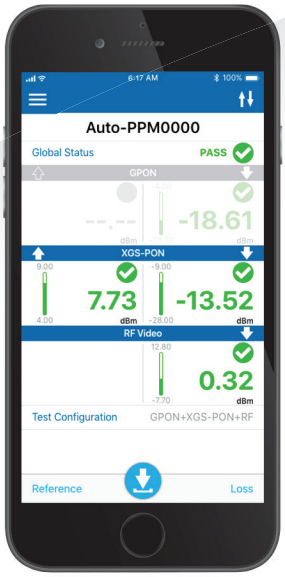
PPM-350D PON Power Meter

TEST ANY PON TECHNOLOGY WITH ONE INTELLIGENT INSTRUMENT



FTTx Test Solutions

PON-aware™

OPM EXFO

Available for iOS® and Android™

Feature(s) of this product is/are protected by one or more of: US patents 7,187,861; 8,861,953; 9,287,974; 9,654,213; 9,654,213; 9,831,948; patent application US 2018/0076890 A1; and US design patent(s) pending.

SPEC SHEET

This intelligent PON power meter automatically detects and adapts test parameters to the PON technology in use at the customer premises, thanks to its groundbreaking, patented PON-aware™ capability.

KEY FEATURES

- Unique PON-aware™ capability automatically detects PON technology in use
- Compatible with GPON and EPON networks
- Supports 10G-capable PON networks
- Pass-through mode for ONT/ONU verification
- Bluetooth® and USB connectivity
- Smart app to store and share test results, create test reports
- Compact, rugged and designed to comply with the IP54 enclosure standard
- Rechargeable battery lasts for up to 8 hours of continuous use

APPLICATIONS

- Single-layer PON service activation
- Multi-layer PON service activation
- Insertion loss testing
- Multiple PON technologies supported on a single unit:
  - GPON (ITU-T G984.2)
  - EPON (IEEE 802.3)
  - XG(S)-PON (ITU-T G987.2)
  - TWDM NG-PON2 (ITU-T G989.2)
  - RF overlay
  - RFoG (ANSI/SCTE 174 2010)

COMPLEMENTARY PRODUCTS

Fiber Inspection Probe
FIP-400B Wireless

EXFO

NEXT-GENERATION PON COMPLIANT

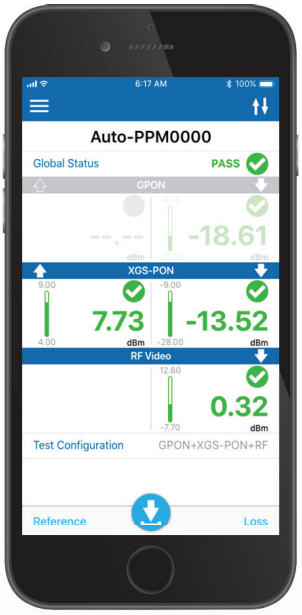
Next-generation passive optical networks (PONs) will, in most cases, leverage the existing outdoor plant infrastructure already in use for current PON customers. This adds a level of complexity to PON testing since multiple wavelengths will reach the end user at the service activation location. Having the right instrument is vital to avoid meaningless test results or false positives.

EXFO's PPM-350D can be used in legacy and next-generation PON scenarios. It is compatible with single-layer PON and RF overlays as well as mixing a next-generation layer on top of it. The PPM-350D affords the unique ability to test several next-generation PON technologies (XGS-PON, NG-PON2) with a single unit. With the same PPM-350D test unit you can tackle today's increasing field complexities and you are already equipped for tomorrow's PON challenges.

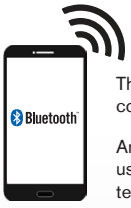
PON-AWARE TECHNOLOGY

Deploying a mix of legacy and next-generation equipment? No problem. By relying on pre-configured and customizable test configurations, the PPM-350D automatically detects the type of network under test and self-adjusts the pass/fail criteria for error-free testing.

