

# Optical Power Expert

CONNECTED OPTICAL POWER METER



TestFlow



State-of-the-art power meter with Bluetooth connectivity, a wide touchscreen and best-in-class optical performances. In a pocket-sized form factor. Turns on instantly for use on the go.

SPEC SHEET

## KEY FEATURES

Connect to smart app via Bluetooth for data reporting from the field and cloud storage (see page 2 for release dates)

User-friendly: Compact, color touchscreen and intuitive interface

Robust and rugged: IP54 design for dust and water protection

Time-saving features: no offset nulling, lightning-fast boot-up

Visual fault locator (on PRO)

Local data storage of 1000 test results

Error-free, automated wavelength recognition and switching (on PRO)

3-year warranty and calibration interval

## APPLICATIONS

Measuring optical power (dBm) and insertion loss (dB)

Fiber tracing

All telecom networks including:

- Passive optical networks (PON)
- 5G rollouts
- FTTx
- LAN/WAN access and enterprise
- CATV
- Military applications

Applicative bundles of wavelengths for PON (GPON, XGS-PON, NG-PON2, RFoG, etc.), CWDM and DWDM ITU channels

## RELATED PRODUCTS



Light source  
FLS-600



Fiber inspection probe  
FIP-400B wireless

EXFO

## OPTICAL POWER EXPERT

The Optical Power Expert is an essential device in today's field toolkit to measure the optical signal power (dBm) or link loss (dB). With the Optical Power Expert, save field test results on the device and share reports through your smartphone<sup>a</sup>. Leverage the TestFlow mobile app to simplify your workflow and test results management, while also receiving field updates that enable new features. The Optical Power Expert enables technicians to close more jobs, better and more efficiently through industry-leading features such as bundled wavelengths or instant boot up for use on the go. The device comes with built-in expertise with automation that avoids human error (smart features such as auto-wavelength recognition and switching).

The power meter comes with best-in-class performances, a wide color touchscreen and an intuitive graphical interface. Pocket-sized and rugged, the device is designed for extensive use in the field. It has a high capacity data storage for test results.



The compact Optical Power Expert fits neatly into your pocket.

## FASTREPORTER

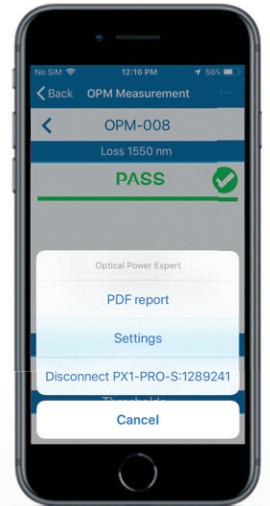
Test results can be transferred to a PC via the USB port on the unit. From there reports can be generated with EXFO's FastReporter data post-processing software.

# FastReporter

## GO BEYOND WITH THE CLOUD

Pair the device with the TestFlow mobile app and leverage your smart device for:

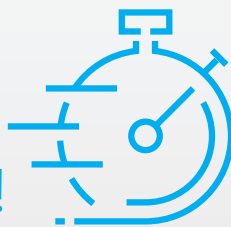
- Occasional PDF reporting from the field to share on the go via email, text message or your favorite messaging app
- Cloud storage and full job documentation **(Available in fall 2021)**



## FOR USE ON THE GO

Lightning-fast boot-up, intuitive graphical user interface (GUI), no offset nulling or warm-up required. The Optical Power Expert boots up and is ready for use when you need it.

