	2*Ni-MH AA battery
External Power Supply	5V/1A AC/DC adapter
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension	160L×76W×45H(mm)
Weight	300g

FHP3G10 Selective Power Meter

- Support selective power level 1490/1577/1550nm measurements separately at the same time
- Applicable to GPON&XG(S)-PON, EPON&10G-EPON and RF CATV co-existence PON network
- Built in 10mw VFL function
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report
- Bluetooth is optional

Items	Specifications
Optical Port	OPM: SC/UPC or SC/APC
	VFL:SC/UPC
Calibrated Wavelength	1490nm/1550nm/1577nm
Test Range	1490nm/1577nm: -40~+10dBm 1550nm: -40~+20dBm
Test Accuracy	±0.5dB
Resolution	0.01dB
Display Unit	dBm/dB/mw
Isolation	1490nm>35dB; 1550nm>35dB; 1577nm>35dB
VFL	10mW, CW / 2Hz
Memory Capacity	999groups
Threshold Setting	10groups(Pre-set by PC software)
Communication Port	Type-C USB port
Bluetooth	Optional
Power Supply	2*2500mAh Ni-MH AA battery
External Power Supply	5V/1A; AC/DC adapter
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension	160L×76W×45H(mm)
Weight	249g

FHP3G25 Power Meter

- Support selective power level 1490/1577/1358nm measurements separately at the same time
- Applicable to GPON&XG(S)-PON, EPON&10G-EPON and 25G PON co-existence PON network
- Built in 10mw VFL function
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report
- Bluetooth is optional

Items	Specifications
Optical Port	OPM: SC/UPC or SC/APC
	VFL:SC/UPC
Calibrated Wavelength	1490nm/1577nm/1358nm
Test Range	-40~+10dBm
Test Accuracy	±0.5dB
Resolution	0.01dB
Display Unit	dBm/dB/mw
Isolation	>35dB
VFL	10mW, CW / 2Hz
Memory Capacity	999groups
Threshold Setting	10groups(Pre-set by PC software)
Communication Port	Type-C USB port
Bluetooth	Optional
Power Supply	2*2500mAh Ni-MH AA battery
External Power Supply	5V/1A; AC/DC adapter
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension	160L×76W×45H(mm)
Weight	249g

FHP2P04 10GPON OPM

- Support measuring upstream 1310/1270nm and downstream 1490/1577nm optical power level
- Applicable to GPON&XG(S)-PON and EPON&10G-EPON co-existence PON network
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report
- Bluetooth is optional

Items	Specifications			
10G PON Power Meter				
Wavelength	1270nm	1310nm	1490nm	1577nm
Measurement Range(dBm)	-10~+13	-30~+13	-50~+13	-50~+17
Spectral Passband(nm)	1270±10	1310±20	1490±10	1577±6
Insertion Loss	≤1.5dB			
Uncertainty	≤0.5dB			
Display Resolution	0.01dB			
Display Unit	dBm/dB			
Threshold Setting	10 groups			
Data Storage	700 groups			
Display	2.5inch LCD			
Optical Port	2*SC/APC or 2*SC/UPC			
Communication Port	USB Type-C interface			
Bluetooth	Optional			
Power Supply	2*2500mAh Ni-MH AA battery			
Extranal Power Supply	5V/1A; AC/DC adapter			
Working Temp	-10℃~+50℃			
Storage Temp	-20℃~+70℃			
Dimension	160L×76W×45H(mm)			
Weight	300g			

FHP3P05 10G PON Power Meter

- Support measuring upstream 1310/1270nm and downstream 1490/1577/1550nm optical power level
- Applicable to GPON&XG(S)-PON, EPON&10G-EPON and RF CATV co-existence PON network
- 10 groups User defined Pass, Warning, Fail mode
- Support USB Type-C charging and test data upload

Items	Specifications		
Wavelength	1270/1310nm	1490nm	1550/1577nm
Measurement Range	CW mode: -40dBm~+10dBm Burst mode: -30dBm~+10dBm	-50dBm~+13dBm	-50dBm~+23dBm
Spectral Passband	1270/1310nm (1240nm~1360nm)	1490nm (1480nm~1500nm)	1550/1577nm (1539nm~1610nm)
Insertion Loss	≤1.5dB		
Uncertainty	±0.5dB		
Linearity	±0.2dB		
Resolution	0.01dB		
Data Storage	1000 groups		
Display	2.8 inch TFT LCD		
Threshold	10 sets(Configured via PC software)		
Auto Power-off	10 minutes		
Number of Ports	2 (left ONU port, right OLT&Video port)		
Optical Port	FC/PC, SC/PC (APC optional)		
Communication Port	USB Type-C interface		
Power Supply	1.2V*4 pcs Ni-MH AA battery; 5V/1A AC/DC adapter		
Working Temp	-10℃~+50℃		
Dimension	190L×105W×55Hmm		
Weight	700g		

NEW!

FHP3P05 PRO 10GPON OPM

- 3.5 inch color touch screen LCD
- Applicable to GPON&XG(S)-PON, EPON&10G-EPON and RF CATV co-existence PON network
- 5 wavelength power value simultaneous measurement and display(1490nm/1550nm/1577nm/1310nm/1270nm)
- Built in 10mw VFL function
- Long glowing rogue ONU alarm and detection
- User defined Pass/Fail threshold
- Support USB Type-C charging and test data upload
- Support Powerful PC software to generate the test report

Items	Specifications				
10G PON Power Meter					
Wavelength	1270nm	1310nm	1490nm	1550nm	1577nm
Measurement Range(dBm)	-10~+13	-30~+13	-50~+13	-40~+26	-50~+17
Spectral Passband(nm)	1270±10	1310±20	1490±10	1550±10	1577±6
Insertion Loss	≤1.5dB				
Uncertainty	≤0.5dB				
Display Resolution	0.01dB				
Threshold Setting	10 groups				
Data Storage	1000 groups				
VFL					
Wavelength	650±10nm				
Output Power	10mw				
Working Mode	CW, 1Hz/2Hz				
Others					
Display	3.5inch touch screen LCD				
Optical Port	SC/APC or SC/UPC				
Communication Port	USB Type-C interface				
Power Supply	5000mAh lithium battery				
Working Temp	-10℃~+50℃				
Dimension	192.9L×93.8W×47Hmm				

BJ200 Box-type OTDR

- Single wavelength box-type OTDR, support live fiber test
- Dynamic range up to 20dB
- Small deadzone 1.5m/4.5m
- Suitable for FTTx last mile testing (first connector loss and ONU/Splitter connectivity state is measurable)
- Offline ONU identification (ONU connected or NO ONU)
- USB Type-C interface, Compatible with mainstream Android devices, plug and play
- OTDR testing on the phone app, easy to operate, quick response
- Support test PDF report generation on phone App directly

Items	Specifications
AI Test Mode	
Normal Mode	Wavelength: 1550nm (1625/1650nm is optional), Support live fiber test Dynamic range: 20dB Event deadzone: 1.5m, Attenuation deadzone: 4.5m
Last Mile Troubleshooting	Test Settings 1) ONU End (Test from splitter towards ONU) 2) Splitter (Test from ONU towards splitter) First connector insertion loss and the ONU/Splitter connectivity state can be tested
Offline ONU Status Detection	Results 1：ONU 2：NO ONU
OTDR Module	
Wavelength	1550nm (1625/1650nm is optional), support live fiber test
Dynamic Range	20dB
Deadzone	Event deadzone: 1.5m, Attenuation deadzone: 4.5m
Test Range	500m, 1km, 2km, 5km, 10km, 20km, 40km, 60km
Pulse Width	3ns~20us
Test Mode	Auto, Manual, Realtime
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution) (excluding IOR uncertainty)
Others	
Optical Interface	SC/UPC (APC is optional)
Electric Interface	USB Type-C
Operation mode	Android phone APP operation
Working Temp	-10℃~+50℃
Dimension	85.8Lx60.8Wx18H(mm)
Weight	80g

NEW!

MINI1000 Smart OTDR

- 4 inch color LCD, portable design and easy to carry
- Multi functions 10mw VFL, stable laser source, optical power meter, Fiber link map and electric torch
- Support Multi-point touch operation like Mobile phone
- 22dB dynamic support over 60km optical fiber measurement
- 1650nm live fiber testing module is available
- Fast real-time test response and trace refresh speed

Items	Specifications
Test Range	500m~120km
Pulse Width	3ns~10us
Test Time	5s~180s
Test Mode	Auto, Manual, Real-time
Sampling Point	30000
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution) (excluding IOR uncertainty)
VFL	Working wavelength: 650±10nm Output power: 10mW, CW/1Hz/2Hz
Stable OLS	Working wavelength: Consistent with OTDR Output power: >-12dBm, CW/270Hz/1kHz/2kHz
Normal OPM (Standard)	Calibrated wavelength: 850/1300/1310/1490/1550/1625/1650nm Test range: -40~+10dBm
10G PON Selective OPM (Optional)	Support 1490nm and 1577nm selective power testing separately Calibrated wavelength: 850/1300/1310/1490/1550/1577/1625/1650nm
Optical Interface	OTDR/OLS: Fixed SC/UPC (APC is available) VFL/OPM: 2.5mm universal port
Electrical Interface	USB Type-C charging port and data port
Display	4inch color touch screen
Data Storage	120M storage card
Battery	4000mAh lithium battery
Working Environment	-10℃~+50℃; 0~85%(non condensing)
Dimension/Weight	85x148x37mm/275g

Model		Wavelength	Dynamic Range	Dead-zone
Basic	M1000D	1310/1550nm	22/20dB	3m/10m
	M1000S	1650nm	20dB	
Pro	M1000D PRO	1310/1550nm	22/20dB	1/4m
	M1000S PRO	1650nm	20dB	
	M1000T PRO	1310/1550/1650nm	22/20/20dB	

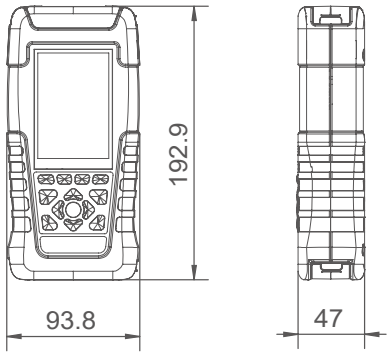
Note: Support color customization

FHO1000-D28

FHO1000-D22

FHO1000 Handheld OTDR

- 3.5 inch color LCD, portable design and easy to carry.
- Support 10mw VFL, stable laser source, optical power meter, RJ45 line sequence test, Fiber link map and other functions.
- Ultra short 1m/4m deadzone
- 28dB dynamic range support over 100km optical fiber measurement.
- OTDR testing and curve view analysis can be controlled through the mobile phone app.
- PDF report generation is available on phone app
- Fast real-time test response and trace refresh speed



Items	Specifications
Fiber Type	SMF
Distance Range	500m, 1km, 2km, 5km, 10km, 20km, 40km, 80km, 120km
Pulse Width	3ns/5ns/10ns/30ns/50ns/100ns/275ns/500ns/1us/2us/5us/10us/20us
Event Dead-zone①	≤1m
Attenuation Dead-zone①	≤4m
IOR Setting	1.000~1.999
Sampling Points	64000
Sampling Resolution	0.05m (1km)
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution) (excluding IOR uncertainty)
Loss Accuracy	0.1dB
Linearity	≤0.05dB/dB
Reflectance Accuracy	±2dB
VFL	Working wavelength: 650±10nm Output power: 10mW, CW/1Hz/2Hz
Stable OLS	Working wavelength: Consistent with OTDR Output power: >-12dBm, CW/270Hz/1kHz/2kHz
Normal OPM	Calibrated wavelength: 850/1300/1310/1490/1550/1625/1650nm Test range: -60~+10dBm

Items	Specifications
RJ45 Test	RJ45 line sequence test according to TIA568-A or TIA568-B standard
Optical Interface	OTDR: FC/UPC or SC/UPC VFL: 2.5mm universal port OLS: share the OTDR port OPM: 2.5mm universal port
Electrical Interface	RJ45 port×2, RJ45 remote module USB Type-C charging port and data port
Wireless	Bluetooth
Mobilephone APP	Android system
Data Storage	Pluggable 16GB micro SD card
Available Lanaguage	English, Spanish, Portuguese, Russian, Hungarian and German (please contact sales for other languages)
Battery	5000mAh lithium battery
Working Temp	-10℃~+50℃
Humidity	0~85%(non condensing)
Dimension	192.9L×93.8W×47Hmm
Weight	0.57kg

Model	Wavelength	Dynamic Range	Dead-zone	Color (default)	Bluetooth	Live Fiber Test
FHO1000-D22	1310/1550nm	22/20dB	1/4m	Blue	Support	Not support
FHO1000-D28	1310/1550nm	28/26dB	1/4m	Orange	Support	Not support
FHO1000-SA20F	1650nm	20dB	1/4m	Blue	Support	Support
FHO1000-SP20F	1625nm	20dB	1/4m	Blue	Support	Support

Notes

1: Deadzone test conditions: event deadzone return loss>-45dB, attenuation deadzone return loss >-55dB.

2: FHO1000-SA20F/SP20F supports live fiber test, and the maximum light intensity in the link is 0dbm(1310nm/1490nm/1550nm).

3: FHO1000 series OTDR has the function of normal broadband power meter, and FHO1000-SA20F/SP20F also support 1490nm/1577nm selective optical power meter.

