



# Grandway

## Fiber Optic Testing Instrument





Established in 1994, 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.





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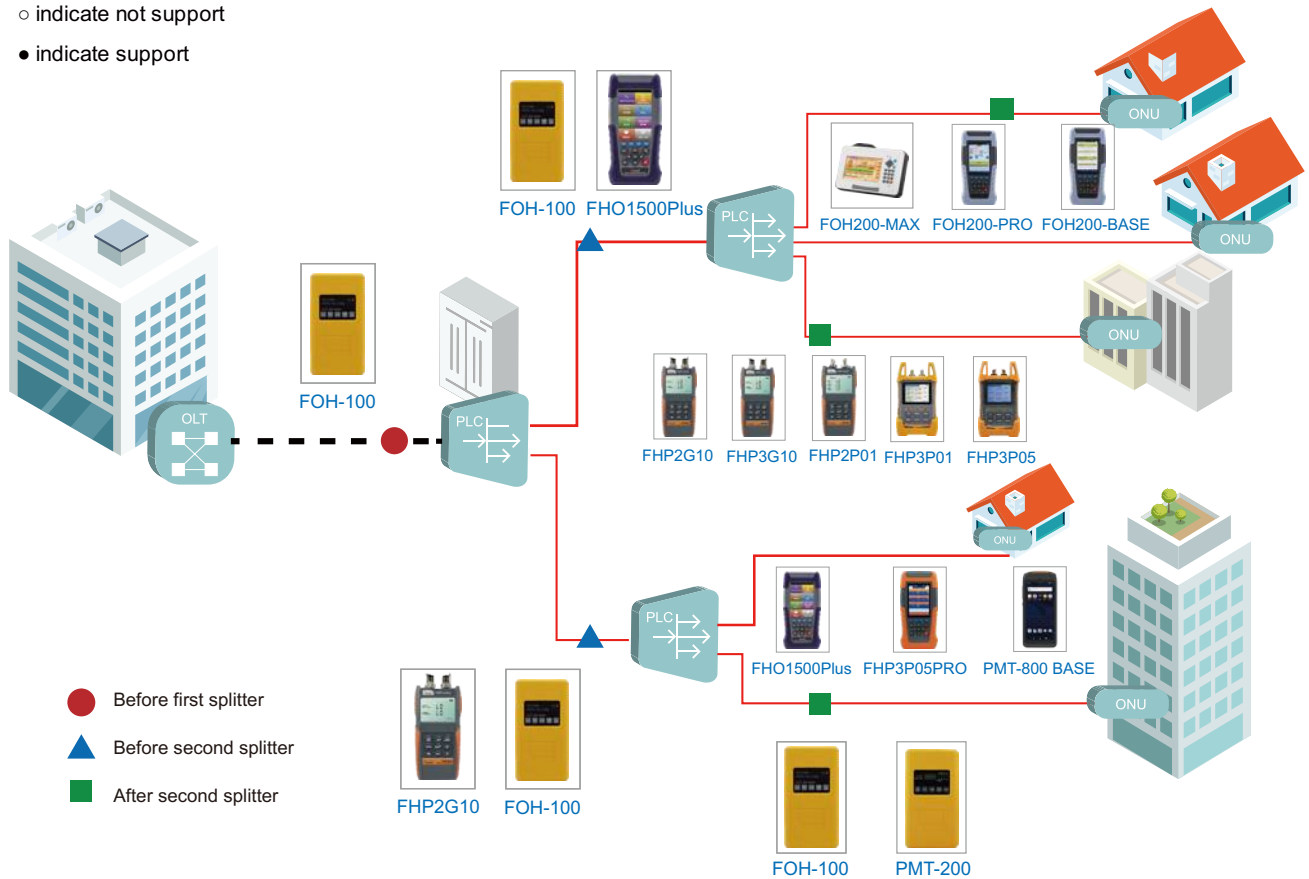


## PON Installation and Maintenance Solution

Model	FHP2P01	FHP2G10	FHP3G10	FHP3P05 PRO	FOH-100	PMT-200	FOH-200 BASE	FOH-200 PRO	FOH-200 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 RF CATV	G/E-PON	GPON	G/E-PON XG(S)-PON 10GE-PON	G/E-PON XG(S)-PON 10GE-PON	G/E-PON XG(S)-PON 10GE-PON
Downlink Power Measure (nm)	1490/1550	1490/1577	1490/1577/ 1550	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





## PMT-800 BASE Personal Digital Assistant

- Wired speed measurement capability  $\geq 2000$  Mbps through 2.5G Ethernet port
- 160MHz WiFi6 speed test capacity  $\geq 1800$  Mbps
- Support Ookla Speedtest
- 10GPON downlink selective OPM and 10mw VFL
- WiFi signal coverage and strength analysis
- Support IPTV testing and HDMI TV simulation
- Support real-time capture of complete network data packets

