# OLP-39G/-39X

## SmartPocket™ V2 TruePON Tester

**User manual**

BN 2336/98.11
2022.04
English

Please direct all inquiries to your local Viavi sales company.
The addresses can be found at:
www.viavisolutions.com/en-us/contact-sales-expert

The description of additional features of the device can be found at:
www.viavisolutions.com/en-us/products/network-test-and-certification

## Copyrights



## Copyright



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## Notes:

Changes may be made to specifications, designations and delivery information.

# Contents

# 1 Introduction

## OLP-39G/-39X TruePON Tester

The OLP-39G/-39X is a specialized TruePON Tester designed for use cases such as system/network qualification, subscriber activation, and troubleshooting of passive optical network (PON).

The instrument performs wavelength selective optical power measurements suitable for testing G-PON networks, as defined in ITU-T G.983/4 or IEEE 802.3ah (OLP-39G) and XGS-PON networks, as defined in ITU-T G.9807.1 respectively (OLP-39X).

In TruePON mode the OLP-39G/-39X identifies the OLT-ID, ODN class, and loss based on the TOL (Transmitted Optical Level from OLT), while the ODN class can be recognized automatically or set manually.

An integrated pass/fail analysis feature simplifies standard conformity and optical budget/margin testing, and provides unambiguous measurement result presentation.

With PC-based reporting, all test results can be summarized in a professional, industry-proven report.

### Main features

The OLP-39G/-39X offers many helpful features that are optimized to workflows of typical telecom operators, and thus ensure that test times are kept as short as possible.

- OLT-ID, ODN class and loss based on TOL for G-PON (OLP-39G) and XGS-PON (OLP-39X)
- Display of G-PON and XGS-PON results separately or simultaneously (OLP-39X)
- Accurate and repeatable wavelength selective power measurements
- Unambiguous pass/fail result presentation and user definable pass/fail thresholds
- Data storage for up to 1000 measurements
- USB-C interface for measurement data transfer to a laptop/PC
- Easy operation and instantly ready to operate
- Versatile power supply options using dry or rechargeable batteries or via the USB-C interface
- Automatic power-off (can be disabled)
- Color-coded test head cover for easy distinction between APC and PC connector types
- Smart-Reporter PC software for data management and report generation

### Description of OLP-39G and OLP-39X features in this manual

In this user manual the OLP-39X with G-PON and XGS-PON is described. Please note that for the OLP-39G only G-PON is available.

## User manual update

If the operating instructions about features provided by your device are missing, please visit the Viavi web site to check if additional information is available.

**To download the latest operating instructions:**

1. Visit the Viavi web site at www.viavisolutions.com.
2. Search for **SmartPocket**.
3. Open the download area and download the operating instructions if available.

# Symbols used in this user manual

Various elements are used in this user manual to draw attention to special meanings or important points in the text.

### Symbols and terms used in warnings

The following warnings, symbols and terms are used in this document in compliance with the American National Standard ANSI Z535.6-2011:

***NOTICE***

Follow the instructions carefully to avoid **damage to or destruction of the instrument.**

**⚠ CAUTION**

Follow the instructions carefully to avoid a low or medium risk of **injury to persons.**

**⚠ WARNING**

Follow the instructions carefully to avoid **potential death** or **severe injury** to persons.

**⚠ DANGER**

Follow the instructions carefully to avoid **death** or **severe injury** to persons.

**High Voltage**

Follow the instructions carefully to avoid **damage** to the instrument or **severe injury** to persons.

This safety instruction is given if the danger is due to **high voltage**.

**Laser**

Follow the instructions carefully to avoid **damage** to the instrument or **severe injury** to persons.

This safety instruction is given if the danger is due to **laser radiation**. Information specifying the laser class is also given.

**Warning format**

All warnings have the following format:

**⚠ WARNING**

**Type and source of danger**

**Consequences of ignoring the warning**

- ▶ Action needed to avoid danger.