FHO5000 Series OTDR

- Dynamic range from 26dB to 50dB, small deadzone 0.8m/3m
- Optimized PON test capability to pass through 1x128 splitter, the minimum distance between splitters is 30 meters
- Excellent FLM(Fiber Link Map) testing performance
- Built-in OTDR trace and FLM testing PDF report
- Remote control on PC software is available
- Multi function Integrated design, smart and rugged
- Bluetooth and mobile APP is available on PRO version

Model	Wavelength	Dynamic Range	Dead-zone
FHO5000-D26	1310/1550nm±20nm	26/24dB	1/4m
FHO5000-D35		35/33dB	1/4m
FHO5000-D40		40/38dB	0.8/3m
FHO5000-D43		43/41dB	0.8/3m
FHO5000-D45		45/43dB	0.8/3m
FHO5000-D50		50/48dB	0.8/3m
FHO5000-TP35	1310/1490/1550nm±20nm	35/33/33dB	1/4m
FHO5000-T26F	1310/1550/1625nm±20nm	26/24/24dB	1/4m
FHO5000-T35F		35/33/33dB	1/4m
FHO5000-T40F		40/38/38dB	0.8/3m
FHO5000-T43F		43/41/41dB	0.8/3m
FHO5000-T45F		45/43/43dB	0.8/3m
FHO5000-T50F		50/48/48dB	0.8/3m
FHO5000-TC35F	1310/1550/1650nm±20nm	35/33/33dB	1/4m
FHO5000-TC40F		40/38/38dB	0.8/3m
FHO5000-TC43F		43/41/41dB	0.8/3m
FHO5000-TC45F		45/43/43dB	0.8/3m
FHO5000-M21	850/1300nm±20nm	19/21dB	1/4m
FHO5000-MD21	850/1300nm±20nm	19/21dB	1/4m
	1310/1550nm±20nm	35/33dB	1/4m
FHO5000-MD22	850/1300nm±20nm	19/21dB	1/4m
	1310/1550nm±20nm	40/38dB	0.8/3m

Other Functions
★ Built in multi-language OTDR/FLM PDF report generation
★ Live Fiber detect: Verifies presence communication light in optical fiber
★ Dual wavelength(1310nm/1550nm) analysis-Macro bending detection
★ Built-in Bidirectional test analysis function
★ Trace overlay and comparison (most 8 traces)
★ Define the Pass/Fail result of each event through threshold settings
★ Powerful PC analysis software “OTDRviewer”
★ Remote control on PC software “Server” via RJ45 cable
★ Bluetooth and Android mobile APP is available on PRO version
★ OTDR trace and Fiber link map conversion
★ Start launching cable and end receiving fiber function

Items	Specifications
Pulse Width	3ns, 5ns, 10ns, 30ns, 50ns, 100ns, 275ns, 500ns, 1us, 2us, 5us, 10us, 20us
Distance Range	500m, 2km, 5km, 10km, 20km, 33km, 40km, 80km, 120km, 160km, 265km
Sampling Resolution	Minimum 5cm
Sampling Points	Maximum 256,000 points
Linearity	≤0.05dB/dB
Loss Threshold	0.01dB
Loss Resolution	0.001dB
Distance Resolution	0.01m
IOR Setting	1.2000~1.7000, 0.0001 step
Distance Accuracy	±(0.75m+test distance×3×10^{-5}+sampling resolution) (excluding IOR uncertainty)
Memory Capacity	16G TF card

Items	Specifications
Visual Fault Locator Module	
Working Wavelength	650nm±20nm
Power	10mw, CLASSIII B Laser
Launching Mode	CW/2Hz
Connector	Universal 2.5mm
Optical Power Meter Module	
Wavelength Range	800~1700m
Calibrated Wavelength	850/1300/1310/1490/1550/1625/1650nm
Test Range	TypeA:-60~+5dBm(standard); Type B: -40~+23dBm(optional)
Accuracy	±0.35dB
Resolution	0.01dB
Optical Laser Source Module	
Working Wavelength	Consistent with OTDR
Output Power	≥-10dBm
Output Accuracy	±0.5dB
Output Mode	CW/270Hz/1kHz/2kHz
Others	
Interface	1×RJ45 port, 3×USB port (USB 2.0, Type A USB×2, Type B USB×1)
Display	7-inch touch screen TFT-LCD
Available Lanaguage	English, traditional Chinese, French, Korean, Russian, Spanish, Portuguese, Turkish, Italian, German, Thai, Hungarian, Czech, Vietnamese, Polish (please contact sales for other languages)
Battery	7.4V/5.2Ah lithium battery (with air traffic certification)
Power Supply	10V(dc)/4A, 100V(ac) to 240V(ac), 50~60Hz
Temperature	Working Temp: -10℃~+50℃; Storage Temp: -20℃~+70℃
Humidity	≤95% (No-condensation)
Dimension	253×168×73.5mm
Weight	1.5kg (with battery)
Accessories	Main unit, Power adapter, Charge cord, Lithium battery, FC adapter, USB cable, Quick guide, Test report, Carrying bag, Wrist strap
Optional	SC/LC adapter, Fiber microscope, Launch cable box

Notes

1: Please consult us for more customized models

2: Model T26F/T35F/T40F/T43F/T45F/T50F/TC35F are integrated built-in filter, support live fiber testing

3: Dynamic range is measured with maximum pulse width, averaging time is 3 minutes, SNR=1;
The level difference between the RMS noise level and the level where near end back-scattering occurs.

4: Event dead zone is measured with pulse width of 3ns and return loss ≥-45dB. Dynamic range>5dB
Attenuation dead zone is measured with pulse width of 3ns and returen loss ≥-55dB. Dynamic range>5dB

FHO5000-XX-XX-XX-XX-XX-XX-XX-XX

Model

M	850/1300nm
MD	850/1300/1310/1550nm
D	1310/1550nm
T	1310/1550/1625nm
TC	1310/1550/1650nm
TP	1310/1490/1550nm
P	1650nm

Dynamic Range

21	19/21dB for Model M or 19/21/35/33dB for Model MD
22	19/21/40/38dB for Model MD
26	26/24dB for Model D
35	35/33dB for Model D or 35/33/33 for Model TP
40	40/38dB for Model D
43	43/41dB for Model D
45	45/43dB for Model D
50	50/48dB for Model D
26F	26/24/24dB for Model T with filter
35F	35/33/33dB for Model TC/T with filter
40F	40/38/38dB for Model T with filter
43F	43/41/41dB for Model T with filter
45F	45/43/43dB for Model T with filter
50F	50/48/48dB for Model T with filter
P26	26dB for Model P with filter
P38	38dB for Model P with filter

Laser Source

/	Without laser source
LS	With laser source

Connector

/	FC/UPC(default)
SC	SC/UPC
ST	ST/UPC

Fiber Link Map

/	Without fiber link map
FLM	With fiber link map

Fiber Microscope

/	Without fiber microscope
FM	With fiber microscope

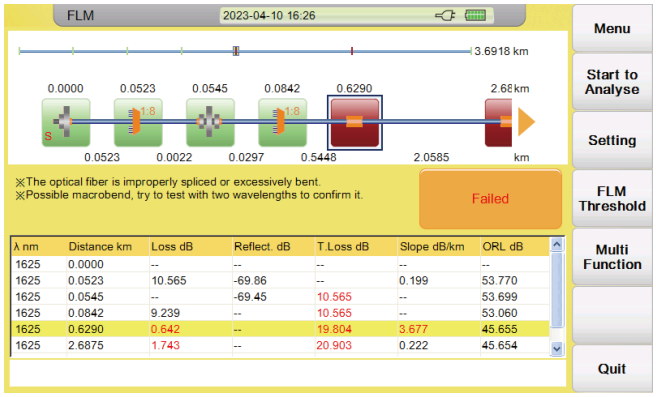
Touch Screen

/	Without touchscreen
TS	With touchscreen

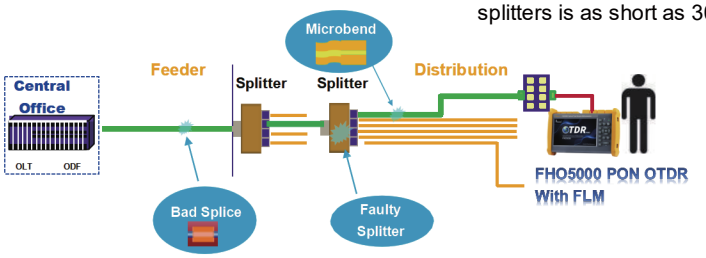
Power Meter

/	Without power meter
PMA	With power meter TYPE A
PMB	With power meter TYPE B

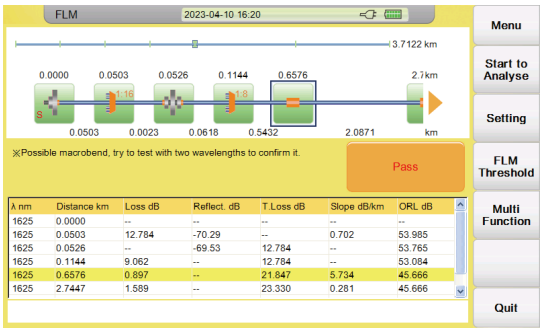
Intelligent Fiber Link Map (FLM)



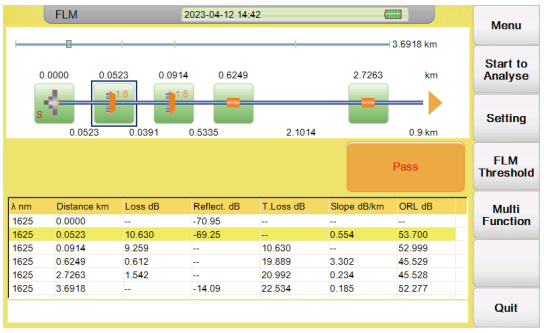
- Adaptively adjust multiple pulse width tests based on link, merge and analyze
- FLM can test any PON structure including balanced or unbalanced splitter
- No need to analyze curves, test results are displayed through icons, simple and clear
- Comprehensive fiber optic fault diagnosis and analysis
- User-defined Pass/Fail function and automatic FLM reports generation
- Suitable for PON network analysis, can pass through up to 1x128 splitters
- Splitter identification, shortest distance between splitters is as short as 30m



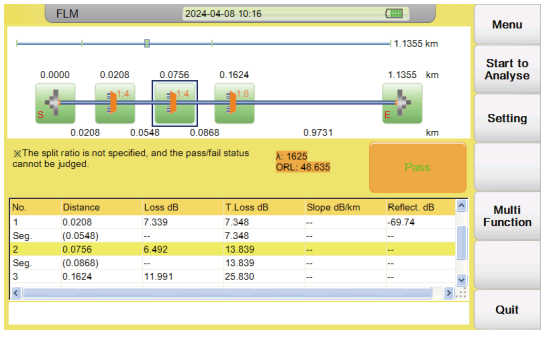
Optimized PON test capability through FLM



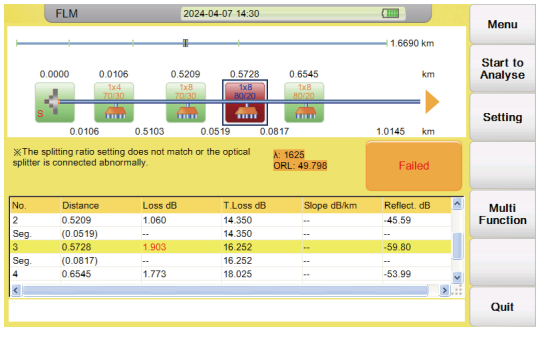
Test 1x16+1x8 splitters



Test 1x8+1x8 splitters



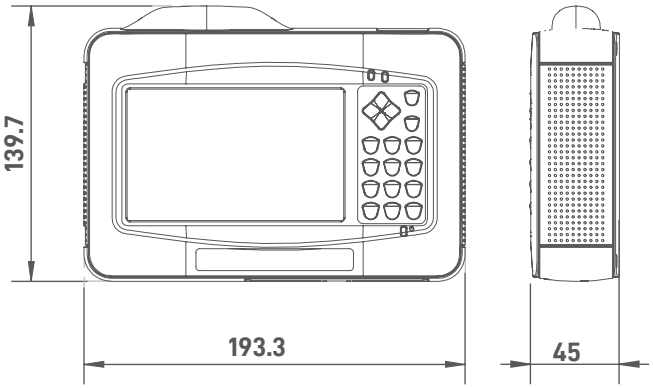
Test three levels splitters



Test unbalanced splitters

FHO3000 Mini Series OTDR

- 5-inch capacitive touch screen, portable design and easy to carry
- Support 10mw VFL,stable laser source, optical power meter, optical loss test, fiber link map test and fiber microscope
- Ultra short 1m/4m deadzone
- 1625nm live fiber testing module is available
- Support sor and PDF export
- Support pass through 1x32 splitter PON network



Items	Specifications
Pulse Width	3ns~20us
Distance Range	0.1km~120km
Event Dead-zone	≤1m
Attenuation Dead-zone	≤4m
IOR Setting	1.30000~1.70000
Sampling Points	128,000
Distance Accuracy	±(0.75m+test distance×3×10^{-5}+sampling resolution) (excluding IOR uncertainty)
Loss Resolution	0.001dB
Linearity	≤0.03dB/dB
VFL	Working wavelength: 650±10nm
	Output power: 10mW, CW/1Hz/2Hz
Stable OLS	Working wavelength: Consistent with OTDR
	Output power: >-10dBm
Normal OPM	Calibrated wavelength: 850/1300/1310/1490/1550/1625/1650nm
	Test range: -60~+5dBm

Items	Specifications
Optical Interface	OTDR: FC/UPC or SC/UPC (APC is available)
Display Screen	5inch capacitive touch screen
Electrical Interface	USB2.0 Port USB Type-C charging port and data port
Data Storage	16GB card
Battery	3.7V/7000mAh lithium battery, support fast charge
Working Temp	-10℃~+50℃
Humidity	0~85%(non condensing)
Dimension	195×141×44mm
Weight	0.9kg(with battery)

Model	Wavelength	Dynamic Range	Dead-zone
FHO3000-D28	1310/1550nm	28/26dB	1/4m
FHO3000-D32		32/30dB	1/4m
FHO3000-D35		35/33dB	1/4m
FHO3000-T28F	1310/1550/1625nm	28/26/26dB	1/4m
FHO3000-T32F		32/30/30dB	1/4m
FHO3000-T35F		35/33/33dB	1/4m

Notes

1: Please consult us for more customized models.