Items	Specifications
Operating System	Android12
CPU	4-core CPU, 4*A55 2.0GHz 64 bit processor
Memory	RAM: 4G; ROM: 64G
Display Screen	Size: 6.3inch Capacitive screen
	Resolution: 1080x2280
Optical Port	2.5mm universal VFL port and optical power meter port
Electric Port	1x2.5Gigabit Ethernet Port, 1x1Gigabit Ethernet Port
	1xType-C charging port, 1xHDMI port, 1xTF card slot
Wireless	WIFI+Bluetooth
Speed Test Capacity	$\geq 2000$ Mbps
WiFi Test	2.4G+5G Frequency band
	Support 160MHz WIFI6
	WiFi speed test capacity $\geq 1800$ Mbps
Rear Camera	8 megapixels
10GPON Selective OPM	Wavelength Range: 800nm~1700nm
	Calibrated wavelength: 850nm, 1270nm, 1300nm, 1310nm, 1490nm, 1550nm, 1577nm, 1625nm
	Test range: -40~+10dBm
VFL	Output power: 10mw, 650nm $\pm$ 10nm; CW/1Hz/2Hz
HDMI TV Simulation	Connect TV signal through HDMI cable and simulate TV display on PMT-800
Packet Capture Function	Real time packet capture and analysis through Wireshark
IP Address Acquisition Method	Multiple IP address acquisition methods such as static configuration address, DHCP, PPPOE, etc
LAN Testing	Ping, Ipconfig, Trace Route, Route
Battery	8000mAh lithium battery
Working conditions	-10°C ~ 50°C; 5%~95%(No condensation)
Size	193.5L x 86W x 33H(mm)
Weight	500g

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**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

Items	Specifications
<b>OptiTracking Function</b>	
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
<b>ONU Detection Function</b>	
ONU Status Type	ONU Online, ONU Offline, No ONU, Rogue ONU
<b>OTDR Module</b>	
Wavelength	1650nm
Dynamic Range	20dB
Deadzone①	Event deadzone: 1m, Attenuation deadzone: 4m
Test Range	500m~120km
Pulse Width	3ns~20us
Distance Accuracy	$\pm(1m+Test\ distance \times 3 \times 10^{-5} + Sampling\ resolution)$ (excluding IOR uncertainty)

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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.

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### M350 Mini Optical Explorer

- FTTX last mile fiber troubleshooting
- First connector loss and ONU/Splitter connectivity state is measurable
- ONU status 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

Items	Specifications
<b>Fiber Link Map</b>	
Last Mile Troubleshooting	Test Settings 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 Status Detection	Results 1: ONU 2: NO ONU
Normal Mode	Wavelength: 1650nm (1550nm optional), Support live test Dynamic range: 20dB EDZ: 1m, ADZ: 4m
<b>OTDR Module</b>	
Wavelength	1650nm (1550nm optional), support live test
Dynamic Range	20dB
Deadzone	Event deadzone: 1m, Attenuation deadzone: 4m
Test Range	500m~120km
Pulse Width	3ns~10us
Test Mode	Auto, Manual, Realtime
Distance Accuracy	$\pm(1m+Test\ distance \times 3 \times 10^{-5} + Sampling\ resolution)$ (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

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**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	Version 1: GPON+XG(S)PON Version 2: GPON+XG(S)PON+EPON+10GEPON
PON Data Parsing	OLT information: OLT PON-ID, ODN class, Tx power, ODN loss
Power Measurement	Downlink: 1490nm 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 color screen
Wireless	Bluetooth connection with Android phone app
Data Storage	16G TF Card
Working Temp	-10°C~50°C
Humidity	5%~95%(no condensation)
Dimension	193×94×47mm
Weight	570g

Notes:

The OLT information 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

Items	Specifications
Applicable Network	Version 1: GPON+XG(S)PON Version 2: GPON+XG(S)PON+EPON+10GEPON
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: 1490nm and 1577nm Uplink: 1270nm and 1310nm
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 color screen
Wireless	Bluetooth connection with Android phone app
Data Storage	16G TF Card
Working Temp	-10°C~50°C
Humidity	5%~95%(no condensation)
Dimension	193×94×47mm
Weight	609g

**Notes:**

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



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## 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 function
- Downlink 1490/1577nm and uplink 1270/1310nm power measurement and judgement
- Compatible with GPON, EPON, XG(S)-PON and 10G EPON
- 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	XG(S)-PON, GPON, 10G-EPON, EPON
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: 1490nm and 1577nm Uplink: 1270nm and 1310nm
OTDR function	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 information 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 extraction)
- 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)

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 * <sup>1</sup> 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) * <sup>2</sup>
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 information 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%.



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### 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
<b>GPON ONU Emulation</b>	
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
<b>Others</b>	
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 information extraction needs to be activated in GPON OLT according to ITU-T G.984.3 Amd3





### FHP201 PON Power Meter

- Support measuring 1310nm upstream burst signal and 1490/1550nm downstream signal
- Support EPON/GPON network
- 900 data storage function
- With Pass, Warning, Fail mode
- Intelligent charging and auto power off

Items	Specifications		
Wavelength	1310nm	1490nm	1550nm
Sensor Type	InGaAs		
Isolation Rate	1490nm>40dB	1310nm>40dB	1310nm>40dB
	1550nm>40dB	1550nm>30dB	1490nm>30dB
Test Range	-40~+16dBm	-50~+16dBm	-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	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		