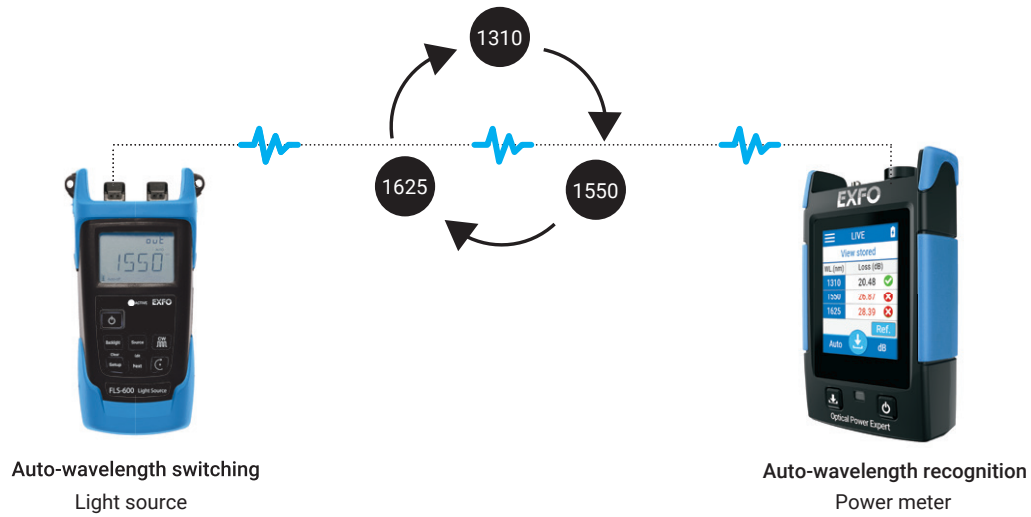
Ready,  
Set,  
Good to go!



Lightning-fast boot-up  
No nulling  
No warm-up  
Intuitive GUI

## AUTOMATED TESTING = ERROR-FREE TESTING

When used in combination with an EXFO light source<sup>a</sup> in auto-switching mode, the power meter automatically recognizes the wavelength in use and switches to the proper calibration parameter. At the press of a button, you can store results for all wavelengths at once.



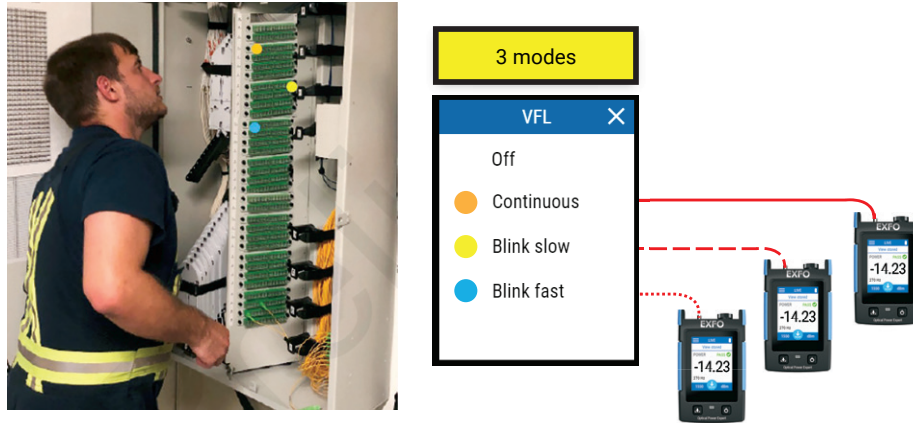
## FIBER TRACING

When it comes to fiber tracing, the Optical Power Expert can detect four different tones emitted from a source<sup>a</sup>: 270 Hz, 330 Hz, 1 kHz and 2 kHz.



a. See compatibility details in the technical specifications.

The PRO configuration includes a visual fault locator that emits light in three different modes (continuous, slow blink and fast blink) to trace fibers and identify breaks and macrobends.



## EVOLUTIVE SOLUTION

To increase field efficiency and adapt to new challenges as they arise, this solution is designed to evolve, and system releases will be made on a regular basis. These releases will upgrade the feature set of the Optical Power Expert, the mobile app and relevant cloud-based services.



## LOW COST OF OWNERSHIP

Designed for extended use in the field, the Optical Power Expert delivers best-in-class optical performances day in, day out. EXFO's track-record of robustness, backed with IP54 design for water and dust protection, makes this device extremely reliable and a long-lasting investment.



**Long-lasting LiPo rechargeable and field-replaceable battery**



**Designed for field use**



**EXFO's proven robustness**





**3-year calibration**  
Cut costs related to factory returns and downtime



**IP54 design**  
Water and dust protection

## CONFIGURATIONS AVAILABLE

The Optical Power Expert is available in two configurations: PX1 and PX1-PRO.