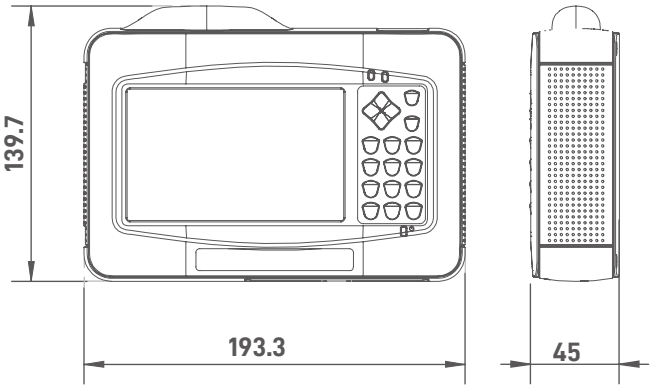
2: Dynamic range is measured with 20us pulse width, averaging time is 180s, SNR=1.

3: Event dead-zone is measured with 3ns pulse width.

4: Attenuation dead-zone is measured with 3ns pulse width.

FHO3000L Mini Series OTDR

- 5-inch color LCD capacitive touch screen
- 26/24dB dynamic range and 2.5m/8m deadzone
- 11 functions in 1, support auto OTDR, expert OTDR, Event Map , Optical power meter, VFL, Stable laser source, optical loss test, RJ45 cabel seq test, RJ45 length test, RJ45 cable tracking(optional), electric torch
- Support one button screenshot function
- Multi-language display and input



Items	Specifications
Dynamic Range	26/24dB
Fiber Type	SMF
Wavelength	1310nm±20nm/1550nm±20nm
Event Dead-zone	2.5m
Attenuation Dead-zone	8m
Distance Range	500m/1km/2km/4km/8km/16km/32km/64km/100km
Pulse Width	3ns~20us
Distance Accuracy	±(1m+Test distance×5×10^{-5}+Sampling resolution) (excluding IOR uncertainty)
Linearity	±0.5dB/dB
Sampling Points	16k~128k
Sampling Resolution	0.05m~8m
Loss Resolution	0.001dB
Distance Resolution	0.001m
Loss Threshold	0.20dB
IOR Setting	1.00000~2.00000

Items	Specifications
Reflectance Accuracy	±3dB
File Format	SOR standard file format
Loss Test Mode	4-point/5-point method
Laser Safety Level	Class II
Optical Port	FC/UPC (SC, ST, APC polishing is optional)
Refresh Rate	3Hz(Typ.)
OPM	
Working Wavelength	800nm~1700nm
Calibrated Wavelength	850nm/980nm/1300nm/1310nm/1490nm/1550nm/1625nm/1650nm
Test Range	-70~+10dBm/-50~+26dBm
Resolution	0.01dB
Accuracy	±5%
Frequency Identification	CW/270/330/1k/2kHz (Use inner LS)
Optical Port	Universal FC/SC/ST
Wavelength Recognition	Support
VFL	
Working Wavelength	650nm±20nm
Output Power	≥10mw
Working Mode	CW/1Hz/2Hz
Optical Port	FC/UPC (Interchangeable SC/ST)
Laser Safety Level	Class III
OLS	
Working Wavelength	1310nm/1550nm
Laser Type	FP-LD
Output Power	≥ -5dBm
Working Mode	CW/270Hz/330Hz/1kHz/2kHz
Stability	CW, ±0.5dB/15 min(after 15min of preheating)
Optical Port	FC/UPC (Interchangeable SC/ST)
Optical Loss Test	
Working Wavelength	Consistent with LS
IL Test	Support
RJ45 Cable Finder (Optional)	
Working Mode	Digital tracking
Distance	≤300m
Online/Line Pair Tracking	Support

Items	Specifications
RJ45 Cable Length	
Test Distance	≤300m
RJ45 Cable sequence	
Test Standard	T568A/T568B
Others	
Display	5 inches color touch screen
Available Lanaguage	English, Spanish, Russian, French, Portuguese, Arabic
Data Storage	8GB TF card
Data Interface	USB type C
Working Temp	-10℃~+55℃
Storage Temp	-40℃~+70℃
Humidity	0~95% (No condensation)
Dimension	195L×141W×44Hmm
Weight	0.9kg

Notes

1: Dynamic range is measured with 20us pulse width, averaging time is 180s, SNR=1.

2: Event dead-zone is measured with 3ns pulse width, return loss>-45dB

3: Attenuation dead-zone is measured with 3ns pulse width, return loss>-55dB

F2H-LFC Launch Fiber Cable

- Compact and ruggedized, easy to carry
- Excellent waterproof and dustproof performance
- Non-metal construction will not corrode or conduce electricity

Items	Specifications
Dimension	238(L) x 141(W) x 67(H)mm
Fiber Type	G.657A/G.652D (MM can be customized)
Typical Loss	<0.5dB @ 1310nm for 1,000 meters
Connector Type	FC/SC/LC selectable
Polishing Type	APC/UPC selectable
Box Material	Polypropylene
Color	yellow
Weight	0.75kg / 0.35kg (without fiber)
Operating Temperature	-40~+55°C
Ordering Information	
Name	LFC=Launch Fiber Cable
Connector 1	SC=SC/UPC;AS=SC/APC;FC=FC/UPC; AF=FC/APC;LC=LC/UPC;AL=LC/APC
Connector 2	SC=SC/UPC; AS=SC/APC; FC=FC/UPC; AF=FC/APC; LC=LC/UPC; AL=LC/APC
Fiber Type	7A1=SM G.657.A1; 2D=SM G.652.D; OM1=MM 62.5/125um; OM2=MM 50/125um
Cable Length	0.5=0.5km; 1=1km; 2=2km

FHO-LCB Launch Cable Box

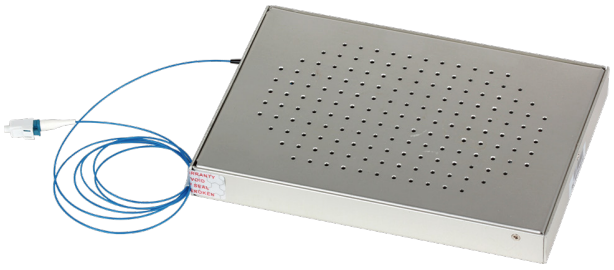
- Compact, easy to carry
- Case can house up to 1,000 meters of fiber
- Attachable with FHO5000 Series OTDR

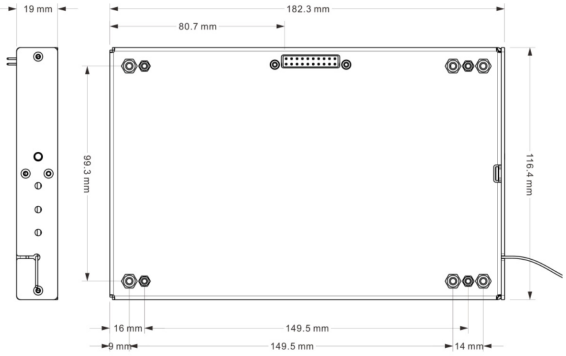
Items	Specifications
Dimension	206(L) x 122(W) x 23(H)mm
Fiber Type	SM G.652D
Adapter Type	Replaceable FC/SC/ST adapters
Polishing Type	APC or UPC
Color	black
Weight	1kg
Operating Temperature	-40~+55°C
Ordering Information	
Name	LCB=Launch Cable Box
Adapter 1	SC=SC/UPC;AS=SC/APC;FC=FC/UPC; AF=FC/APC;ST=ST/UPC;AT=ST/APC;
Adapter 2	SC=SC/UPC; AS=SC/APC;FC=FC/UPC; AF=FC/APC;ST=ST/UPC; AT=ST/APC;
Fiber Type	7A1=SM G.657.A1; 2D=SM G.652.D; OM1=MM 62.5/125um; OM2=MM 50/125um
Cable Length	500=500m; 1000=1000m

OLC-200 Launch Cable Ring

- Customized length of 100m-2000m
- Case can house up to 1,000 meters of fiber
- Customized fiber optic types OS2/OM1/OM2/OM3/G.652x~G.657x
- Used to eliminate testing deadzone of OTDR
- Design of a dedicated storage compartment for couplers

Items	Specifications		
Dimension	121x115x20mm		
Fiber Type	OS2/OM1/OM2/OM3/G.652x~G.657x		
Fiber Length	100m~2000m		
Connector Type	FC/SC/ST/LC/E2000, etc		
Polishing Type	APC or UPC		
Ordering Information			
Configuration	Fiber type	Length	Model
Lanuch cable+coupler	Single mode	150M	OS2-150M,9/125um
Lanuch cable+coupler	Single mode	300M	OS2-300M,9/125um
Lanuch cable+coupler	Single mode	500M	OS2-500M,9/125um
Lanuch cable+coupler	Single mode	1KM	OS2-1KM,9/125um
Lanuch cable+coupler	Multi mode	500M	OM1-500M,62.5/125um
Lanuch cable+coupler	Multi mode	1KM	OM1-1KM,62.5/125um
Lanuch cable+coupler	Multi mode	500M	OM2-500M,50/125um
Lanuch cable+coupler	Multi mode	1KM	OM2-1KM,50/125um
Lanuch cable+coupler	Multi mode	100M	OM3-100M,50/125um
Lanuch cable+coupler	Multi mode	300M	OM3-300M,50/125um





GW-4000 OTDR Module

- Specially designed for fiber optic monitoring systems
- 0.8m/3.5m ultra small deadzone performance, 32dB~45dB dynamic range is available
- Miniaturization, high performance, and easy installation
- 256,000 sampling points and 5cm resolution ensure more accurate fiber testing
- Wide working temperature range
- High speed Ethernet data transmission interface

Items	Specifications
Wavelength	1310nm/1550nm/1625nm/1650nm(customizable) Configure up to two wavelengths
Fiber Type	0.9mm, SM
Dynamic Range	32~45dB(customizable)
Pulse Width	3ns~20us
Event Deadzone	0.8m
Attenuation Deadzone	3.5m
Sampling Resolution	0.05m~4m
Distance Resolution	0.01m
Sampling Point	256,000
Distance Accuracy	±(0.75m+test distance×3×10^{-5}+sampling resolution) (excluding IOR uncertainty)
Test Range	Maximum range 400km
Linearity	±0.03dB/dB
Laser Safety	IEC 60825-1:2007:CLASS 1
Power Supply	DC 9~12V/1.5A
Connector	FC, SC, ST, LC (UPC or APC)
Working Temp	-20℃~+55℃
Storage Temp	-40℃~+85℃
Humidity	0~95%
Dimension/Weight	183mm x 116mm x19mm / 400g

RTU-4000 Integrated monitoring equipment

- Integrating OTDR, optical switch, WDM and PCB
- Support customized multi-channel (1~16 channels) monitoring optical ports
- The dynamic range of OTDR module can reach up to 45dB; Deadzone performance 1m/4m
- Support dark fiber and live fiber monitoring
- Support automatic setting of IP address
- The communication interface supports RJ45 network port and RS232 serial interface
- Suitable for integrated deployment of fiber optic monitoring network

Items	Specifications
Base Unit	
Optical port number	8(Customizable number of other channels)
Network Interfaces	RJ45
Optical port	LC/APC
Height	1U
Width	Standard 19 inch rack
Dimension	438mm×300mm×45mm(L×W×H)
Working temperature	-20~+60℃
Storage temperature	-40~+70℃
Relative humidity	0% to 95%（non-condensing）
OTDR Module	
Monitoring wavelength	1625nm (1550nm or 1650nm is optional)
Dynamic range	35dB~45dB
Live fiber monitoring	Support
Pulse width	3ns,5ns,10ns,30ns,50ns,100ns,275ns,500ns,1us,2us,5us,10us,20us
Event deadzone	1m
Attenuation deadzone	4m
Sampling resolution	0.05~4m
Distance resolution	0.01m
Test range	500m~265km
Sampling points	Max 256,000
Distance accuracy	$\pm(0.75+3\times10^{-5}\times$Test distance+Sampling resolution)m
Linearity	±0.03dB/dB
Optical Switch Unit+FWDM	
Output port number	8(Customizable number of other channels)
Fiber type	SM; LC/APC
Pass Band Wavelength	1610~1680nm
Reflection Band Wavelength Range	1260~1590nm
Insertion loss	MON-COM:≤2.0dB; LINE-COM:≤0.8dB
Isolation	MON-COM:≥15dB; LINE-COM:≥30dB
Return loss	≥50dB
Repeatability	≤±0.05dB
Switch time	≤15ms
OSW working life	$\geq10^{9}$

GS-402F Fusion Splicer

- 4.3 inch high-definition capacitive touch screen
- 7s fast splicing, 18s fast heating
- Newly designed interface menu for a better user experience
- With VFL and power meter function
- Industrial grade processor with high reliability and faster speed
- Heating progress bar display function
- Lightweight, only less than 1500g
- Support high brightness LED ambient lighting