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### FHP3P01 PON Power Meter

- Support measuring 1310nm upstream burst signal and 1490/1550nm downstream signal
- Support EPON/GPON network
- 2.8-inch TFT LCD Display with high resolution
- 1000 data storage function
- With Pass, Warning, Fail mode and LED indicator
- Equipped with protective rubber

Items	Specifications		
Wavelength	1310nm	1490nm	1550nm
Sensor Type	InGaAs		
Isolation Rate	1490nm>40dB	1310nm>40dB	1310nm>40dB
	1550nm>40dB	1550nm>30dB	1490nm>30dB
Test Sange	-40~+10dBm	-50~+15dBm	-50~+20dBm
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		

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### FHP2G10 Selective Power Meter

- Supports co-existence of G/E-PON and XGS-PON/10G-EPON services power test
- Selective power level 1490nm/1577nm measurements separately at the same time
- Normal broadband power meter support 1270nm/1310nm/1550nm/1625nm
- Built-in 10mw VFL function
- 999 groups test results can be stored

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°C~+50°C
Storage Temp	-20°C~+70°C
Dimension	160L×76W×45H(mm)
Weight	300g

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### FHP3G10 Selective Power Meter

- Supports co-existence of G/E-PON, XGS-PON/10G-EPON and RF video services power test
- Selective power level 1490nm/1577nm/1550nm measurements separately at the same time
- Built-in 10mw VFL and bluetooth function
- 10 groups user-defined Pass/Warning/Fail function
- 999 groups test results can be saved
- Auto power off and backlight function

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

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## FHP3P05 10G PON Power Meter

- Applicable to XG(S)PON/10G EPON and G/E PON optical power testing
- Support downstream 1490/1550/1577nm power test
- Support upstream 1310/1270nm power test
- With threshold setting and clear Pass/Fail indicator
- 1000 groups of data storage

Items	Specifications		
Wavelength	1270/1310nm	1490nm	1550/1577nm
Measurement Range	CW mode: -40dBm~+10dBm Burst mode:-30dBm~+10dBm	-50dBm~+15dBm	-50dBm~+20dBm
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		

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### FHP3P05 PRO 10GPON OPM

- 3.5 inch color touch screen LCD
- Supports co-existence of G/E-PON, XGS-PON/10G-EPON and RF video services uplink and downlink power test
- 5 wavelength power value simultaneous selective measurement and display at same screen (1490nm/1550nm/1577nm/1270nm/1310nm)
- Long glowing rogue ONU alarm and detection function
- Support 10mw VFL function
- With threshold setting and clear Pass/Fail indicator

Items	Specifications				
<b>10G PON Power Meter</b>					
Wavelength	1270nm	1310nm	1490nm	1550nm	1577nm
Measurement Range(dBm)	+13~-10	+13~-30	+13~-50	+26~-40	+17~-50
Burst Mode(dBm)	+13~-10	+13~-30	-	-	-
Spectral Passband	1270±10nm	1310±20nm	1490±10nm	1550±10nm	1577±6nm
Insertion Loss	≤1.5dB				
Uncertainty	≤0.5dB				
Display Resolution	0.01dB				
Display Unit	dBm/dB/mw				
Threshold Setting	Support user defined				
<b>VFL</b>					
Wavelength	650±10nm				
Output Power	10mw				
Working Mode	CW, 1Hz/2Hz				
Optical Port	Universal 2.5mm				
<b>Others</b>					
Display	3.5inch touch screen LCD				
Optical Port	2*SC/APC or 2*SC/UPC				
Charging Port	USB Type-C interface				
Power Supply	5000mAh lithium battery				
Data Storage	16G TF card				
Working Temp	-10°C ~+50°C				
Storage Temp	-20°C ~+70°C				
Dimension	192.9L×93.8W×47Hmm				
Weight	480g				





### 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	$\pm(1m+Test\ distance \times 3 \times 10^{-5} + Sampling\ resolution)$ (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°C~+50°C; 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 Handheld OTDR

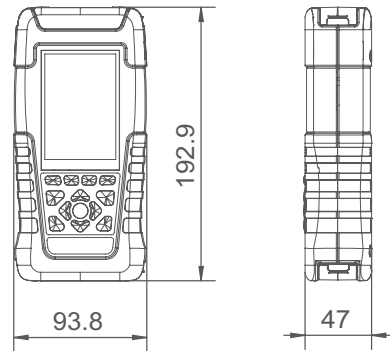


FHO1000-D28



FHO1000-D22

- 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.
- 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 <sup>-5</sup> +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-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

Let's go in the grandway!