The following character formats are used in this user manual:

| | |
|---|---|
| ✓ | **Requirement**<br>This requirement must be met first; e.g.<br>✓ The device is switched on. |
| ▶<br>**1.**<br>**2.** | **Instruction**<br>Follow the instructions given (the numbers indicate the order in which the instructions should be followed); e.g.<br>▶ Select mode. |
| *Italics* | **Result**<br>Indicates the result of following an instruction; e.g.<br>*The page opens.* |
| **Bold type face** | **Pages, controls, and display elements**<br>Screen pages, controls, and display elements are indicated in bold type. |
| Text in blue | **Cross references**<br>Cross references are indicated in blue type. When using the PDF version, just click on the blue text to skip to the cross reference. |
| **[MODE]**<br>**[■□□]** | **Device keys**<br>Device keys are indicated within square brackets.<br>The three sensitive keys are indicated as squares, the active key is highlighted. |

# 2 Safety Information

- **All safety information for your device can be found in the printed booklet “Safety, Disposal and Environmental Protection“ provided with your device.**
- **Carefully read and follow all instructions given there.**


- **The booklet “Safety, Disposal and Environmental Protection“ is attached to this PDF. You can open it from the attachment window or by clicking the thumbnail on the left.**

# 3 Getting Started

## Unpacking the device

### Packing material

We suggest that you keep the original packing material. It is designed for reuse (unless it is damaged during shipping). Using the original packing material ensures that the device is properly protected during shipping.

### Checking the package contents

Your device is shipped with the following accessories:

- 2.5 mm universal adapter
- 2 dry batteries AA
- User manual
- Belt bag

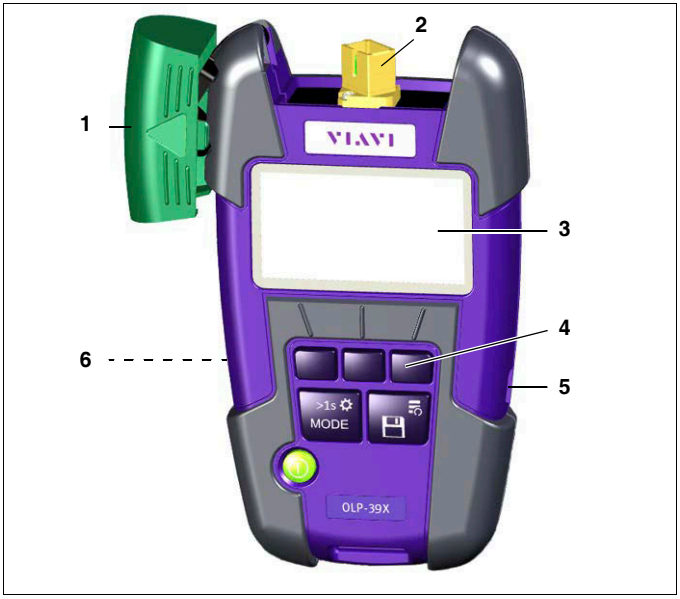
### Checking for shipping damage

After you unpack the device, check to see if it has been damaged during shipping. This is particularly likely if the packaging is visibly damaged. If there is damage, do not attempt to operate the device. Doing so can cause further damage. In case of damage, please contact your local Viavi Sales Company. Addresses can be found at www.viavisolutions.com.

### Recovery following storage/shipping

Condensation can occur if a device that is stored or shipped at a low temperature is brought into a warm environment. To prevent damage, wait until no more condensation is visible on the surface of the device before powering it up. Do not operate the instrument until it has reached its specified temperature range and wait until it has cooled down if the instrument was stored at a high temperature (see “Environmental conditions” on page 35).

# Device overview




| | |
|---|---|
| **1** | **Test head cover** |
| **2** | **Fixed SC adapter** |
| **3** | **Display** |
| **4** | **Key pad**<br>Representation in the user manual:<br>**[■□□]** Context sensitive keys (here left key is selected)<br>**[MODE]** Mode/Settings key<br>**[🖫]** Save/Results key<br>**[⏻]** Power key |
| **5** | **USB interface**<br>For power supply and measurement data downloads and updates. |
| **6** | **Battery compartment** (on rear of the device) |

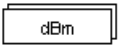
## Keys

The key pad contains two types of keys:

- **Context sensitive keys:** The functions of these keys depend on the selected mode or menu and is shown in the display above the key.
- **Function keys:** The functions of these keys are always the same and shown on the key itself.

## Key usage (first and second function levels)

The function keys and the context sensitive keys in certain modes have two function levels.




A second function level is indicated by two cascading frames.