Both the PX1 and PX1-PRO are available with either standard detector (10 to -70 dBm) or high-power detector (26 to -50 dBm).

### PX1

#### Features

- Measure absolute power [dBm] and loss [dB]
- Pass/fail status
- 11 calibrated wavelengths
- Tone detection

### PX1-PRO

#### Features

- Measure absolute power [dBm] and loss [dB]
- Pass/fail status
- 45 calibrated wavelengths organized in bundles
- Tone detection
- Applicative bundle of wavelengths for PON (GPON, XGS-PON, NG-PON2, RFoG, ), CWDM and DWDM ITU channels
- Add up to 24 wavelengths to favorite list
- Wavelengths adjustable by 1 nm steps
- Visual fault locator (VFL)
- Auto-wavelength recognition and switching
- Soft-pouch included



SPECIFICATIONS<sup>a</sup>

| CONFIGURATIONS                    | PX1  |                        | PX1-PRO  |                        |
|-----------------------------------|--|------------------------|--|------------------------|
|                                   | PX1-S  | PX1-H                  | PX1-PRO-S  | PX1-PRO-H              |
| Detector type                     | InGaAs   | GeX                    | InGaAs   | GeX                    |
| Power measurement range (dBm)     | 10 to -70  | 26 to -50 <sup>b</sup> | 10 to -70  | 26 to -50 <sup>b</sup> |
| Power uncertainty                 | ±5 % <sup>c</sup>  |                        |  |                        |
| Measurement units available       | dB, dBm, Watt (W, mW, nW, pW)  |                        |  |                        |
| Wavelength measurement range (nm) | 830 to 1625  |                        | 780 to 1650  |                        |
| Calibrated wavelengths (nm)       | 11 calibrated wavelengths:<br>830, 850, 980, 1300, 1310, 1450,<br>1490, 1550, 1577, 1590, 1625 |                        | 45 calibrated wavelengths: 800, 820, 830, 840, 850,<br>860, 870, 880, 910, 980, 1270, 1280, 1290, 1300,<br>1310, 1320, 1330, 1340, 1350, 1370, 1390, 1410,<br>1430, 1450, 1460, 1470, 1480, 1490, 1500, 1510,<br>1520, 1530, 1540, 1550, 1560, 1570, 1577, 1580,<br>1590, 1600, 1610, 1620, 1630, 1640, 1650 |                        |
| Auto-wavelength recognition       | No   |                        | Yes <sup>d</sup>   |                        |
| Auto-wavelength switching         | No   |                        | Yes <sup>e</sup>   |                        |
| Wavelength bundles                | No   |                        | Yes  |                        |
| Visual fault locator              | No   |                        | Yes (3 modes—continuous, 1 Hz, 4 Hz)   |                        |
| Tone detection                    | 270 Hz, 330 Hz, 1 kHz, 2 kHz   |                        |  |                        |

## GENERAL SPECIFICATIONS

|                       |  |
|-----------------------|--|
| Dimension             | 133 mm x 78 mm x 30 mm (5 1/4 in x 3 in x 1 1/8 in)  |
| Display size          | 2.8 in   |
| Weight (with battery) | 225 g (0.5 lb)   |
| Display type          | Color display with capacitive touchscreen  |
| Interface languages   | Chinese (Simplified and Traditional), English, French, German, Russian, Spanish  |
| Battery charging      | < 3 hours charging time, when unit is off<br>USB Type C charging port connector<br>AC/DC charger/adapter input: ~ 100 – 240 V; 50/60 Hz; 1.0 A max, output: --- 5 V; 2 A   |
| Battery autonomy      | 8 h (continuous use)   |
| Interfaces            | Bluetooth 5.0 with BLE<br>USB Type C   |
| Storage capacity      | 1000 test results for local reading  |
| Reporting             | Two methods available:<br>• Connect PX1 to smartphone via Bluetooth. Generate and share PDF reports via TestFlow application.<br>• Transfer results to a PC via USB cable and generate reports with FastReporter software. |
| Warranty              | 3 years  |
| Calibration interval  | 3 years  |
| Temperature           | Storage <sup>f</sup> -40 °C to 70 °C (-40 °F to 158 °F)<br>Operating -10 °C to 50 °C (14 °F to 122 °F)   |