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 <sup>-5</sup> +sampling resolution) (excluding IOR uncertainty)
Memory Capacity	16G TF card

Items	Specifications
<b>Visual Fault Locator Module</b>	
Working Wavelength	650nm±20nm
Power	10mw, CLASSIII B Laser
Launching Mode	CW/2Hz
Connector	Universal 2.5mm

<b>Optical Power Meter Module</b>	
Wavelength Range	800~1700nm
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

<b>Optical Laser Source Module</b>	
Working Wavelength	Consistent with OTDR
Output Power	≥-10dBm
Output Accuracy	±0.5dB
Output Mode	CW/270Hz/1kHz/2kHz

<b>Others</b>	
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 Language	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 return loss ≥-55dB. Dynamic range>5dB





FH05000-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

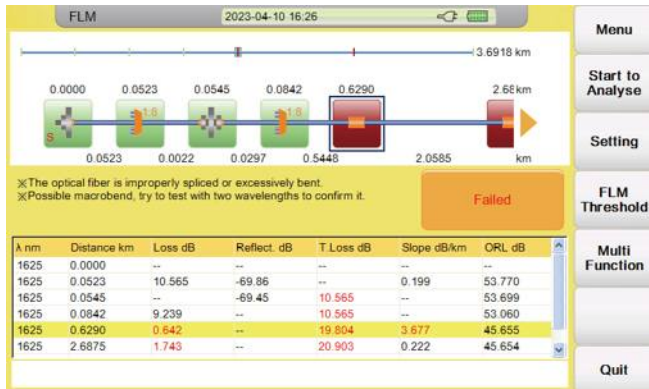
**Power Meter**

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

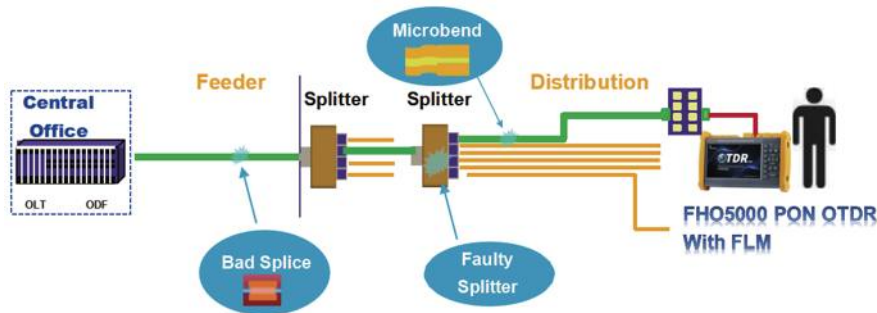
Let's go in the grandway!



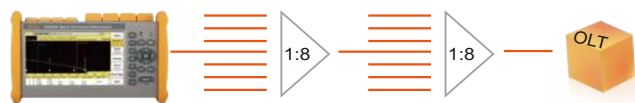
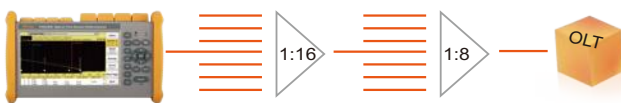
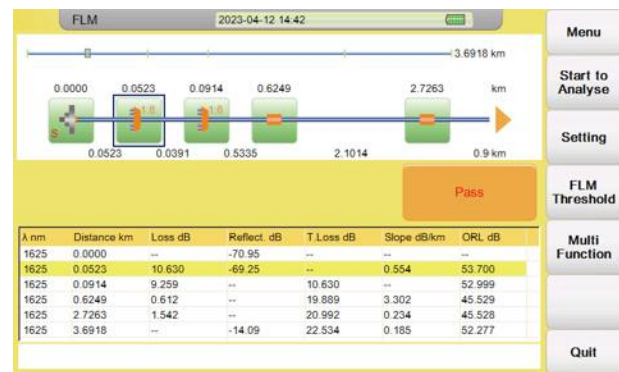
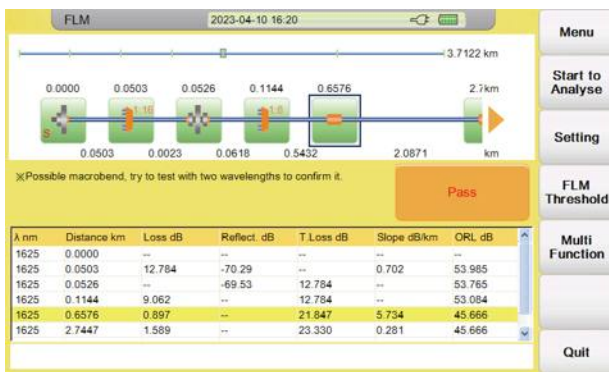
### Intelligent Fiber Link Map (FLM)



- Adaptively adjust multiple pulse width tests based on link, merge and analyze
- No complex settings, testing can be completed with just one button
- 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



(Link condition: No reflection FUT, No reflection splitter.)

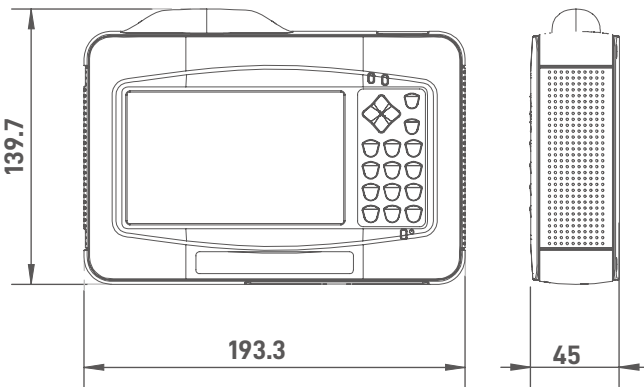


Applicable to FHO5000 Series



**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 <sup>-5</sup> +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

Let's do in the grandway!