Items	Specifications
Alignment method	4 motors alignment
Applicable fiber	SM(G.652), MM(G.651), DS(G.653), NZDS(G.655), BIF(G.657)
Cladding diameter	80-150μm
Coating diameter	160-3000μm
Cleaved length	8~16mm (coating diameter:250-1000um)
Typical splice loss	SM: 0.02dB；MM: 0.01dB；DS/NZDS/BIF: 0.04dB
Return loss	>60dB
Splicing program	Preset 9 splicing modes
Operation mode	Manual/ Automatic
Auto-heating	Available
Typical splice time	7 seconds
Typical heating time	18 seconds
Fiber magnification	320X
Viewing display	4.3inch high resolution display with touch screen
Data storage	8000 latest records & 1000 images
Loss evaluation	Available
Tension test	1.8~2.25N
Battery capacity	5200mAh Li-battery, 250 cycles splicing and heating
Power supply	Adaptor, input: AC100-240V(50/60HZ),output: DC15-19V
Electrode life	More than 5000 ARC discharges
Terminals	Type-C, USB 2.0
VFL	Visual Fault Locator: Output power 10mw, CW mode and 1Hz/2Hz Flashing mode
Power Meter	Calibrated Wavelength: 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm,1650nm
Operating	Altitude:0-5000m, Humidity:0-95%,Temperature:-20~+50℃; Wind:max 15m/s
Dimension/Weight	208x141x104mm / 1486g(with battery)

Standard Package

Name	Picture	Name	Picture
Fusion Splicer		Power Adapter	
Fiber Cleaver		Power Plug	
Fiber Stripper		User Manual	/
Spare Electrodes		Strap	
Cooling tray		Cleaning Brush	
Drop Cable Stripper		Working Tray Table	
Certificate/Test Report	/	Alcohol bottle	
Air blower		Carrying Box	

GS-401 Fusion Splicer

- 4 motors accurate alignment, Small and light
- 4.3 inch touch screen LCD Monitor
- 7 seconds fast and stable splicing
- Automatic & real-time ARC calibration
- Automatic splicing and heating
- 5200mAh Li-battery, 250 cycles splicing and heating
- Apply to 250μm/0.9mm/2.0mm/3.0mm fibers and SOC

Items	Specifications
Alignment method	4 motors alignment
Applicable fiber	SM(G.652), MM(G.651), DS(G.653), NZDS(G.655), BIF(G.657)
Cladding diameter	80-150μm
Coating diameter	160-3000μm
Cleaved length	5-16mm (coating diameter<250μm) 16mm (coating diameter:250-3000μm)
Typical splice loss	SM: 0.02dB；MM: 0.01dB；DS/NZDS/BIF: 0.04dB
Return loss	>60dB
Splicing program	40 groups
Operation mode	Manual/ Automatic
Auto-heating	Available
Typical splice time	7 seconds
Typical heating time	26 seconds for 60mm and 40mm shrinkable sleeves
Fiber magnification	250X(X or Y view), 125X(X and Y view)
Viewing display	Dual high sensitivity camera, 4.3 inch LCD Touch Screen Monitor
Data storage	4000 groups data records
Loss evaluation	Available
Tension test	1.8~2.25N
Interface	GUI menu interface, easy for operation
Battery capacity	5200mAh Li-battery, 250 cycles splicing and heating
Power supply	Adaptor, input: AC100-240V(50/60HZ),output: DC11-13.5V
Electrode life	More than 4000 ARC discharges, easy to replace
Terminals	USB 2.0 port, for software upgrading, records exporting
Operating	Altitude:0-5000m, Humidity:0-95%,Temperature:-10~+50℃; Wind:max 15m/s
Dimension/Weight	149mm(L)×120mm(W)×127mm(H) / 1.90kg (including battery)

Standard Package

Name	Picture	Name	Picture
Fusion Splicer		Power Adapter	
Fiber Cleaver		Power Plug	
Fiber Stripper		User Manual	
Spare Electrodes		Strap	
Cooling tray		Cleaning Brush	
Drop Cable Stripper		Carrying Box	

GS-401 Toolkit Customization

Optional toolkit

1：GS-401 Splicer	3：FHO1000-D28 OTDR	5：FHP12 power meter
2：FHO1000-D22 OTDR	4：MT500 optical power meter	6：VLS-8 VFL
		7：Alcohol pot

GS-602F Fusion Splicer

- 6 motors core alignement automatic fusion splicer
- 5s fast splicing, 11s overspeed heating
- With VFL and power meter
- 4.3" high resolution lcd touch screen with 380x magnification
- Independently developed new structure heater, compatible with mult-type connectors
- Multi-gear adjustable handle, convenient for multi-scene operation
- Independent R&D of integrated mechanical core module

Items	Specifications
Alignment method	6 motors core alignment
Applicable fiber	SM(G.652), MM(G.651), DS(G.653), NZDS(G.655), BIF(G.657)
Cladding diameter	80-150μm
Coating diameter	160-3000μm
Cleaved length	8~16mm (coating diameter:250-1000um)
Typical splice loss	SM: 0.02dB； MM: 0.01dB； DS/NZDS/BIF: 0.04dB
Return loss	>60dB
Splicing program	Preset 41 splicing modes
Operation mode	Manual/ Automatic
Auto-heating	Available
Typical splice time	5 seconds
Typical heating time	11 seconds
Fiber magnification	380X
Viewing display	4.3inch high resolution display with touch screen
Data storage	20000 latest records & 200 images
Loss evaluation	Available
Tension test	1.8~2.25N
Battery capacity	7200mAh Li-battery, 320 cycles splicing and heating
Power supply	AC input 100-240V, DC input12-15V
Electrode life	More than 5000 ARC discharges
Terminals	USB 2.0, Mini USB
VFL	Visual Fault Locator: Output power 15mw, CW mode and 2Hz Flashing mode
Power Meter	Calibrated Wavelength: 850nm, 1300nm, 1310nm, 1490nm, 1550nm, 1625nm Measuring Range:-50~+26dBm; Absolute error:<0.3dB(-50dBm~+3dBm)
Operating	Altitude:0-5000m, Humidity:0-95%,Temperature:-20~+50℃; Wind:max 15m/s
Dimension/Weight	135.1Wx205.9Lx130.4mm / 2.0kg (including battery)

Standard Package

Name	Picture	Name	Picture
Fusion Splicer		Power Adapter	
Fiber Cleaver		Power Plug	
Fiber Stripper		Certificate/Test Report	/
Spare Electrodes		Strap	
Cooling tray		Cleaning Brush	
Drop Cable Stripper		Carrying Box	

Multi functional carrying case

GS-601 Fusion Splicer

- 6 motors accurate real core to core alignment
- 5 inch high resolution color touch screen
- 6 seconds splicing & 18 seconds heating
- Automatic & real-time ARC calibration
- Industrial quad-core CPU with 30% power saving
- Anti-shock, anti-vibration, dustproof &waterproof
- Apply to 250μm/0.9mm/2.0mm/3.0mm fibers and SOC

Items	Specifications
Alignment method	6 motors core to core alignment
Applicable fiber	SM(G.652), MM(G.651), DS(G.653), NZDS(G.655), BIF(G.657)
Cladding diameter	80-150μm
Coating diameter	160-3000μm
Cleaved length	5-16mm (coating diameter<250μm) 16mm (coating diameter:250-3000μm)
Typical splice loss	SM: 0.02dB；MM: 0.01dB；DS/NZDS/BIF: 0.04dB
Return loss	>60dB
Splicing program	40 groups
Operation mode	Manual/ Automatic
Auto-heating	Available
Typical splice time	6 seconds
Typical heating time	18 seconds for 60mm and 40mm shrinkable sleeves
Fiber magnification	250X(X or Y view), 125X(X and Y view)
Viewing display	Dual high sensitivity camera, 5 inch 800*480 LCD Touch Screen Monitor
Data storage	4000 groups data records
Loss evaluation	Available
Tension test	1.8~2.25N
Interface	GUI menu interface, easy for operation
Battery capacity	5200mAh Li-battery, 250 cycles splicing and heating
Power supply	Adaptor, input: AC100-240V(50/60HZ),output: DC11-13.5V
Electrode life	More than 4000 ARC discharges, easy to replace
Terminals	USB 2.0 port, for software upgrading, records exporting
Operating	Altitude:0-5000m, Humidity:0-95%,Temperature:-10~+50℃; Wind:max 15m/s
Dimension/Weight	156mm(L)×141mm(W)×156mm(H) / 2.45kg (including battery)

Standard Package

Name	Picture	Name	Picture
Fusion Splicer		Power Adapter	
Fiber Cleaver		Power Plug	
Fiber Stripper		User Manual	
Spare Electrodes		Strap	
Cooling tray		Cleaning Brush	
Drop Cable Stripper		Carrying Box	

GS-601 Toolkit Customization

Optional toolkit

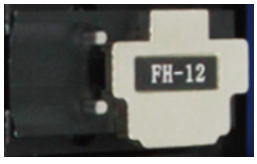
1：GS-601 Splicer	3: FHO1000-D28 OTDR	5： FHP12 power meter
2: FHO1000-D22 OTDR	4： MT500 optical power meter	6： VLS-8 VFL
		7： Alcohol pot

GS-901 Ribbon Fiber Splicer

- Applicable to 2~12 ribbon fiber splicing
- 5 inch high resolution color touch screen
- 20s splicing time, heating 1~2 fiber is 26s and 4~12 ribbon fiber is 40s
- Support 10000 groups fusion records and 200 fusion images
- Ruggedized body, waterproof, anti-dust, anti-shock
- Pluggable 5200mAh Li-battery, support separate charging

Items	Specifications
Alignment method	Clad to clad
Applicable fiber	SM(G.652), MM(G.651), DS(G.653), NZDS(G.655)
Fiber cores quantity	Single core, 2-12 cores
Coating diameter	250~400μm
Typical splice loss	SM: 0.05dB；MM: 0.02dB；DS: 0.08dB；NZDS: 0.08dB
Return loss	>60dB
Splicing program	40 groups
Operation mode	Manual/ Automatic
Auto-heating	Available
Typical splice time	20 seconds
Typical heating time	1~2 cores 26 seconds, 4~12 cores 40 seconds
Fiber magnification	25X
Viewing display	Dual high sensitivity camera, 5 inch 800*480 LCD Touch Screen Monitor
Data storage	10000 groups data records and 200 groups images
Loss evaluation	Available
Tension test	1.8~2.2N
Interface	GUI menu interface, easy for operation
Battery capacity	5200mAh Li-battery, 150 cycles splicing and heating
Power supply	Adaptor, input: AC100-240V(50/60HZ),output: DC11-13.5V
Electrode life	More than 3000 ARC discharges, easy to replace
Terminals	USB 2.0 port, for software upgrading, records exporting
Operating	Altitude:0-5000m, Humidity:0-95%,Temperature:-10~+50℃; Wind:max 15m/s
Dimension/Weight	155mm(L)×144mm(W)×155mm(H) / 2.3kg (including battery)

Standard Package

Name	Picture	Name	Picture
Ribbon Fiber Splicer		Power Adapter	
Fiber Cleaver		Power Plug	
Heating Stripper		User Manual	
Spare Electrodes		Strap	
Cooling tray		Cleaning Brush	
R-12 Fiber holder		Carrying Box	

GW-550 Fiber Cleaver

- True one action cutting optical fiber cleaver with just one push
- Tungsten steel blade, high hardness, good wear resistance
- 24 cutting blade surface, supporting 48,000 times fiber cutting
- Multi function fiber holder,suitable for 250μm bare fiber,900μm,2~3mm patchcord and drop cable
- 0.5° precision cutting angle, precision CNC machining technology

Items	Specifications	
Model	GW-550	GW-550A
Blade Auto Rotate	Not suppot	Support Cut once and rotate once
Fiber Type	Silicon fiber	
Fiber Count	Single	
Bare Fiber Diameter	125μm	
Coating Diameter	160~900μm,2mm/3mm and drop cable	
Cleaving Angle	≤0.5°	
Cleaving Length	10~20mm	
Adjustable Blade Position	3 heights and 24 surfaces	
Blade Life	48000 times	
Dimension	76mm×87mm×46mm(including waste fiber collection box)	
Weight	208g	

GW-650 Fiber Cleaver

- Metal material, support blade automatic rebound function
- Tungsten steel blade, high hardness, good wear resistance
- 24 cutting blade surface, supporting 48,000 times fiber cutting
- Multi function fiber holder,suitable for 250μm bare fiber,900μm,2~3mm patchcord and drop cable
- 0.5 ° precision cutting angle, precision CNC machining technology

Items	Specifications
Fiber Type	Silicon fiber
Fiber Count	Single
Bare Fiber Diameter	125μm
Coating Diameter	160~900μm,2mm/3mm and drop cable
Cleaving Angle	≤0.5°
Cleaving Length	5~20mm
Adjustable Blade Position	3 heights and 24 surfaces
Blade Life	48000 times
Dimension	65(W)×78(D)×62(H)mm
Weight	335g

GW-750 Fiber Cleaver

- One action to complete fiber cutting
- High cutting accuracy
- Equipped with multi-function fiber holder, suitable for various types of optical fiber
- Support blade automatic rebound function
- Equipped with residual fiber collection box

Items	Specifications
Fiber Type	Silicon fiber
Fiber Count	Single
Bare Fiber Diameter	125μm
Coating Diameter	160~900μm,2mm/3mm and drop cable
Cleaving Angle	≤0.5°
Cleaving Length	5~20mm
Adjustable Blade Position	3 heights and 16 surfaces
Blade Life	48000 times (1000 fibers×16 surfaces×3 heights)
Dimension	63W×69D×58H mm (without residual fiber collection box)
Weight	360g