- **Short press:** Select the first level function.
- **Long press:** Holding the key for at least 2 sec. opens the second level. You then have access to additional functions or a menu to change settings.

| | Short press | Long press |
|---|---|---|
|  | Press to switch the device on/off. | |
| **Context keys**  | Functions depend on selected mode and display. See following chapters for more information. | |
| **MODE key**   | Toggle between PON mode and TruePON mode | Open the settings menu. |
| **Save/Result key**  | Store the current measurement. | Open the list of saved measurements. |

# Power Supply

**NOTE:** The devices are not designed for batteries based on lithium.

The following power sources can be used to operate the OLP-39G/-39X:

- Two 1.5 V dry batteries (Mignon AA size, alkaline type recommended)
- Two 1.2 V NiMH rechargeable batteries (Mignon AA size)
- via AC adapter over USB interface

## Battery operation

**⚠ WARNING**

**Dangers in handling batteries**

Handling batteries may be dangerous. Please note the following safety instructions.

- Please note the battery operation safety information in the booklet **"Safety, Disposal end Environmental Protection"** provided with your device.

**Replacing the batteries**

- Do not replace individual batteries. Always change both batteries at the same time.
- Always use batteries of the same type; i.e. do not mix rechargeable and non-rechargeable batteries.

**Replacing the batteries**

The battery compartment is on the back of the device.

1. Pull down the lid to open the battery compartment.

***NOTICE:*** Take care to insert the batteries correctly.
The correct polarity is indicated by a diagram inside the battery compartment.

2. Insert new batteries or replace dead ones.
3. Close the battery compartment.
4. Press [⏻] to switch on.

**NOTE:** The batteries cannot be recharged with the OLP-39G/-39X.

**General tips on using batteries**

- Never use batteries based on lithium.
- Always handle batteries with care.
- Do not drop or damage the batteries or expose them to excessively high temperatures.
- Do not store rechargeable batteries for more than one or two days at very high temperatures (e.g. in a vehicle), either separately or fitted in the device.
- Do not leave discharged batteries in the device for a long time if it is not being used.
- Do not store rechargeable batteries for more than 6 months without recharging them at intervals.
- Avoid deep discharging of the batteries as this can cause the cell polarity to reverse and make the battery useless.

## Protecting the environment

Please dispose of any unwanted dry batteries and rechargeable batteries carefully. They should also be removed from the instrument if it is to be scrapped. If facilities in your country exist for collecting waste or for recycling, please make use of them rather than throwing the batteries in the normal trash. You will often be able to return used batteries to the place where you purchase new ones. Any dry or rechargeable batteries that you purchased from Viavi can be returned to one of our Service Centers for disposal.

## Operation from AC power

**To fit one of the mains plug adapters:**

- See Fig. 1 and follow the instructions which are shown on the packaging of the mains plug adapter.

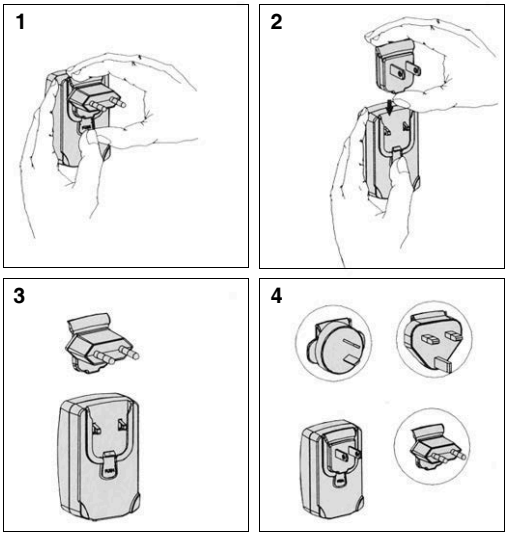



Fig. 1 Fitting the mains plug adapter

**To operate the OLP-39G/-39X from AC power:**

1. Connect the USB-C connector power cord to the OLP-39G/-39X.
2. Plug the mains plug adapter into the AC receptacle.

## Switching the device on/off

The OLP-39G/-39X has two battery power modes:

| Mode | Icon | Description |
|---|---|---|
| **Permanent ON (PERM)** |  | The device is switched on permanently. |
| **Automatic OFF (ECON)** |  | The device switches off 20 minutes after the last operation.<br>This function is only available when the device is powered from batteries. |

**To switch the device on/off:**

- Press **[⏻]** to switch the device on/off.

## Selecting a power mode

✓ The device is switched on.

1. Long press **[MODE]** to open the settings menu.
2. Use **[⬆⬇]** to select **ECON**.
3. Press **[ ]** to select power mode:
   ON = ECON
   OFF = PERM
4. Press **[MODE]** to close the menu.