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°C~+50°C
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

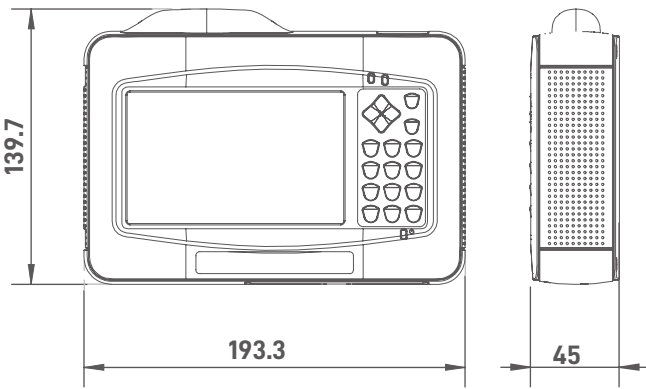
#### Notes

- 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 <sup>-5</sup> +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



Let's go in the grandway!

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.)
<b>OPM</b>	
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
<b>VFL</b>	
Working Wavelength	650nm±20nm
Output Power	≥10mw
Working Mode	CW/1Hz/2Hz
Optical Port	FC/UPC (Interchangeable SC/ST)
Laser Safety Level	Class III
<b>OLS</b>	
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)
<b>Optical Loss Test</b>	
Working Wavelength	Consistent with LS
IL Test	Support
<b>RJ45 Cable Finder (Optional)</b>	
Working Mode	Digital tracking
Distance	≤300m
Online/Line Pair Tracking	Support





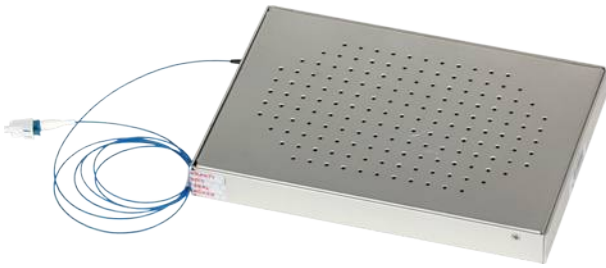
Items	Specifications
<b>RJ45 Cable Length</b>	
Test Distance	≤300m
<b>RJ45 Cable sequence</b>	
Test Standard	T568A/T568B
<b>Others</b>	
Display	5 inches color touch screen
Available Lanaguage	English, Spanish, Russian, French, Portuguese, Arabic
Data Storage	8GB TF card
Data Interface	USB type C
Working 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

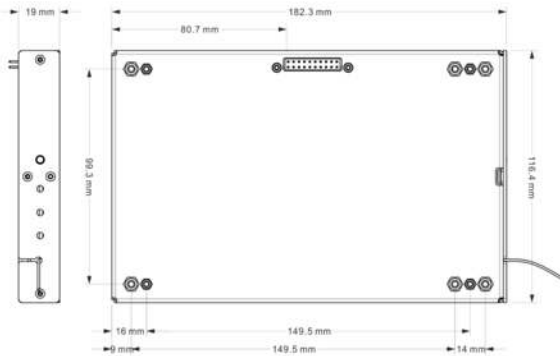
Let's go in the grandway!





## 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	$\pm(0.75m + \text{test distance} \times 3 \times 10^{-5} + \text{sampling resolution})$ (excluding IOR uncertainty)
Test Range	Maximum range 400km
Linearity	$\pm 0.03\text{dB/dB}$
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°C ~+55°C
Storage Temp	-40°C ~+85°C
Humidity	0~95%
Dimension/Weight	183mm x 116mm x 19mm / 400g

Let's go in the grandway!





**F2H-LFC Launch Fiber Cable**

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

Let's go in the grandway!





### 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

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### 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)

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### 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-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)

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### 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)

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### 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	

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**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

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## 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

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### GW-950 Fiber Cleaver

- High precision and low loss
- Stable cutting performance, typical cutting angle  $\leq 0.7^\circ$
- Multi-function fiber holder
- Support blade automatic rebound function
- Equipped with residual fiber collection box

Items	Specifications
Fiber Type	Silicon fiber
Fiber Count	Single
Bare Fiber Diameter	125 $\mu$ m
Coating Diameter	160~900 $\mu$ m, 2mm/3mm patchcord and drop cable
Cleaving Angle	$\leq 0.7^\circ$
Cleaving Length	10~16mm
Blade Life	>40000 times
Dimension	58mm(W) $\times$ 57mm(D) $\times$ 53mm(H)
Weight	280g

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## 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

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### 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
<b>CWDM Optical Power Meter</b>	
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
<b>OTDR</b>	
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 <sup>-5</sup> +Sampling resolution)(excluding IOR uncertainty)
Loss Accuracy	0.1dB
Linearity	0.1dB
Reflectance Accuracy	±2dB