EQUIPEMENT AND MOBILE APP OVERVIEW



1. **Pass/fail LEDs for upstream and downstream**
   Get a clear view of pass/fail status without looking at the screen
2. **Touchscreen interface**
3. **View of multiple layers simultaneously**
4. **Designed in compliance with IP54 rating**
   Rechargeable battery
   Internal storage up to 3500 results
   Bluetooth® and USB connectivity



The PPM-350D features standard Bluetooth connectivity.

Android™ and iOS® mobile applications let you use your smart device to store results, create test reports, share results and more.

Example of a triple layer network with GPON, XGS-PON and an RF video overlay. PON-aware™ technology helps technicians validate the service activation for GPON and XGS-PON customers with a single test configuration. The PON-aware™ feature automatically detects the service being activated and provides a clear pass/fail status according to that service.

REPORTING

Create complete service activation reports directly from your mobile device.

LOSS TESTING

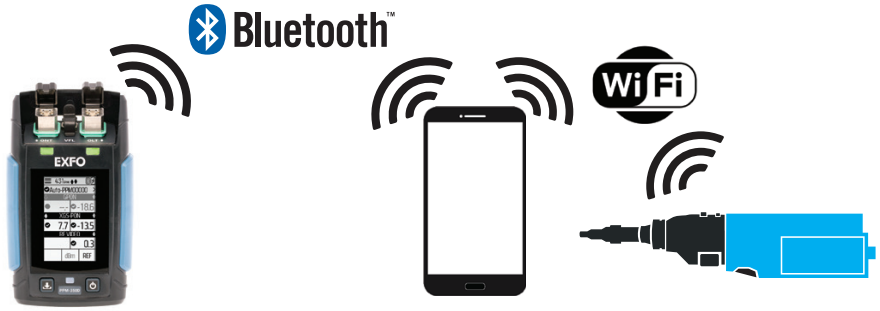
On top of using it for PON service activation, the PPM-350D can be used to measure insertion loss (IL) of fiber networks using a portable light source or the PON system transmit cards of the optical line terminal (OLT) at the central office. The PPM-350D and the mobile application feature a loss testing mode to take a reference for accurate IL measurement of the fiber under test.

FIBER CONNECTOR INSPECTION AND CERTIFICATION—THE ESSENTIAL FIRST STEP BEFORE ANY OPTICAL TESTING

Taking the time to properly inspect a fiber optic connector using an EXFO fiber inspection probe can prevent a lot of issues from arising further down the line, thus saving you time, money and trouble. Moreover, using a fully automated solution with autofocus capabilities will turn this critical inspection phase into a fast and hassle-free one-step process.

DID YOU KNOW THAT THE CONNECTOR OF YOUR TEST INSTRUMENT IS ALSO CRITICAL?

The presence of a dirty connector at a test instrument port or test jumpers can negatively impact your test results, and even cause permanent damage during mating. Therefore, it is critical to regularly inspect these connectors to ensure that they are free of any contamination. Making inspection the first step of your optical testing is a best practice that will maximize the performance of your instrument and your efficiency.



FEATURES	WIRELESS	
	Semi-automated **FIP-425B**	Fully automated **FIP-435B**
Three magnification levels	√	√
Image capture	√	√
Five-megapixel CMOS capturing device	√	√
Automatic fiber image-centering function	√	√
Automatic focus adjustment	X	√
On-board pass/fail analysis	√	√
Pass/fail LED indicator	√	√
WiFi connectivity	√	√

THREE PON OPTIONS

Available in three options, this instrument is tailored to fit your needs. Choose between single- or dual-layer PON testing and RF overlay supporting RF video.

	UPSTREAM (nm)	DOWNSTREAM (nm)	PPM-350D-SR	PPM-350D-D	PPM-350D-DR
GPON (ITU-T G984.2)	**1310**	**1490**	√	√	√
1G EPON (IEEE 802.3)	**1310**	**1490**	√	√	√
XG/XGS-PON (ITU-T G987.2)	**1270**	**1578**		√	√
TWDM NG-PON2 (ITU-T G989.2)	**1524 to 1544**	**1596 to 1603**		√	√
10G EPON (IEEE 802.3)	**1270**	**1577**		√	√
RF video overlay		**1550**	√		√
RFoG (ANSI/SCTE 174 2010)	**1310 or 1610**	**1550**	√		√

VISUAL FAULT LOCATER OPTION

The PPM-350D's optional visual fault locator (VFL) enables quick and easy troubleshooting to identify breaks, bends and faulty connectors or splices, as well as other causes of signal loss. This valuable option helps you shorten time-to-restoration cycles and increase the productivity of your field crews.