## Selecting a PON mode

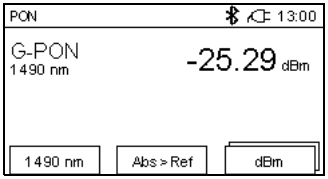
✓ The device is switched on.

- Short press **[MODE]** to toggle between **PON** and **TruePON** mode.

# 4 DISPLAY OVERVIEW

## Status bar

| | |
|---|---|
| **PON** | Selected mode: PON, TruePON |
|  | Bluetooth® is active<br>Bluetooth connection allows for data transfer via the MobileTech app (for future use). |
| **7:15** | Real Time Clock<br>Time can be changed via the settings menu. |
|  | Battery status in **PERM** power mode:<br>Device remains switched on. |
|  | Battery status in **ECON** power mode:<br>Device switches off 20 min. after last operation. |
|  | The device is powered via USB |




## PON mode

**NOTE:** XGS-PON and Dual mode are available in OLP-39X only.

| | |
|---|---|
| **G-PON**<br>**XGS-PON** | Display of selected mode and wavelength. |
| **dBm** | Shows measurement results in dBm, dB or W. |
| **Dual** | Shows selected mode<br>Press key to select mode:<br>1490 nm > 1577 nm > Dual >.... |
| **Abs>Ref** | Press key to set current measurement value as new reference level. |
| **dBm** | **Short press** key to select mode:<br>dBm/Watt > Loss > PF Abs > PF Loss >...<br>**Long press** key to toggle unit: dBm <> Watt |

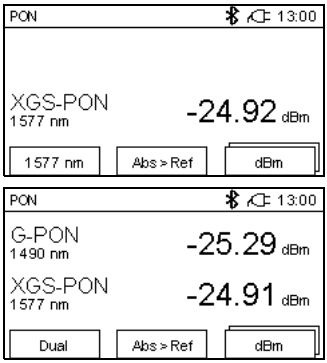



Fig. 2 XGS-PON (top), Dual mode (bottom)

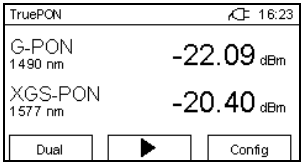
# TruePON mode

**NOTE:** In this examples **DUAL** mode is selected.
XGS-PON and Dual mode are available in OLP-39X only.

### Home screen

Showing PON values before starting the OLT-ID detection

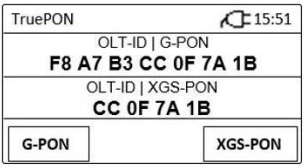
| | |
|---|---|
| **G-PON / XGS-PON** | Shows wavelength and power level of G-PON and XGS-PON |
| **Dual** | **Press** key to select operation mode: Dual > G-PON > XGS-PON > Dual >... |
| ▶ | **Short press** key to start measurement<br>**Long press** key to recall last results |
| **Config** | **Press** key to change TruePON settings |




### TruePON overview

Showing detected OLT-IDs after pressing the start button.

| | |
|---|---|
| **OLT-ID \| G-PON** | Shows OLT-ID of G-PON in ASCII code |
| **OLT-ID \| XGS-PON** | Shows OLT-ID of XGS-PON in HEX code |
| **G-PON** | Press key to show G-PON details |
| **XGS-PON** | Press key to show XGS-PON details |




### TruePON details

Showing details of detected OLT-IDs.

| | |
|---|---|
| **Header** | Selected PON type |
| **OLT-ID** | OLT-ID in ASCII or HEX code |
| **Loss** | Loss in dB or Pass/Fail |
| **ODN-Class** | ODN class as detected or Pass/Fail |
| **Power** | Power in dBm or Pass/Fail |
| **Footer** | **AUTO/N1:** ODN-Class (Auto or as set)<br>**ONT:** Location as set |

**NOTE:** In the **Settings** menu Pass/Fail can be individually enabled or disabled for Loss, ODN-Class, and Power.


Fig. 3 P/F Off (top),
P/F ON (bottom)

# 5 PON MODE

- Short press **[MODE]** to toggle between **PON** and **TruePON** mode.

**NOTE:** XGS-PON and Dual mode are available in OLP-39X only.

## Selecting an operation mode

The OLP-39G/-39X provides three operation modes with following displays:

- **G-PON:** Gigabit Passive Optical Network measurement at 1490 nm
- **XGS-PON:** 10-Gigabit-Capable Symmetric Passive Optical Network measurement at 1577 nm
- **Dual:** Display of G-PON and XGS-PON simultaneously

**To select an operation mode:**

- Press **[■□□]** to select a mode.