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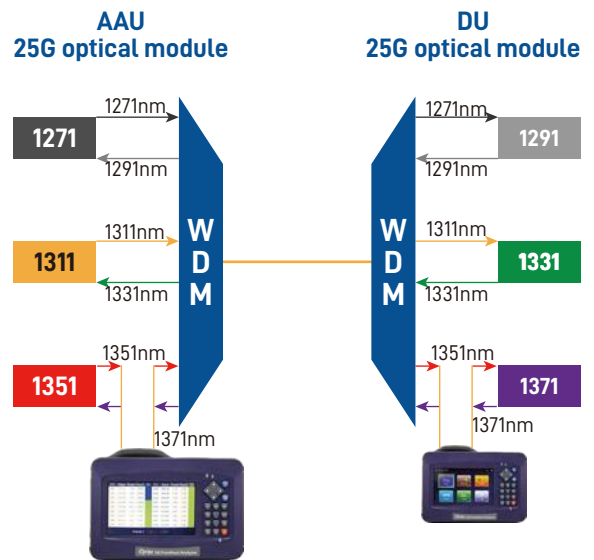
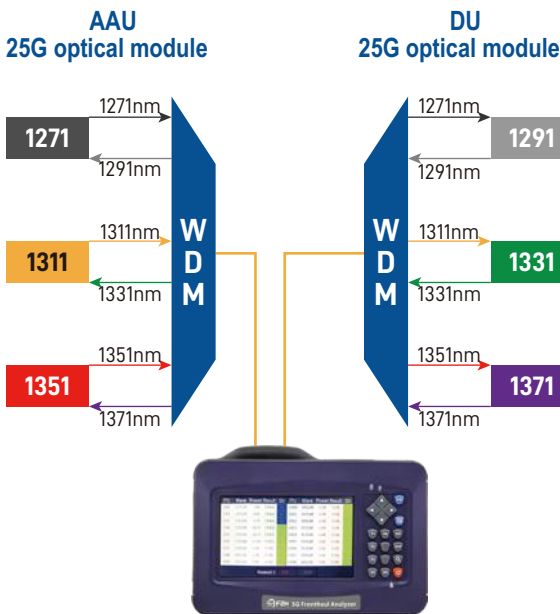
Stable Laser Source	
Wavelength	1650nm±5nm
Output Power	>-12dBm
Working Mode	CW/270Hz/1kHz/2kHz
VFL	
Wavelength	650±10nm
Output Power	10mW
Working Mode	CW/1Hz/2Hz
Others	
Interface	Optical port: FC/UPC×2
	Charging port: USB Type-C
	Wireless interface: Bluetooth
Data Storage	Pluggable micro SD card
Battery	≥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 channel 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
<b>CWDM Optical Power Meter</b>	
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

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CWDM OTDR	
Fiber Type	SMF (ITU-T G.652)
Wavelength	1271nm, 1291nm, 1311nm, 1331nm, 1351nm, 1371nm, 1391nm, 1411nm, 1431nm, 1451nm, 1471nm, 1491nm, 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	$\pm(1m + \text{Test distance} \times 3 \times 10^{-5} + \text{Sampling resolution})$ (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
<b>OPM</b>	
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
<b>VFL</b>	
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
<b>Others</b>	
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℃
Humidity	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			

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### 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	

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### 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	850/1300/1310/1550/1490/1625nm	
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	

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## 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

Let's go in the grandway!

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				

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**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°C~+50°C			
Storage Temp	-20°C~+70°C			
Dimension/Weight	120L×33W×30H mm / about 67.8g			
Accessories	2*AAA dry battery, Quick guide, Carrying bag			

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### 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°C	
Storage Temp	-20 to +70°C	
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	

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## 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	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°C~+50°C
Storage Temp	-20°C~+70°C
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

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**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
<b>Laser Source Part (LD)</b>				
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
<b>Power Meter Part (PD)</b>				
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			
<b>Others</b>				
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			

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### 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

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**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

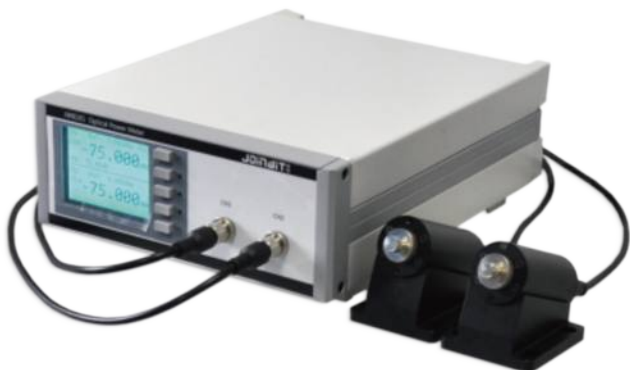
Items	Specifications
Output Channel	1~4 channels
Max Output Power	2mw/5mw/10mw/customized
Wavelength	1310nm/1550nm/customized
Laser Type	DFB/customized
Stability	±0.005dB(15 mins/10mw, 25°C)
	±0.025dB(8 hrs/10mw, 25°C )
Return Loss	>45dB
TEC Stability	±0.1°C
TEC Working Range	20~30°C
Optical Interface	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°C, Storage temp: -40~80°C
Dimension/Weight	235×380×145mm/about 4kg

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Let's go in the grandway!