FTTX SPECIFICATIONS

		Spectral passband (nm)	Power measurement range (dBm)	Calibrated wavelength (nm)	Maximum total safe power (dBm)
ONT/ONU	**Upstream 1270 nm, burst mode**	1260 to 1280	–10 [a] to 13	1270	16
	Upstream 1310 nm, burst mode	1290 to 1330	–30 [a] to 13	1310	
	Upstream 1524-1544 nm, burst mode	1330 to 1630 [b]	–10 [a] to 13	1534	
	Upstream 1550 nm, burst mode	1330 to 1630	–10 [a] to 13	1550	
	Upstream 1610 nm, burst mode	1330 to 1630 [b]	–10 [a] to 13	1610	
OLT	**Downstream 1490 nm**	1480 to 1500	–50 to 13	1490	17
	Downstream 1550 nm	1540 to 1560	–35 to 26	1550	27
	Downstream 1577-1578 nm	1573 to 1630	–50 to 17	1578	20
	Downstream 1596-1603 nm	1573 to 1630	–50 to 17	1600	
	Downstream 1610 nm	1573 to 1630	–50 to 17	1610	
ORL (dB)	60 [a, c]				
Pass-through insertion loss (dB)	1.5 [a]				
Power Uncertainty (dB)	0.5 [a, d]				

Notes

a. Typical, at 23 °C ± 3 °C and with SC/APC connectors.
b. For model PPM-350D-DR, 1555 nm ± 5 nm is excluded from the spectral passband.
c. At calibrated wavelength.
d. At input level 2 dBm, CW.

VISUAL FAULT LOCATOR (VFL) (OPTIONAL)

Laser, 650 nm ± 10 nm
CW/Modulate 1 Hz
Typical P_{out} in 62.5/125 µm: > –1.5 dBm (0.7 mW)
Laser safety: Class 2

LASER SAFETY

If VFL option is available

GENERAL SPECIFICATIONS

Storage capacity	up to 3500 results
Battery autonomy	8 hours of continuous use
Battery charge time	< 2 hours
Display resolution	0.01 dBm
Measurement units	dB, dBm
Dimensions (H x W x D)	154 mm x 88 mm x 41 mm (6 $^{1}/_{16}$ in x 3 $^{1}/_{2}$ in x 1 $^{5}/_{8}$ in)
Display size	69 mm (2.7 in)
Weight	420 g [a]
Display type	Reflective
Display pixel count	400 x 240
Operating temperature range	0 °C to 50 °C
Storage temperature range	–40 °C to 70 °C
Connector	USB type C
Connectivity	Bluetooth low energy
Smart device OS compatibility	Android 6 and above, iOS 11 and above

Note

a. PPM-350D-SR model

STANDARD ACCESSORIES INCLUDED

- Instruction manual (soft copy)
- Certificate of calibration (hard copy)
- GP-2269: USB-A to USB-C cable
- GP-2227: USB AC adapter
- GP-2275: Wrist strap
- GP-2274: Protective cover for optical ports
- GP-2277: Rechargeable battery
- GP-10-071: Soft carrying case

ORDERING INFORMATION

PPM-350D-XX-XX-XX

Model

PON option
SR = Single PON layer and RF video
D = Dual PON layer
DR = Dual PON layer and RF video

VFL option
00 = Without visual fault locator
VFL = With visual fault locator

Connectors
EA-EUI-28 = APC/DIN 47256
EA-EUI-89 = APC/FC narrow key
EA-EUI-91 = APC/SC
EA-EUI-95 = APC/E-2000
EA-EUI-98 = APC/LC

Example: PPM-350D-DR-VFL-EA-EUI-91

EXFO Headquarters > Tel.: +1 418 683-0211 | Toll-free: +1 800 663-3936 (USA and Canada) | Fax: +1 418 683-2170 | info@EXFO.com | **www.EXFO.com**

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