## VISUAL FAULT LOCATOR (VFL) (PX1-PRO ONLY)

|  |
|--|
| Laser, 650 nm ± 10 nm  |
| CW/Modulate 1 Hz/Modulate 4 Hz                               |
| Typical P <sub>out</sub> in 62.5/125 μm: > -1.5 dBm (0.7 mW) |
| Laser safety: Class 2  |

## LASER SAFETY



a. Specifications valid at (23 ± 1 °C), 1550 nm, with an FOAS-22 adapter and FC/UPC connector.

b. Typical.

c. Singlemode fiber or a 50 μm fiber. Bluetooth ON. Charge OFF. Brightness at 75 %. Between 17 dBm to -35 dBm for high-power model. Between 5 dBm to -50 dBm for standard model.

d. Auto-wavelength recognition with FLS-300, FLS-600, FOT-300, FOT-600

e. Auto-wavelength switching with FLS-600, FOT-600

f. Without battery.



## ACCESSORIES

### Carrying pouches

GP-2267 Soft pouch carrying case

### Wrist strap

GP-3157 Wrist strap

### Power adapters

GP-2227 USB AC adapter (includes interchangeable plugs for North America, Europe, UK and Australia)

GP-2269 USB-A to USB-C cable (for charging purposes only—no data transfer)

### Battery

GP-2295 Rechargeable battery

### Connectors adapters

FOAS-22 FC connector adapter

FOAS-32 ST connector adapter

FOAS-54 SC connector adapter

FOAS-98 LC connector adapter

FOAS-U12 Universal 1.25 mm connector adapter (suitable for 1.25 mm ferrule connectors including LC, MU)

FOAS-U25 Universal 2.5 mm connector adapter (suitable for 2.5 mm ferrule connectors including SC, FC, ST, E2000)

GP-1008 VFL adapter for 1.25 mm ferrule

## WHAT'S IN THE BOX?

### Included accessories—PX1

- Calibration certificate
- GP-2295—Rechargeable battery
- FOAS-U25—Universal 2.5 mm connector adapter<sup>a</sup>
- GP-2269—USB cable (compatible with any AC USB charger)

### PX1



### Included accessories—PX1-PRO

- Calibration certificate
- GP-3157—Wrist strap
- GP-2295—Rechargeable battery
- FOAS-U25—Universal 2.5 mm connector adapter<sup>a</sup>
- GP-2269—USB cable (compatible with any AC USB charger)
- GP-2227—USB AC adapter
- GP-2267—Soft carrying pouch

### PX1-PRO



a. Universal 2.5 mm connector adapter included by default unless otherwise specified upon ordering

## ORDERING INFORMATION

PX1-XX-XX-XX

**Model** ■  
Optical Power Expert

**Configurations** ■  
S = Standard power measurement range  
H = High power measurement range  
PRO-S = Pro configuration with standard power measurement range  
PRO-H = Pro configuration with high power measurement range

**Options** ■  
NRF = Version of the PX1 without the Bluetooth hardware

**Connector adapter** ■  
FOAS-22 = FC connector adapter  
FOAS-32 = ST connector adapter  
FOAS-54 = SC connector adapter  
FOAS-98 = LC connector adapter  
FOAS-U12 = Universal 1.25 mm connector adapter  
FOAS-U25 = Universal 2.5 mm connector adapter

Example: PX1-S-FOAS-22

**EXFO headquarters** T +1 418 683-0211 **Toll-free** +1 800 663-3936 (USA and Canada)

EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to [www.EXFO.com/contact](http://www.EXFO.com/contact).

For the most recent patent marking information, please visit [www.EXFO.com/patent](http://www.EXFO.com/patent). EXFO is certified ISO 9001 and attests to the quality of these products. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit [www.EXFO.com/recycle](http://www.EXFO.com/recycle). **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.**

For the most recent version of this spec sheet, please go to [www.EXFO.com/specs](http://www.EXFO.com/specs).

In case of discrepancy, the web version takes precedence over any printed literature.