### 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

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### 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
<b>Identifier</b>	
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
<b>OPM</b>	
Working Wavelength	800~1700nm
Calibrated Wavelength	850/1300/1310/1490/1550/1625nm
Measurement Range	-50~+26dBm
Optical Port	2.5mm universal connector
<b>VFL</b>	
Working Wavelength	650nm±10nm
Output Power	10mw
Optical Port	2.5mm universal connector
<b>Others</b>	
Power Supply	2*AA 1.5V alkaline battery
Working Temp	-10℃~+50℃
Storage Temp	-20℃~+70℃
Dimension	230L×43W×36Hmm
Weight	200g

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### 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

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Items	Specifications
<b>GW3306C</b>	<b>Optical Fiber Identifier</b>
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)
<b>GW3306CT</b>	<b>Optical Signal Generator</b>
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

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### 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°C~+50°C	
Storage Temp	-30°C~+60°C	
Weight	1.5kg	
<b>Standard Accessories:</b>		
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	
<b>Optional Accessories:</b>		
25-A-M	125-A-M	SC-A-F
FC-A-F	AV-USB 2.0 Converter	
<b>Applications</b>		
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	

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### FIM-4 Fiber Microscope



- 400X magnification, <math><1 \mu\text{m}</math> 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

Items	Specifications
Magnification	400X
Resolution	<math><1 \mu\text{m}</math>
View of Field	X: 680 $\mu\text{m}$
	Y: 510 $\mu\text{m}$
Focus Way	Manual
Focus Speed	2~5s
Alignment	>98%
Laser Source	Blue LED
Output Port	USB 1.0/2.0
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

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### FIM-5 Fiber Microscope

- 400X magnification, <1 μm resolution for clear image
- 4.5 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
<b>FIM-5 Probe</b>	
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	USB 1.0/2.0
Size	180x22x56mm
Weight	110g
<b>FIM-5 Display</b>	
Screen	4.5 inch
Capacity/RAM	8G
Input	Type-C USB
Battery	2500mAh Li-ion
Size	205x120x8.9mm
Weight	355g
<b>Standard Accessories</b>	
FIM-5 Probe	1pc
4.5 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

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### 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

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### 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)
<b>Standard Accessories:</b>		
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

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### 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)	

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### FIM-15 Fiber Microscope

- Suitable to detect the end face of single core and multi-core optical fiber
- 8.0" Ultra high definition TFT display
- Auto focus, auto analysis
- Multiple magnification options

Model	FIM-15A	FIM-15B	FIM-15C
Focus Mode	Manual	Auto	Auto
Generate report automatically	Optional	Optional	Support
Test Time	1~4s	1~3s	4s
Adjust Repeatability	±10um	±0.5um	±0.5um
Image Brightness	Manual	Auto	Auto

Test product type	
MM	Regular single fiber as LC/SC connectors, patch cord, ferrule PC/APC fiber male end face.
MF	Regular single fiber as TOSA/ROSA assembly, QSFP/SFP-SC/LC transceivers, in-adapter, bulkhead PC/APC fiber female end face.
MT	Multifiber as MPO, MT ferrule PC/APC male end face.

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Items	Specifications							
FIM-15	AX1	AX2	AX4	BX1	BX2	BX4	CX2	CX4
Magnification	80X	200X	400X	80X	200X	400X	200X	400X
CCD Resolution	1/3" 600CCD							
Display	8.0" TFT 1024*768 HD							
Field of View	400X: 247x189um, 200X: 500x384um							
Adjust Way	Manual/Auto							
X/Y Axis Adjustment	Support							
Output Interface	1*BNC, 1*USB, 1*SD card interface						1*BNC, 1*VGA	
Power Supply	DC 12V 0.8A							
Dimension	200x265x295mm						200x265x320mm	
Weight	1.75kg			2kg			3kg	

### Standard Accessories: Take FIM-15B-400X-MM as an example

Item	Description	Quantity
FIM-15B-400X-MM	400X magnification auto test bench microscope	1pc
1.25mm uniersal adaptor	Test 1.25mm patch cord as LC PC connectors	1pc
2.5mm uniersal adaptor	Test 2.5mm patch cord as FC/SC/ST PC connectors	1pc
12V Power Supply		1pc



### 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



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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°C~+50°C
Storage Temp	-30°C~+60°C
<b>Standard Tips</b>	
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
<b>Optional Tips</b>	
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 $\pm$ 10ppm
	Frequency Deviation	$\pm$ 999ppm
	Line Interface	75 $\Omega$ (Unbalanced), 120 $\Omega$ (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: $\pm$ 1Hz
	Offset Measurement	Accuracy: $\pm$ 1ppm
		Range: -999ppm~+999ppm
2M	VF Injection	Frequency: 200MHz~3400MHz, Step: 10Hz
		Level: -60dBm~+3dBm
		Frequency: 200MHz~3400MHz
		Accuracy: $\pm$ 1Hz
2M	VF Measurement	Level range: -60dBm~+3.14dBm
		-60dBm~-21dBm, accuracy: $\pm$ 2.87dBm
		-20dBm~+3.14dBm, accuracy: $\pm$ 0.21dBm
		Accuracy: $\pm$ 1us
G.703 CO	Delay Measurement	Accuracy: $\pm$ 1us
	Line Rate	64kb/s $\pm$ 1000ppm
	Line Interface	120 $\Omega$ , Balanced
	Line Code	AMI