GW-850 Fiber Cleaver

- High cutting accuracy
- Equipped with multi-function fiber holder, suitable for various types of optical fiber
- Mini shape and durable
- Surface oxidation process

Items	Specifications
Fiber Type	Silicon fiber
Fiber Count	Single
Bare Fiber Diameter	125μm
Coating Diameter	160~900μm,2mm/3mm and drop cable
Cleaving Angle	≤0.8°
Cleaving Length	5~20mm
Adjustable Blade Position	3 heights and 16 surfaces
Blade Life	48000 times (1000 fibers×16 surfaces×3 heights)
Dimension	58W×55D×55H mm
Weight	280g

FCA-18 CWDM Optical Power Meter

- Applicable to the opening and maintenance test of 5G front-haul/CWDM transmission system
- Supporting 1271~1611nm 18 channel optical power test
- Simple operation and visual display
- 10 groups of threshold values can be set to judge pass/fail
- View the results in the form of histogram or table

Items	Specifications
Detector Type	InGaAs
Fiber Type	SM fiber
Calibrated Wavelength	1271~1611nm
Test Range	-40~+10dBm
Number Of Channels	18
Channel Spacing	20nm
Accuracy	±1dB
Display Resolution	0.01dB
Isolation	>25dB
Threshold Setting	10 groups
Insertion Loss	<1.5dB
Data Storage	500 groups
Interface	Optical port：FC/UPC
	Charging port：USB Type-C
	Wireless interface: Bluetooth
Battery working time	Battery life in standby mode > 48 hours
Working Temp	-10℃~+60℃
Humidity	0~90% (Non condensing)
Dimension	195L×141W×44H(mm)
Weight	0.8kg

Model	Number Of Testing Port	Support Online Testing
FCA-18A	Dual Optical Port	Yes
FCA-18B	Single Optical Port	No

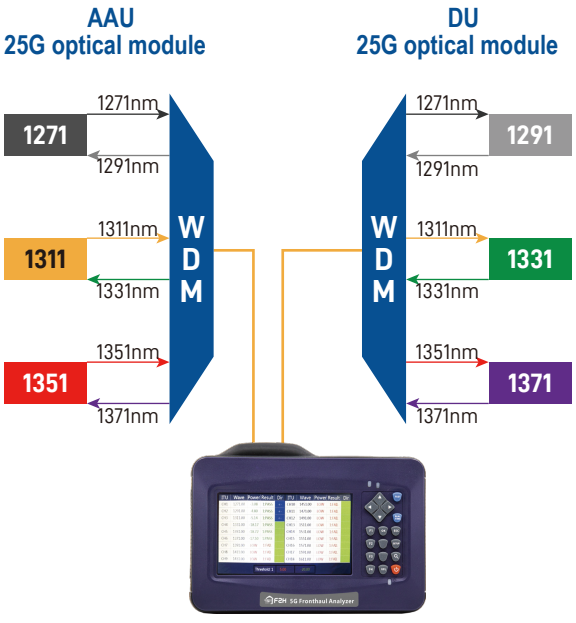
FCA-20 5G Fronthaul Analyzer

- Applicable to the opening and maintenance test of 5G front-haul/CWDM transmission system
- Supporting 1271~1611nm 18 channel optical power test
- Ultra short deadzone to accurately locate the optical fiber link faults from DU to WDM, WDM to WDM, and WDM to AAU
- Serial connection test by dual optical port, which does not affect the online service
- Bluetooth function, supporting on-site test cloud docking

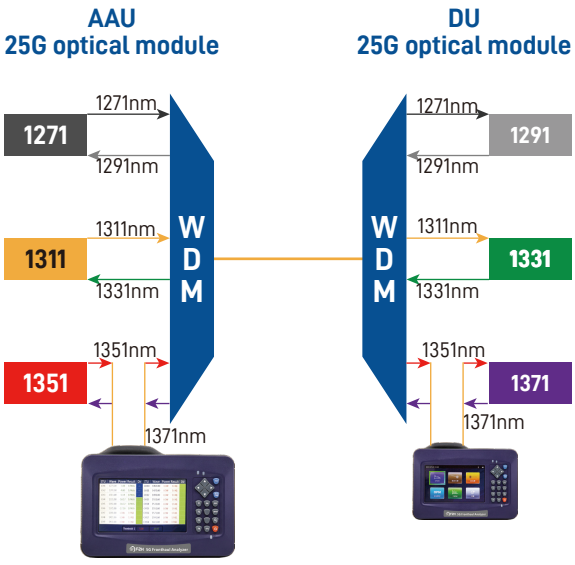
Items	Specifications
CWDM Optical Power Meter	
Detector Type	InGaAs
Fiber Type	SM fiber
Calibrated Wavelength	1271~1611nm
Test Range	-40~+10dBm
Number Of Channels	18
Channel Spacing	20nm
Accuracy	±1dB
Display Resolution	0.01dB
Isolation	>25dB
Threshold Setting	10 groups
Insertion Loss	<1.5dB
Data Storage	500 groups
OTDR	
Fiber Type	SMF (ITU-T G.652)
Wavelength	1650nm±5nm
Dynamic Range	24dB
Distance Range	1km，2km，5km，10km，20km，40km，80km
Pulse Width	3ns/5ns/10ns/30ns/50ns/100ns/275ns/500ns/1us/10us/20us
Dead-zone	Event dead-zone≤1m; Attenuation dead-zone≤4m
IOR Setting	1.30000~1.70000
Sampling Points	64000
Sampling Resolution	0.05m（1km）
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution)(excluding IOR uncertainty)
Loss Accuracy	0.1dB
Linearity	0.1dB
Reflectance Accuracy	±2dB

Stable Laser Source	
Wavelength	1650nm±5nm
Output Power	>-12dBm
Working Mode	CW/270Hz/1kHz/2kHz
VFL	
Wavelength	650±10nm
Output Power	10mW
Working Mode	CW/1Hz/2Hz
Others	
Interface	Optical port：FC/UPCx2
	Charging port：USB Type-C
	Wireless interface: Bluetooth
Data Storage	Pluggable micro SD card
Battery	≥6700mAh，Battery life in standby mode > 48 hours
Working Temp	-10℃~+60℃
Humidity	0~90% (Non condensing)
Dimension	195L×141W×44H（mm）
Weight	0.8kg

WDM to WDM:
trunk line series connection test 18 channels optical power and OTDR fiber link analysis



AAU-WDM,DU-WDM:
branch line series connection test single chanel optical power and OTDR fiber link



FCA-30 5G Fronthaul Analyzer

- Applicable to the opening and maintenance test of 5G front-haul/CWDM transmission system
- Supporting 1271~1611nm 18 channel optical power level testing
- Supporting 1271~1611nm 18 channel OTDR test to pass through WDM
- Ultra short deadzone to accurately measure total optical fiber link from DU to AAU
- Serial connection test by dual optical port, which does not affect the online service
- Bluetooth function, supporting on-site test data cloud docking

Items	Specifications
CWDM Optical Power Meter	
Detector Type	InGaAs
Fiber Type	SM fiber
Calibrated Wavelength	1271~1611nm
Test Range	-40~+10dBm
Number Of Channels	18
Channel Spacing	20nm
Accuracy	±1dB
Display Resolution	0.01dB
Isolation	>25dB
Threshold Setting	10 groups
Insertion Loss	<1.5dB
Data Storage	500 groups

CWDM OTDR	
Fiber Type	SMF (ITU-T G.652)
Wavelength	1271nm, 1291nm, 1311nm, 1331nm, 1351nm, 1371nm, 1391nm, 1411nm, 1431nm, 1451nm, 1471nm, 1491m, 1511nm, 1531nm, 1551nm, 1571nm, 1591nm, 1611nm
Wavelength Channel	18 channels
Dynamic Range	38dB
Distance Range	1km，2km，5km，10km，20km，40km，80km
Pulse Width	3ns/5ns/10ns/30ns/50ns/100ns/275ns/500ns/1us/10us/20us
Event dead-zone	≤1m
Attenuation dead-zone	≤4m
IOR Setting	1.30000~1.70000
Sampling Points	64000
Sampling Resolution	0.05m（1km）
Distance Accuracy	±(1m+Test distance×3×10^{-5}+Sampling resolution)(excluding IOR uncertainty)
Loss Accuracy	0.1dB
Linearity	0.1dB
Reflectance Accuracy	±2dB
Others	
Interface	Optical port：FC/UPCx2
	Charging port：USB Type-C
	Wireless interface: Bluetooth
Data Storage	16GB micro SD card
Battery	Two 5000mAh lithium batteries
Working Temp	-10℃~+60℃
Humidity	0~90% (Non condensing)
Dimension	286×190×80mm
Weight	2.5kg

MT500 Series Power Meter

- High performance imported optical detector
- Multifunctional integration (optical power meter, VFL, RJ45 cable test, flashlight)
- Low power consumption,continuous working for more than 80 hours
- Multi unit display dBm/dB/Mw
- Power saving function
- USB interface charging
- Ergonomic design, mini and small, easy to carry
- Support self calibration function

Items	Specifications
OPM	
Detector Type	InGaAs
Working Wavelength	800nm~1700nm
Display Resolution	0.01dBm
Frequency Identification	270Hz/330Hz/1kHz/2kHz
Optical Port	2.5mm universal FC/SC/ST
Self Calibration	Support
VFL	
Working Wavelength	650nm±30nm
Output Power	MT500-A2、MT500-B2、MT500-A2-C、MT500-B2-C：2mW MT500-A10、MT500-B10、MT500-A10-C、MT500-B10-C：10mW
Output Mode	CW/1Hz/2Hz
Optical Port	2.5mm universal FC/SC/ST
Others	
Battery (3 versions optional)	1) 3pcs AAA dry battery
	2) 3pcs AAA Ni-MH rechargeable battery
	3) Lithium battery
Data Storage	50 groups test data
TWIN Function	Auto wavelength recognition when working with FHS2 series laser source
Auto Power-off	10 minutes
Working Temp	-10℃~+50℃
Storage Temp	-25℃~+70℃
Humitidy	0～95% (No condensation)
Dimension	104L×67W×28Hmm
Weight	140g

Model	USB Charge	Test Range	Calibrated Wavelength	Accuracy
MT500-A2, MT500-A10	Not support	-70dBm~+6dBm	850/1300/1310/1490/1550/1625 /1650nm	±0.35dB
MT500-A2-C, MT500-A10-C	support			
MT500-B2, MT500-B10	Not support	-50dBm~+26dBm		
MT500-B2-C, MT500-B10-C	support			

FHP12 Series Mini Power Meter

- 2.5mm universal optical port
- Low power consumption, continuous use for 100 hours
- With backlight function
- Battery power display
- Compact and portable design

Items	Specifications	
	FHP12-A	FHP12-B
Sensor Type	InGaAs	
Working Wavelength	800~1700nm	
Calibrated Wavelength	850/1300/1310/1550/1490/1625nm	
Test Range	+10~-60dBm@850nm	+26~-40dBm@850nm
	+10~-65dBm @1300/1310/1550/1490/1625nm	+26~-45dBm @1300/1310/1550/1490/1625nm
Resolution	0.01dB	
Accuracy	±0.35dB	
Continuous Working Time	About 100 hours	
Power Supply	2*AAA dry battery	
Working Temp	-10℃~+50℃	
Storage Temp	-20℃~+70℃	
Dimension/Weight	120L×33W×30H mm / about 70g	
Accessories	2*AAA dry battery, Quick guide, Carrying bag	

FHP1 Series Power Meter

- Integrated with high performance optical detector
- Support auto power off
- With backlight function
- Compact and portable design
- Support reference value setting

Items	Specifications	
	FHP-1A02	FHP-1B02
Sensor Type	InGaAs	
Connector	FC/PC	
Working Wavelength	800~1700nm	
Calibrated Wavelength	850/1300/1310/1550/1490/1625/1650nm	
Test Range	-60~+3dBm	-40~+23dBm
Resolution	0.01dB	
Accuracy	±0.35dB	
Power Supply	4*AAA dry battery	
Working Temp	-10℃~+50℃	
Storage Temp	-20℃~+70℃	
Dimension/Weight	115L×62W×30H mm / about 140g	
Accessories	FC/PC adapter, 4*AAA dry battery, Quick guide, Test report, Carrying bag	

FHP2 Series Power Meter

- Integrated with high performance optical sensor
- Auto wavelength recognition with FHS2 series laser source
- High accuracy and stability
- 999 group data storage function
- USB Type-C charging/data port, 2pcs 2500mAh AA rechargeable batteries
- With computer software to export data and make reports
- VFL and bluetooth is optional

Items	Specifications	
	FHP2A04	FHP2B04
Sensor Type	InGaAs	
Working Wavelength	800~1700nm	
Calibrated Wavelength	Standard: 850/1300/1310/1490/1550/1625nm Optional: 980nm/1270nm/1577nm/1650nm,etc (Please contact sales for other customized wavelengths)	
Test Range	-70~+10dBm	-50~+26dBm
Accuracy	±0.2dB	
Resolution	0.01	
Frequency Detection	270Hz/330Hz/1kHz/2kHz	
Recognizable Wavelength	850/1300/1310/1490/1550/1625nm *(with FHS2 series laser source)	
Frequency Identification Range	-40dbm~+10dBm@1550nm	-20dBm~+26dBm@1550nm
Wavelength Identification Range	-40dbm~+10dBm@1550nm	-20dBm~+26dBm@1550nm
Unit display	dBm/dB/mw	
VFL(Optional)	Working wavelength: 650±10nm Output power: 10mw; Working mode: CW/2Hz	
Bluetooth(Optional)	Can be connected with Android mobile phone software through Bluetooth	
Memory Capacity	999 groups (can be transferred to PC software and generate report)	
USB Port	TYPE-C charging/data port	
Power Supply	2* Ni-MH AA battery Input: AC100~240V, 50/60Hz Output: DC5V/1A	
Working Temp	-10℃~+50℃	
Storage Temp	-20℃~+70℃	
Dimension/Weight	160L×76W×45H(mm) / 265g	
Accessories	2*Ni-MH AA battery, FC adapter, SC adapter, Power adapter, USB cable, Test report, Quick guide, Carrying bag	