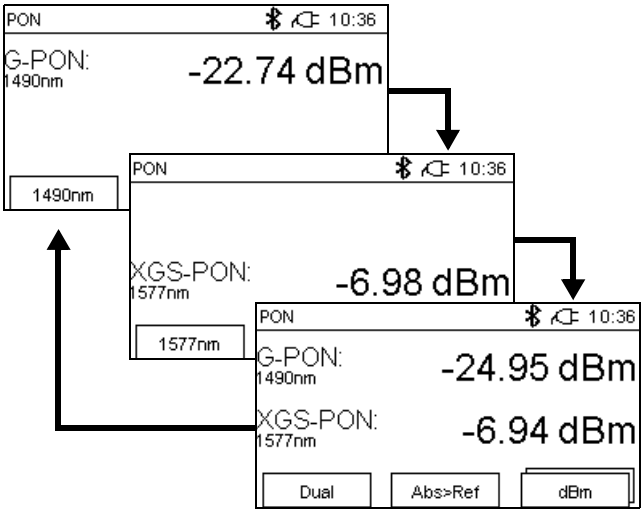



Fig. 4 Operation modes

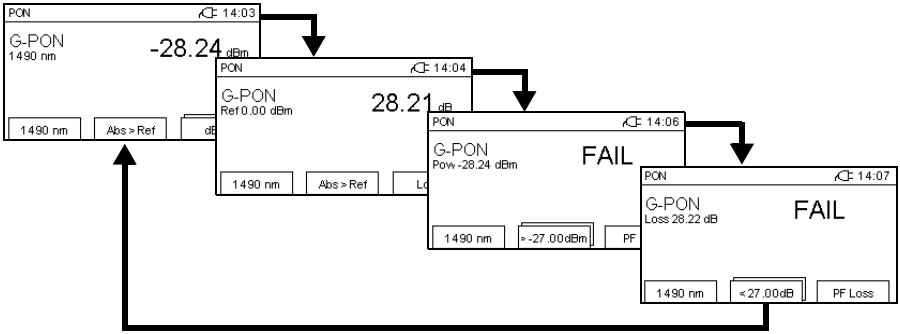
## Selecting a display mode

The OLP-39G/-39X provides following display modes:

- **dBm/Watt:** Display of absolute power level
- **Loss:** Display of power level relative to a reference value
- **PF Abs:** Pass/Fail indication based on an absolute power threshold
- **PF Loss:** Pass/Fail indication based on a relative power threshold

**To select a display mode:**

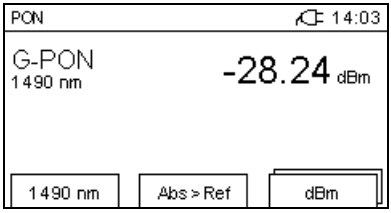
▶ Press **[□□■]** to toggle between the displays modes.




## Absolute power level mode

The power level is displayed in dBm or Watts (nW, µW, mW).

▶ Long press **[□□■]** to toggle dBm/Watts.




**NOTE:** The context sensitive field shows the selected unit.

## Loss mode

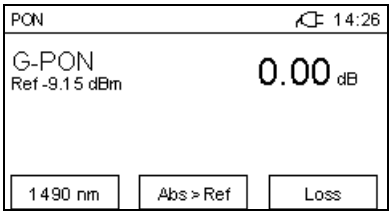
In **Loss** mode the power level relative to a reference value is displayed. The reference value can be set by defining the current power level as the reference value **[Abs>Ref]**.

- Press **[□□■]** to display relative power level.

### Setting the reference level

✓ **Absolute power level** mode or **Loss** mode is selected.

- Press **[Abs>Ref]**.
  *The current power level is set as the new reference level.*




**NOTE:** The reference level can be stored for both wavelength separately.
When **Dual** is selected, the power levels of both wavelengths are set as reference level simultaneously.

## Pass/Fail mode

An integrated pass/fail analysis feature simplifies standard conformity testing and provides unambiguous measurement result presentation.

The OLP-39G/-39X provides two Pass/Fail modes:

- **PF Abs:** Pass/Fail indication based on a absolute power threshold
- **PF Loss:** Pass/Fail indication based on a loss threshold

**To select a Pass/Fail mode:**

▶ Press **[□□■]** until **PF Abs** or **PF Loss** is displayed.