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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
Test Patterns		N×64kb/s (N=1~32), 4M, 8Mkb/s
	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
<b>Channel/Frequency index</b>	
Frequency range	5MHz-862MHz
Precision	50ppm
Resolution	10KHz
Measurement band width	280KHz
Frequency step	50KHz, 100KHz, 500KHz
<b>Channel type</b>	
Analog TV	TV
Digital TV	16/32/64/128/256 QAM
Frequency/channel	SIGL
<b>Analog power level testing</b>	
Measuring range	25dBuV-120dBuV
Precision	±1.5dB
Resolution	0.1dB
Detection method	Peak value detection
Input impedance	75Ω
<b>Digital power level testing</b>	
Measuring range	25dBuV-110dBuV
Precision	±1.5dB
Resolution	0.1dB
Detection method	Average value detection
Input impedance	75Ω

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Items	Specifications
<b>Voltage testing</b>	
Input range	0-80V(AC/DC)
Precision	±2V
Resolution	0.1V
<b>Digital channel</b>	
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
<b>Carrier-noise ratio(C/N)</b>	
Signal input range	>70dBuV
Measuring range	20dB-50dB
Precision	±2dBuV
Resolution	0.5dB
<b>Spectrum analysis</b>	
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
<b>Slope testing</b>	
Number of channels	5
Resolution	±0.1dB
<b>Items</b>	
<b>Specifications</b>	
<b>General specifications</b>	
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
<b>Standard accessories</b>	
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
<b>Transmitter</b>	
Output Mode	induction mode, direct connection mode, clamp mode
Working Frequency	577Hz, 815Hz, 8kHz, 33kHz, 65.5kHz, 82kHz, 133kHz, three kinds of composite frequency output at the same time, the selected frequency is customized;
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°C-50°C
<b>Receiver</b>	
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°C-50°C

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### 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	
	<b>OCID Specification</b>	
Model	GWRK200-40A	GWRK200-100C
Wavelength	1550nm	
Cable loss <sup>1</sup>	10dB	20dB
Test range <sup>2</sup>	40km	100km
Optical Interface	FC/APC	
Average output power	>-10dBm	
Requirements for return loss at the end of optical cable	≤40dB (Cable loss is less than 10dB)	≤20dB (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		
	<b>OTDR Specification</b>	
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	
	<b>Others</b>	
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)	

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## 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	
<b>10M/100M/1000M/10G Ethernet Test</b>	<b>E1/V.35 Test</b>
<ul style="list-style-type: none"> <li>●High line rate IP Ping test</li> <li>●Provide RFC2544 (throughput, delay, packet loss, back-to-back) functional test</li> <li>●Y.1564 (service configuration test, service performance test)</li> <li>●Provide IP address checking</li> <li>●DFTP server tests the upstream and downstream channel bandwidth</li> <li>●Optical interface supports 850nm/1300nm/1310nm/1550nm</li> </ul>	<ul style="list-style-type: none"> <li>●Provide 75 Ω unbalanced and 120 Ω balanced interfaces of E1</li> <li>●Support Bert bit error characteristic test (G.821, G.826, M.2100/550)</li> <li>●Support frame relay, HDLC and PPP protocol testing</li> <li>●Support Ping and loopback Ping tests on E1 and V.35 links</li> <li>●Automatic detection of destination IP address (HDLC/PPP/FR) function</li> <li>●Support 30B+D voice call function</li> </ul>
<b>Optical Power Meter Test</b>	<b>OTDR Test</b>
<ul style="list-style-type: none"> <li>●Test wavelength: 850nm/1300nm/1310nm/1550nm/1625nm</li> <li>●Test range: +26~ -50dBm or +10~ -70dBm</li> </ul>	<ul style="list-style-type: none"> <li>●Wavelength: 1550nm±20nm</li> <li>●Maximum measuring distance: 0~80km</li> <li>●Dynamic range: 20dB</li> <li>●Event deadzone: &lt;3m</li> <li>●Distance accuracy: ± (1m+0.1% * distance)</li> <li>●Graphical interface: support</li> <li>●Support detection of overall loss, event point loss and fiber attenuation</li> </ul>
<b>VFL Test</b>	
<ul style="list-style-type: none"> <li>● Working wavelength: 650nm LD</li> <li>●Output power: 6mw</li> <li>● Max test range:8~10km</li> <li>●Optical connector:2.5mm universal (FC/SC/ST)</li> </ul>	
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°C~+50°C
Storage Temp	-20°C~+70°C
Humidity	0~90% (Non condensing)
Dimension	230mm x130mm x 60mm
Weight	2.5 kg

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### 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
<b>MPO OLS</b>	
Wavelength	1550nm or (optional)
Output Power	≥-5dBm
Spectral Width (FWHM)	≤5nm
Frequency	CW, 270, 1K, 2kHz
Power Stability	±0.1
<b>MPO OPM</b>	
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
<b>Normal Optical Power Meter</b>	
Wavelength Range	800~1700nm
Calibrated Wavelength	850/1300/1310/1490/1550/1625nm
Measuring Range	+26~-50 dBm
Uncertainty	≤ 0.25 dB
<b>VFL</b>	
Wavelength	650nm
Output Power	10mW
<b>Other</b>	
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



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**Где купить:**

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Note:Specifications Subject to change without notice