VLS-6 Series Pen Type VFL

- Stable luminescence and strong red laser source
- 2.5mm universal optical port (FC/SC/ST)
- Max 30km test range
- CW/2Hz output mode
- Suitable for SM/MM fiber
- Small, portable and long working hours

Items	Specifications				
Model	VLS-6-1	VLS-6-10	VLS-6-15	VLS-6-20	VLS-6-30
Laser Safety Level	Class IIIA	Class IIIB	Class IIIB	Class IIIB	Class IIIB
Laser Type	LD				
Output Power	>1mw	>10mw	>15mw	>20mw	>30mw
Test Range	3~5km	8~10km	10~15km	15~20km	20~30km
Optical port	2.5mm universal optical port (FC/SC/ST)				
Working Wavelength	650±10nm				
Output Mode	CW/2Hz				
Power Supply	2*AA alkaline battery				
Working Temp	-10℃~+50℃				
Storage Temp	-20℃~+70℃				
Dimension	175L×26W×26Hmm				
Weight	173g				
Accessories	Pen type VFL*1, AA alkaline battery*2, Black bag*1, Manual card*1				

VLS-8 Series Mini VFL

- 2.5mm universal adapter (FC/SC/ST)
- Max 15km test range
- CW/2Hz output
- Suitable for SM/MM fiber
- Small and portable

Items	Specifications			
	VLS-8-1	VLS-8-10	VLS-8-15	VLS-8-30
Laser Type	LD			
Laser Safety Level	CLASS IIIA	CLASS IIIB	CLASS IIIB	CLASS IIIB
Output Power	≥1mW	≥10mW	≥15mW	≥30mW
Test Range	About 5km	About 12km	About 14km	About 15km
Connector	Universal 2.5mm			
Wavelength	650nm ± 10nm			
Modulated Frequency	CW / 2Hz			
Power Supply	2*AAA dry battery			
Working Temp	-10℃~+50℃			
Storage Temp	-20℃~+70℃			
Dimension/Weight	120L×33W×30H mm / about 67.8g			
Accessories	2*AAA dry battery, Quick guide, Carrying bag			

FHS1 Series Laser Source

- Both single mode and multiple mode laser are available
- Single output interface
- Rugged and portable
- Auto power-off function
- Support CW, 270Hz, 1kHz and 2kHz mode output

Items	Specifications	
	FHS1D02	FHS1D03
Output Wavelength	1310nm & 1550nm	850nm & 1300nm
Emitter Type	LD	
Connector	FC/PC	
Output Stability	Short Term (15minutes): <0.1dB	
	Long Term (5 Hours or above): <0.2dB	
Central Wavelength	1310±20nm & 1550±20nm	850±10nm & 1300±20nm
Spectral Width	5nm	
Output Frequency	270Hz, 1KHz, 2KHz	
Output Power	-5dBm(Typical)	
Accuracy	±1dB	
Auto Power-off	Yes	
Back-Light	Yes	
Working Temp	-10 to +50℃	
Storage Temp	-20 to +70℃	
Power Supply	4*AAA dry battery	
Dimension/Weight	115L×65W×30H(mm)/140g	
Accessories	FC/PC adapter, 4*AAA dry battery, Carrying bag, Test report, Quick guide	

FHS2 Series Laser Source

- Both single mode and multiple mode laser are available
- With FHP2 series power meter, automatic wavelength identification can be realized
- Stable output laser, rugged and portable
- Auto power-off function
- Support CW, 270Hz, 1kHz and 2kHz mode output

Items		Specifications				
		FHS2D02	FHS2D02F	FHS2T01F	FHS2Q01F	FHS2Q02F
Wavelength	1310/1550nm	√	√			
	1310/1490/1550nm			√		
	850/1300/1310/1550nm				√	
	1310/1550/1490/1625nm					√
Others	Spectral Width	5nm				
	Output Power	-5dBm(Typical)				
	Output Adjustable Range	±3dB	-	-	-	-
	270/1k/2kHz output frequency	√	√	√	√	√
	Auto wavelength recognition	√	√	√	√	√

Laser type	FP-LD
Output Stability	Short Term (15minutes): <0.05dB
	Long Term (8 hours or above): <0.1dB
Power Supply	2*Ni-MH AA battery
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension/Weight	160L×76W×45H(mm) / 260g
Accessories	2*Ni-MH AA battery, FC adapter, SC adapter, 3*ceramic sleeves,Power adapter, USB cable, Test report, Quick guide, Carrying bag
Customization	FC/APC, SC/APC, ST/APC

FHM2 Series Optical Multimeter

- Integrated laser source and optical power meter
- Dual or triple wavelength output
- Suitable for fiber or device insertion loss test
- Up to 999 test results storage
- With LCD backlight function and auto power off

Model	Specifications			
	FHM2A01	FHM2A02	FHM2B01	FHM2B02
Laser Source Part (LD)				
Output Wavelength	1310/1550nm	1310/1490/1550nm	1310/1550nm	1310/1490/1550nm
Output Power	-5dBm(Typical)	0dBm(Typical)	-5dBm(Typical)	0dBm(Typical)
Frequency Output	270Hz/1kHz/2kHz			
Wavelength Recognition	1310/1550nm	1310/1490/1550nm	1310/1550nm	1310/1490/1550nm
Power Meter Part (PD)				
Test Range	-70~+10dBm		-50~+26dBm	
Resolution	0.01dB			
Calibrated Wavelength	850/1300/1310/1490/1550/1625nm			
Accuracy	±0.2dB			
Frequency Detection	270Hz/1kHz/2kHz			
Wavelength Detection	Support			
Memory Capacity	999 groups			
Others				
Communication Port	USB			
Power Supply	2* Ni-MH AA battery			
Working Temp	-10℃~+50℃			
Storage Temp	-20℃~+70℃			
Dimension/Weight	160L×76W×45H(mm) / 260g			
Accessories	(LD)FC&SC adapter, (PD)FC&SC adapter, 2*Ni-MH AA battery, 3*ceramic sleeves, Power adapter, USB cable, Test report, Quick guide, Carrying bag			
Optional	（PD）1.25mm adapter/2.5mm adapter			

FHA2S02 Optical Attenuator

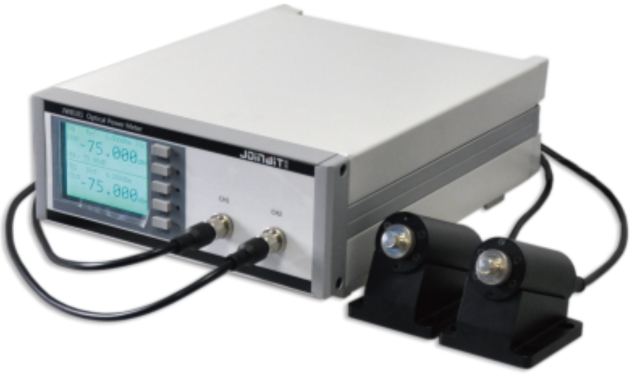
- Low insertion loss, wide attenuation range
- 0.05dB/1.0dB step attenuation adjust
- 8 sets of common attenuation value setting
- With LCD backlight function and auto power off

Items	Specifications
Applicable Wavelength	1310/1550nm
Fiber Type	SMF 9/125um
Signal Mode	CW/Modulated
Max Input Power	+25dBm
Attenuation Range	3~60dB
Resolution	0.05dB
Return Loss	>60dB(APC), >50dB(PC)
Insertion Loss	<3dB
Power Supply	2* Ni-MH AA battery
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension/Weight	160L×76W×45H(mm) / 260g
Accessories	2*FC/PC adapters, 2*SC/PC adapters, 2* Ni-MH AA battery, Power adapter, Test report, Quick guide, Carrying bag

FBS8001 Desktop Laser source

- High stability of output power: 0.005db
- The output power can be adjusted independently
- Good wavelength stability
- High precision APC and ATC circuits
- LCD status display full parameters
- CWDM or DWDM or any other wavelength is optional
- Support 1~4 channel laser source

Items	Specifications
Output Channel	1~4 channels
Max Output Power	2mw/5mw/10mw/customized
Wavelength	1310nm/1550nm/customized
Laser Type	DFB/customized
Stability	±0.005dB(15 mins/10mw, 25℃)
	±0.025dB(8 hrs/10mw, 25°C)
Return Loss	>45dB
TEC Stability	±0.1℃
TEC Working Range	20~30℃
Optical Interface	FC/APC (or customized)
Output Adjustment	0.2mw(Coarse), 0.1mw(Fine)
Communication Port	RS232
Display	3.5-inch TFT color LCD
Power Supply	AC 90~260
Temperature	Working temp: 0~50℃, Storage temp: -40~80℃
Dimension/Weight	235×380×145mm/about 4kg



FBP7001 Desktop Power Meter

- Optical power meter can be configured for external probe or panel mounting
- Intelligent alarm and threshold allocation
- Buzzer alarm and font color alarm setting
- PDL function Test
- Spectroscopic ratio, additional loss, uniformity testing function
- English and Chinese configuration function
- Provide RS232 communication function, realize the power monitoring under no one guard, automatically store the data

Items	Specifications
Wavelength Range	850~1700nm
Probe Type	InGaAs
Detector Size	Φ2.0mm
Test Range	+5~-75dBm
Linearity	±0.04dB(+5~-50dBm)
	±0.08dB(-50~-60dBm)
Uncertainty	±3%
Display Resolution	0.1/0.01/0.001dB
Power Supply	AC 220 (50Hz)
Temperature	Working temp: -5~40℃, Storage temp: -25~70℃
Dimension/Weight	235×300×96mm/about 5kg

OFI-3 Fiber Identifier

- Convenient and easy to use
- LED indicator is simple and clear
- Identification of 270/1k/2k Hz modulation frequency
- Direction and intensity indication of optical signal
- Natural light intensity calibration function

Items	Specifications
Fiber Adapter	RB0.25mm, RB0.9mm, RB3.0mm
Wavelength Range	900~1650nm
Frequency	CW/270Hz/1kHz/2kHz
Sensitivity	Min -50dBm
Sensitivity	1310nm @ 0.25mm: -20dBm, 0.9mm: -20dBm, 3.0mm: -20dBm
	1550nm @ 0.25mm: -30dBm, 0.9mm: -20dBm, 3.0mm: -30dBm
Display (LED)	Signal, Direction, Frequency, Intensity(5 grades), Low battery
Power Supply	2*AA battery
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension/Weight	202L×62W×38H(mm) / 300g
Accessories	2*AA battery, Adapter(RB0.25mm, RB0.9mm, RB3.0mm), Carrying bag, Quick guide,Test report

OFI-5 Optical Fiber Identifier

- Built-in 10 mW VFL function
- Built-in OPM
- Metal gripper,no need to change the adapter
- Low battery monitoring function
- Tone identification, Optical Fiber Identifier can detect optical signals in the tone signal fixed load, 270Hz, 1KHz and 2KHz, to identify a specific optical fiber, can quickly find the necessary fiber

Items	Specifications
Identifier	
Detector Type	1mm InGaAs
Working Wavelength	800nm~1700nm
Insertion Loss: 1:250um/900um optical fiber 2:2.0/3.0mm optical fiber	1: 1.0dB 2: 1.5dB
Application Of Optical Fiber	250um/900um/2mm/3mm optical fiber
Identified Signal Type	CW/270Hz/1kHz/2kHz
Identification Of Modulated Signals	Yes
Power Measurement	Yes
Display	LED color screen
Tone	Yes
Low Power Monitoring	Yes
OPM	
Working Wavelength	800~1700nm
Calibrated Wavelength	850/1300/1310/1490/1550/1625nm
Measurement Range	-50~+26dBm
Optical Port	2.5mm universal connector
VFL	
Working Wavelength	650nm±10nm
Output Power	10mw
Optical Port	2.5mm universal connector
Others	
Power Supply	2*AA 1.5V alkaline battery
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension	230L×43W×36Hmm
Weight	200g

OFI-8 Optical Fiber Identifier

- There is no need to interrupt service during online test, no damage to the fiber
- Identify 270Hz, 1kHz, 2kHz modulation signals with beep sounds
- Four in one universal adapter, no need to replace during on-line test (0.25/0.9/2/3mm fiber)
- Can detect the direction and power of online optical signals
- Built-in 650mAh rechargeable battery
- Support VFL and flashlight function

Items	Specifications
Identifier	
Detector Type	1mm InGaAs
Working Wavelength	800nm~1700nm
Application Of Optical Fiber	250um/900um/2mm/3mm optical fiber
Identified Signal Type	CW/270Hz/1kHz/2kHz
Signal direction	left and right LED indicator light
Optical power reading range	-40~+10dBm
Display	LED color screen
Buzzer sound	Support, when detect signals of different frequencies
VFL	
Working Wavelength	650nm±10nm
Output Power	10mw
Optical Port	2.5mm universal connector
Others	
Power Supply	3.7V, 650mAh rechargeable battery
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension	240x47x29mm
Weight	180g

GW3306C/CT Fiber Finder

- Find the optical fiber without online service interruption
- The direction and frequency of signal can be identified safely and effectively
- Provide corresponding adapter for 250um bare fiber, 0.9mm/2mm/3mm patchcord
- The measured fiber power value can be displayed
- Low power consumption, portable and easy operation

Items	Specifications
GW3306C	**Optical FIber Identifier**
Working Wavelength	800nm~1700nm
Sensor Type	Φ1mm InGaAs 2pcs
Adapter Type	H0.25: 250um bare fiber H0.9: 0.9mm patchcord H2.0: 2.0mm patchcord H3.0: 3.0mm patchcord
Identified Signal Direction	LED indicates Left or Right
Identified Signal Frequency	LED indicates 270Hz, 1kHz, 2kHz
Frequency Detection Range H0.9/H2.0/H3.0	270Hz,1kHz: -30~0dBm
	2KHz: -25~0dBm
Signal Direction Detection Range (CW, Φ3mm patchcord)	-20~10dBm(1310nm)
	-30~10dBm(1550nm)
Signal Power Detection Range (CW, Φ3mm patchcord)	-30~10dBm
Insertion Loss (Typical value)	0.8dB(1310nm)
	2.5dB(1550nm)
Battery	9V dry battery
Battery Power Display	Two color LED indicator
Weight	<210g(without battery)
GW3306CT	**Optical Signal Generator**
Generated Signal Type	1Hz low frequency signal
Signal Generation Mode	mechanical vibration
Insertion Loss (Typical value)	<1dB(1310nm)
Applicable Optical Fiber Type	G.652, G.655
Applicable Optical Fiber Diameter	0.9mm/2mm/3mm
Battery	9V dry battery
Working Life	>8hours (Depending on the working environment)
Working Temp	0℃~+50℃
Storage Temp	-10℃~+70℃
Dimension	209×33×31mm
Weight	<230g(without battery)

OTS-5 Optical Talk Set

- Full duplex numeral pronunciation correspondence function
- High quality conversation and low background noise
- Online display and online call
- Large LCD screen
- Stabilized laser source function

Items	Specifications
Wavelength(nm)	1310/1550
Emitter Type	FP-LD
Transmission Distance(km)	80
Dynamic Range(dB)	40
Output Power(dBm)	-5~-7
Modulation(Hz)	CW, 270Hz,1KHz, 2KHz
Output Stability(dB)	≤±0.05
Items	**Specifications**
Operating Time(hrs)	10 (continuously)
Power Supply	Alkaline battery
Power Adapter(V)	8.4
Fiber Connector	FC/PC
Dimensions(mm)	192x102x50
Weight(g)	338
Accessories	OTS-5 Talk Set, 2pcs*earphones, 6pcs*AA battery, Power adapter, Manual, Certificate, 2pcs*carrying bags

FIM-3 Fiber Microscope

- Convenient using both for male and female adapters
- Widely used in PON, CWDM, DWDM, SDH, SONET etc.
- Magnification: 250* via 3.5'' TFT LCD; 400* via 8'' TFT LCD
- Through the USB 2.0 interface, the PC software can be connected to analyse and record the test results(Optional function)

Items	Specifications	
Magnification	400x (8'' Monitor), 250x (3.5'' Monitor)	
Resolution	0.5μm	
Display Screen	3.5'' TFT-LCD, 320x240 pixels	
	8'' TFT-LCD, 1024x768 pixels	
Video Output	NTSC/PAL	
Power Supply	3.7V 4500mA / 5V 1A Li-Battery	
Working Temp	-20℃~+50℃	
Storage Temp	-30℃~+60℃	
Weight	1.5kg	
Standard Accessories:		
Inspection Probe x1	3.5'' monitor x1	25-U-M x1
125-U-M x1	FC-PC-F x1	SC-PC-F x1
LC-U-F x1	Recharger	Manual
Carrying bag	Li Battery	
Optional Accessories:		
25-A-M	125-A-M	SC-A-F
FC-A-F	AV-USB 2.0 Converter	
Applications		
Tips Type	Function Description	
25-U-M	FC/SC/ST/E2000 patch cord UPC connector	
125-U-M	LC/MU patch cord UPC connector	
25-A-M	FC/SC/ST/E2000 patch cord APC connector	
125-A-M	LC/MU patch cord APC connector	
FC-PC-F	FC UPC bulkhead	
SC-PC-F	SC UPC bulkhead	
LC-U-F	LC UPC bulkhead	
SC-A-F	SC APC bulkhead	
FC-A-F	FC APC bulkhead	

FIM-4 Fiber Microscope

- 400X magnification, <1 μm resolution for clear image
- Universal USB port to connect Windows, Linux OTDR, Laptop
- 50+ tips for UPC, APC, MPO, 60 angled connector inspection
- Applicable to FHO5000 series OTDR
- Support connect with Android phone and display(need additional OTG to Type-C cable)

Items	Specifications
Magnification	400X
Resolution	<1μm
View of Field	X: 680μm
	Y: 510μm
Focus Way	Manual
Focus Speed	2~5s
Alignment	>98%
Laser Source	Blue LED
Output Port	Type-C USB
Size	180x22x56mm
Weight	110g

Standard Accessories	
FIM-4 Probe	1pc
2.5 PC-M (For 2.5mm PC male connector)	1pc
SC-PC-F(For SC-PC female bulkhead)	1pc
FC-PC-F(For FC-PC female bulkhead)	1pc
LC-PC-F (For LC-PC female bulkhead)	1pc

FIM-5 Fiber Microscope

- 400X magnification, <1 μm resolution for clear image
- 4.3 inch display to capture and video data, SD card to save data
- Universal USB port to connect Windows, Linux OTDR, Laptop
- 50+ tips for UPC, APC, MPO, 60 angled connector inspection

Items	Specifications
FIM-5 Probe	
Magnification	400X
Resolution	<1μm
View of Field	X: 680μm
	Y: 510μm
Focus Way	Manual
Focus Speed	2~5s
Alignment	>98%
Laser Source	Blue LED
Output Port	Type-C USB
Size	180x22x56mm
Weight	110g
FIM-5 Display	
Screen	4.3 inch screen
Resolution	1920*1080
Capacity/RAM	8G
Input	Type-C USB
Battery	3500mAh Li-ion

Standard Accessories	
FIM-5 Probe	1pc
4.3 inch display	1pc
2.5 PC-M (For 2.5mm PC male connector)	1pc
SC-PC-F(For SC-PC female bulkhead)	1pc
FC-PC-F(For FC-PC female bulkhead)	1pc
LC-PC-F (For LC-PC female bulkhead)	1pc
Soft case	1pc

FIM-6 Fiber Microscope

- Include Pass/Fail software according to IEC 61300-3-35
- Several tips available (Both female and male tips)
- Save tested analysis report on PC by USB device
- Anti-slip Grip design and Easy Focus
- Complied with RoHS
- CE/FCC approved

Items	Specifications
Magnification	260~400X (digital)
Filed of Vision	400um x 300um
Focus	manual, maximum 2mm in and out
Focus Direction	unidirectional
CCD	1/4” CMOS
Power Supply	computer USB electric power
Software	for Windows 8, 7 and XP
USB	2.0
Weight	150g
Dimension (without tip)	185mm (L) x 24mm (T)

Standard Accessories:	
FIM-6, including USB	1pc
Tip for female SC/PC and FC/PC adapters	1pc
Tip for female LC/PC adapter	1pc
Software (Pass/Fail Analysis)	1pc
Manual	1pc

FIM-7 Fiber Microscope

- WiFi and USB connection to smartphone and PC
- Pass/Fail analysis to IEC 61300-3-35 (only for PC software)
- Several tips available (Both female and male tips)
- Support saving inspected images and reports
- Complied with RoHS
- CE/FCC approved

Items		Specifications
Magnification		260~400X
Field of Vision		400um x 300um
Focus		manual, maximum 2mm in and out
WiFi		2.4GHz WiFi (IEEE 802.11b/g/n)
Power of Charger		110/220V@50/60Hz Charger or USB Cable with PC
Battery		3.7V 1300mA Rechargeable Lithium Polymer Battery
Battery Running Time		about 4 hours (continuous usage)
USB Cable		mini 5-pin to USB 2.0 for Windows XP, WIN7/8
Software	For PC	Pass/Fail Analysis to IEC 61300-3-35
	For Smartphone	Android App and iOS (Apple) App
Weight		170g
Dimension (without tip)		185mm (L) x 24mm (T)

Standard Accessories:	
FIM-7, including WiFi	1pc
AC battery charger, including USB to mini 5-pin cable	1pc
Tip for female SC/PC and FC/PC adapters	1pc
Tip for female LC/PC adapter	1pc
Software (Pass/Fail Analysis)	1pc
Manual	1pc

FIM-9 Fiber Microscope

- Safety filter for eye protection
- Anti-slip design, rugged body with rubber grips
- Coaxial illumination of connector end face illumination

Items	Specifications	
Model	FIM-9-200	FIM-9-400
Magnification	200X	400X
Power Supply	3*AAA alkaline battery	
Light Source	White LED, rated for 10,000 hours	
Controls	Momentary on/off switch for light source and fine-focus control wheel	
Laser Safety Filter	Bulit-in IR filter	
Adapter Interface	Interchangeable for 2.5mm and 1.25mm ferrule connectors	
Weight	0.6kg	
Dimension	225mm(L)×32mm(diameter)	

FIM-17 Fiber Microscope

- Auto pass/fail whole process in 1-3s to save time
- RealTime display image without any delay on the smartphone/tablet under WiFi Mode.
- >8hrs battery support for long time
- Multiple terminals support with PC/Laptop/tablet/smartphone/OTDR with USB or WIFI channel
- Support Android/iOS/Windows System
- All test results, fiber images can be saved and shared on PC/ mobile devices in pdf format for file records

Items	Specifications
Magnification	400X
Resolution	<1.0μm
Field of View	X: 0.383mm Y: 0.287mm
Laser Source	Blue LED
Focus Wheel	Unidirectional single-way
Focus Speed	1~3 seconds
Alignment	>98%
Snapshot Button	Available
Quick switch	WiFi / USB
USB Port	Micro USB for charging and data transfer
Connection Standard	Wi-Fi 802.11, USB 1.0/2.0
Wireless Frequency	2.4GHz
Wireless Transmission Distance	20m
Smartphone Compatibility	Android 4.4 and above; IOS 8.0 and above
Voltage	5V
Battery	3400mAh Lithium battery
Working time	≥8h
Charging Time	≤4h
Items	**Specifications**
Dimension	19*5*3cm
Weight	0.55kg
Working Temperature	-10℃~50℃
Storage Temperature	-20℃~60℃
Humidity	<90% (non-condensing)

Standard Accessories:	
FIM-17 Fiber Microscope	1pc
2.5 PC-M (For 2.5mm PC male connector)	1pc
SC-PC-F(For SC-PC female bulkhead)	1pc
FC-PC-F(For FC-PC female bulkhead)	1pc
LC-PC-F (For LC-PC female bulkhead)	1pc
USB cable	1pc
Soft case	1pc
Application(Software on Android & iOS for end face check)	1pc

FIM-18 Fiber Microscope

- USB1.0/1.1/2.0 output
- Portable video microscope
- High resolution inspection
- Analysis Software
- Applicable to FHO5000 series OTDR

Items	Specifications
Magnification	200x or 400x
Resolution Ratio	0.75um
Weight	Probe(0.14kg)
Dimension	Probe(22*3*3cm)
Working Temp	-20℃~+50℃
Storage Temp	-30℃~+60℃
Standard Tips	
25-U-M	for 2.5mm/PC male connector
125-U-M	for 1.25mm/PC male connector
FC-U-F	for FC/PC female bulkhead
SC-U-F	for SC/PC female bulkhead
LC-U-F	for LC/PC female bulkhead
Optional Tips	
25-A-M	for 2.5mm/APC male connector
125-A-M	for 1.25mm/APC male connector
FC-A-F	for FC APC female bulkhead
SC-A-F	for SC APC female bulkhead
LC-A-F	for LC APC female bulkhead

TLP-3C 2M Transmission Analyzer

- Full-featured measurements to 2M, Datacom
- Smart navigation mode and multi-language displays
- Extensive error and alarm generation, detection and indication
- Histograms analysis of alarm and error events
- Save/Recall of up to 7 user-defined setups and 70 sets of results
- Built-in Li rechargeable battery and smart charger circuit
- Ungradable software via an integrated RS232C interface
- Test results uploaded, conserved and printed by PC Manager software

Items	Specifications	
2M	Internal Clock	2048kb/s ±10ppm
	Frequency Deviation	±999ppm
	Line Interface	75Ω (Unbalanced), 120Ω (Balanced); High Input Impedance >2KW
	Line Code	HDB3, AMI
	Framing	Unframed, PCM30, PCM30CRC, PCM31, PCM31CRC
	Receive Sensitivity	>-43dB
	Tx Clock Source	Internal, Interface and External 2MHz clock or
	Pulse Mask Measurement	Comply with G.703
	Jitter Measurement	Comply with O.172
	Frequency Measurement	Accuracy: ±1Hz
	Offset Measurement	Accuracy: ±1ppm
		Range: -999ppm~+999ppm
	VF Injection	Frequency: 200MHz~3400MHz, Step: 10Hz
		Level: -60dBm~+3dBm
2M	VF Measurement	Frequency: 200MHz~3400MHz
		Accuracy: ±1Hz
		Level range: -60dBm~+3.14dBm
		-60dBm~-21dBm, accuracy: ±2.87dBm
		-20dBm~+3.14dBm, accuracy: ±0.21dBm
	Delay Measurement	Accuracy: ±1us
G.703 CO	Line Rate	64kb/s ±1000ppm
	Line Interface	120Ω, Balanced
	Line Code	AMI

Items	Specifications	
Datacom	Line Interface	V.24, V.35, V.36, X.21, RS-449, RS-485, EIA-530, EIA-530A
	Data Rate	ASYN: C300, 600bit/s, 1.2, 2.4, 4.8, 7.2, 9.6, 19.2, 38.4kb/s
		SYNC: C300, 600bit/s, 1.2, 2.4, 4.8, 7.2, 9.6, 19.2, 38.4kb/s
		N×64kb/s (N=1~32), 4M, 8Mkb/s
Test Patterns	PRBS	2^{23}-1, 2^{20}-1, 2^{15}-1, 2^{11}-1, 2^{9}-1, 2^{6}-1
	Fixed Code	1111, 0000, 1010
	16-BIT	User Programmable Word
LED Alarm Indicators	Signal Loss, AIS, Frame Loss, MFrame Loss, Pattern Loss, Remote Alarm, Error, Clock Slip.	
Error Injection	Type: BIT, FAS, CRC4, CODE, E-BIT	
	Single, Fixed Rate: 10^{-2}, 10^{-3}, 10^{-4}, 10^{-5}, 10^{-6}, 10^{-7}	
Performance Analysis	ITU-T G.821, G.826 and M.2100	
Display	320×240 pixel backlit monochromatic LCD	
Serial Port	RS-232C	
Rechargeable Batteries	5×1.2V AA NiMH batteries, continuous working for 6 hours	
Recharge Time	Approx. 2 hours	
AC Power Adapter	Input: 100V~240VAC, 50/60Hz Output: 12VDC/1.5A	
Test Manager Pro	WIN98/ME/NT/2000/XP	
Dimensions	L×W×H (200mm×160mm×45mm)	
Operating Temperature	0°C~50°C	
Storage Temperature	-20°C~+70°C	
Humidity	5%~95% non-condensing	

Standard Items	Quantity	Standard Items	Quantity
TLP-3C 2M Transmission Analyzer	1pc	Simulation software	1pc
75Ω BNC/L9 E1 test cable	2pcs	Carrying case	1pc
BNC/BNC cable	1pc	User's manual	1pc
RS232 serial upgrading cable	1pc	Warranty card	1pc
DATA converting line (36PIN to 44PIN)	1pc	Certificate of conformity	1pc
X.21 testing line	1pc	V.35 testing line	1pc
V2.4 testing line	1pc	V.11 testing line	1pc
AC adapter	1pc		
Optional Items	**Quantity**	**Optional Items**	**Quantity**
120 testing line	2pcs	64K testing lines	1pc

GD300DQ TV Signal Level Meter

- Accurate QAM testing: digital average power,MER,BER
- Support multiple DVB mode: 16QAM, 32AM, 64QAM, 128QAM, 256QAM
- Single channel/Frequency simulated power levels testing
- Video and audio signal power levels testing
- V/A testing. Show the frequency of video and audio. Field intensity and power level difference simultaneously.
- QAM View includes BER,MER,and constellation

Items	Specifications
Channel/Frequency index	
Frequency range	5MHz-862MHz
Precision	50ppm
Resolution	10KHz
Measurement band width	280KHz
Frequency step	50KHz,100KHz,500KHz
Channel type	
Analog TV	TV
Digital TV	16/32/64/128/256 QAM
Frequency/channel	SIGL
Analog power level testing	
Measuring range	25dBuV-120dBuV
Precision	±1.5dB
Resolution	0.1dB
Detection method	Peak value detection
Input impedance	75Ω
Digital power level testing	
Measuring range	25dBuV-110dBuV
Precision	±1.5dB
Resolution	0.1dB
Detection method	Average value detection
Input impedance	75Ω

Items	Specifications
Voltage testing	
Input range	0-80V(AC/DC)
Precision	±2V
Resolution	0.1V
Digital channel	
Modulation mode	Comply with DVB-C/ITU J83-A
QAM mode	16/32/64/128/256 QAM
Symbol rate	1MS/S-7MS/S
Band width	Set by user
MER	22-39dB
Precision	±2dB
BER	1E-4-1E-9
Carrier-noise ratio(C/N)	
Signal input range	>70dBuV
Measuring range	20dB-50dB
Precision	±2dBuV
Resolution	0.5dB
Spectrum analysis	
Frequency Range	5MHz-862MHz
Resolution	100KHz
Precision	50ppm
Power levels range	20dBV-120dBV
Power levels resolution	0.1dB
Power level precision	±1.5dB
Dynamic range	60dB
Input impedance	75Ω
RBW	300KHz
Testing band width	6,12,62MHz,All range scan
Slope testing	
Number of channels	5
Resolution	±0.1dB
Items	**Specifications**
General specifictions	
Audio output	Built-in speaker
Power supply	Li-ion battery(3.7V,2000mAh),5V AC/DC Adaptor/Charger
Charging time	Less than 5 hours (can work about 8 hours)
Dimension	223*110*47(mm)
Net weight	0.43kg
Working temperature	-10°C-50°C
Standard accessories	
Carrying Bag, AC/DC Adaptor, Battery, Software, USB cable.	

GWDTY-3000 Pipeline and Cable Locator

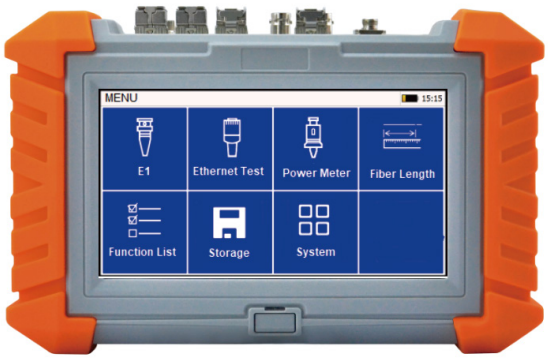
- Detect the route of underground pipeline and cable
- Measure the burial depth of underground pipeline and cable
- Detect and locate the insulation fault point of the underground pipeline and cable
- Identify the goal pipeline and cable under multiple underground pipelines and cables situation

Items	Specifications
Transmitter	
Output Mode	induction mode, direct connection mode, clamp mode
Working Frequency	577Hz, 815Hz, 8kHz, 33kHz, 65.5khz, 82kHz, 133kHz, threekinds of composite frequency output at the same time, the selected frequency iscustomized;
Output Power	10W
Output Voltage	60V
Maximum Output Current	1A
Power Supply	Dual power supply, lithium battery pack (energy saving and environmental protection)
Continuous Working Time	1W ≥12 hours; 5W ≥8 hours; 10W ≥5 hours
Display	Large, high contrast color LCD
Ambient Temperature	-20℃-50℃
Receiver	
Positioning Mode	peak value mode
	Valley value mode
	External equipment mode
Receiving Frequency	50Hz、577Hz、815Hz、8KHz、33KHz、65.5KHz、82KHz、133KHz
Gain Control	Automatic gain, gain range 0~100db
Measuring Depth	0~6m
Positioning Accuracy	5% of depth (0~3m)
	10% of depth (>3m)
Power Supply	lithium battery pack (energy saving and environmental protection)
Working Time	typical working time ≥ 8 hours;
Display	Large, high contrast LCD
Ambient Temperature	-20℃-50℃

GWRK200 Series Optical Cable Identifier

- OCID and OTDR function combination
- Working mode, automatic and manual optional
- Rugged housing design, dustproof and
- Touch screen + key operation, easy to use
- Large capacity lithium battery, supporting low power consumption mode and ultra long working
- It is applicable to optical cable identification in the case of PC termination, APC termination cable breakage at the end of optical fiber

Items	Specifications	
OCID Specification		
Model	GWRK200-40A	GWRK200-100C
Wavelength	1550nm	
Cable loss[1]	10dB	20dB
Test range[2]	40km	100km
Optical Interface	FC/APC	
Average output power	>-10dBm	
Requirements for return loss at the end of optical cable	≤40dB	≤20dB
	(Cable loss is less than 10dB)	(Cable loss is less than 20dB)
Operation mode	Touch screen+key	
Output mode	Visual: Real time waveform display(LCD screen)	
	Audio: Sound (according to disturbance intensity)	
Note: 1: Add a reflector at the end (reflection value >-3dB), can add 5dB 2:Add a reflector at the end (reflection value >-3dB), can add 20km		
OTDR Specification		
Model	GWRK200-40A	GWRK200-100C
Wavelength	1310nm/1550nm	
Dynamic range	32/30dB	38/36dB
Event deadzone	2.5m	2m
Attenuation deadzone	15m	13m
Pulse width	5~20480ns	
Test range	0.3~180km	
Sampling resolution	0.125~8m	
Sampling point	32K	
Loss threshold	0.05dB	
Loss resolution	0.001dB	
Typical refresh time	0.2s	
Optical Interface	FC/UPC	
Storage	16G SD card, >10000 traces	
Others		
Display	5.6' touch screen	
Power supply	DC 12V/3A	
Battery	lithium battery(7.4V 8Ah), working time≥8hrs	
Data interface	USB port and SD card	
Working Temp	0℃~+45℃	
Storage Temp	-20℃~+55℃	
Humidity	0~95% (Non condensing)	
Dimension	65H×150W×235Lmm	
Weight	1.5kg (including battery)	



GW-1015E Integrated Ethernet Data Tester

- This integrated Ethernet data tester that integrates various physical interfaces such as E1/V.35 ,10M/100M/1000M/10G Ethernet, optical power meter test, and OTDR test. It is easy to operate, easy to carry. The display interface directly displays the success and failure of test statistics, saving on-site installation, commissioning and maintenance for engineers and maintenance personnel, saving a lot of time.

Specifications	
10M/100M/1000M/10G Ethernet Test	***E1/V.35 Test***
●High line rate IP Ping test ●Provide RFC2544 (throughput, delay, packet loss, back-to-back) functional test ●Y.1564 (service configuration test, service performance test) ●Provide IP address checking ●DFTP server tests the upstream and downstream channel bandwidth ●Optical interface supports 850nm/1300nm/1310nm/1550nm	●Provide 75 Ω unbalanced and 120 Ω balanced interfaces of E1 ●Support Bert bit error characteristic test (G.821, G.826, M.2100/550) ●Support frame relay, HDLC and PPP protocol testing ●Support Ping and loopback Ping tests on E1 and V.35 links ●Automatic detection of destination IP address (HDLC/PPP/FR) function ●Support 30B+D voice call function
Optical Power Meter Test	**OTDR Test**
●Test wavelength: 850nm/1300nm/1310nm/1550nm/1625nm ●Test range: +26~ -50dBm or +10~ -70dBm	●Wavelength: 1550nm±20nm ●Maximum measuring distance: 0~80km ●Dynamic range: 20dB ●Event deadzone: <3m ●Distance accuracy: ± (1m+0.1% * distance) ●Graphical interface: support ●Support detection of overall loss, event point loss and fiber attenuation
VFL Test	
● Working wavelength: 650nm LD ●Output power: 6mw ● Max test range:8~10km ●Optical connector:2.5mm universal (FC/SC/ST)	

Others	
Storage	Can store 1000 test results, can be displayed or printed on the screen
Monitor	High resolution 7 inch color LCD display, touch screen with LED backlight
Battery	Intelligent lithium battery 8000 mAh, 12.6V operation time: 4 hours; charging time: 5 hours
Charger	12.6V@3A, 90 to 265VAC, 50-60Hz
Working Temp	0℃~+50℃
Storage Temp	-20℃~+70℃
Humidity	0~90% (Non condensing)
Dimension	230mm x130mm x 60mm
Weight	2.5 kg

MPO Integrated Tester

- Support single instrument polarity and loss testing
- Support 24-core or 12-core testing
- 5.6 -inch LCD touch screen
- Support customizable pass or not in threshold
- Support USB end detector function (optional)

Items	Specifications
MPO OLS	
Wavelength	1550nm or (optional)
Output Power	≥-5dBm
Spectral Width (FWHM)	≤5nm
Frequency	CW, 270, 1K, 2kHz
Power Stability	≤±0.1
MPO OPM	
Detector Type	InGaAs
Wavelength	850nm, 1300nm, 1310nm, 1550nm
Measuring Range	+3~-50 dBm
Linearity	±0.1 dB
Uncertainty	±0.25 dB
Port	MPO Male connector
Power Unit	dBm, dB, xW
Resolution	0.01dB
Polarity Detection	A, B, C & user-defined
Record Storage	Support
Normal Optical Power Meter	
Wavelength Range	800~1700nm
Calibrated Wavelength	850/1300/1310/1490/1550/1625nm
Measuring Range	+26~-50 dBm
Uncertainty	≤ 0.25 dB
VFL	
Wavelength	650nm
Output Power	10mW
Other	
Display Size	5.6-inch TFT color touch screen
Power Supply	7.4V/4000mAh lithium battery/Micro USB
Automatic Shutdown Time	user-defined optional
Low Battery Warning	Icon flashing
Communication Interface	Micro USB
Operating Temperature	-10~+60℃
Storage Temperature	-25~+70℃
Dimension	260×155×73mm
Weight	1250g

MPO VFL Tester

- 3.5 inch screen display
- Supports multiple working modes, including full red light on, individual red light on, flashing mode,
- Supports 12 cores MPO fiber or 24 cores MPO fiber
- Can detect the MPO fiber sequence and continuity
- Foot pedal control is optional

Items	Specifications
Working wavelength	650nm±10nm
Optical port	MPO APC male (Customizable UPC)
Optical channel	12 or 24
Applicable fiber types	SM/MM
Battery	Rechargeable lithium battery
Working hours	6 hours
Charging interface	USB Type-C
Operating temperature	-10℃~+60℃
Size	44mm*165mm*44mm
Weight	0.5kg

Test Effect:

★★★ NOTES ★★★

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Note:Specifications Subject to change without notice