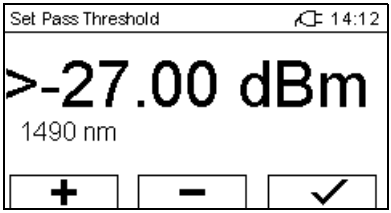
**NOTE:** When **PF Abs** or **PF Loss** is selected the two modes can also be toggled by pressing **[□■□]**.

### Setting the PASS threshold

Setting the fail threshold is identical for both Pass/Fail modes.

✓ **PF Abs** or **PF Loss** mode is selected. Press **[□■□]** to toggle between both modes.

1. Press **[■□□]** to select a wavelength (see also page 18).
2. Long press **[□■□]**.
   *The Set Fail Threshold screen opens.*




3. Use **[+]/[–]** to change the threshold.
4. Press **[✓]** to save the new threshold.

**NOTE:** When Dual mode is active, the fail threshold can not be set. Select G-PON or XGS-PON to set threshold individually.

# 6 TruePON mode

- Short press **[MODE]** to toggle between **PON** and **TruePON** mode.

**NOTE:** XGS-PON and Dual mode are available in OLP-39X only.

## Selecting an operation mode

The OLP-39G/-39X provides three operation modes with following displays:

- **G-PON:** Gigabit Passive Optical Network measurement at 1490 nm
- **XGS-PON:** 10-Gigabit-Capable Symmetric Passive Optical Network measurement at 1577 nm
- **Dual:** Display of G-PON and XGS-PON simultaneously

**To select an operation mode:**

- Press **[■□□]** to select a mode.

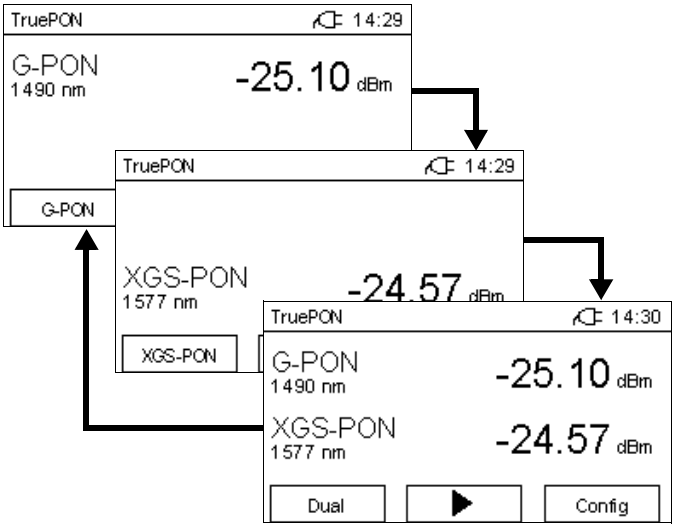



Fig. 5 Operation modes

## Selecting a Pass/Fail display mode

The OLP-39G/-39X provides two display modes:

- **P/F On:** Display of Pass/Fail results
- **P/F Off:** Display of absolute measurement results

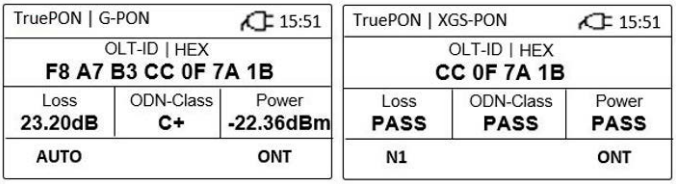
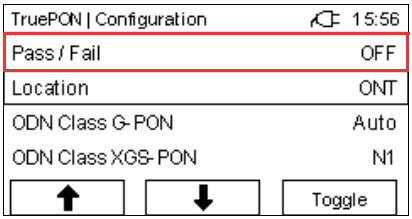



Fig. 6 Display modes: P/F **Off** (left), P/F **On** (right)

**To select a display mode:**

1. In the **Home** screen press **[□□■]**.
   *The Config dialog opens, P/F is selected.*

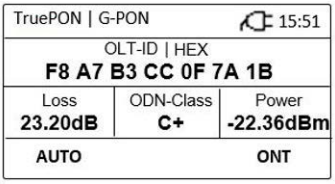



2. Press **[□□■]** to select **ON** or **OFF**.
3. Short press **[MODE]** key to close dialog.

## Individual Pass-Fail-settings

Even if P/F is set to **On**, the Pass/Fail display for Loss, ODN-Class and Power can be disabled.

**For example:**
You want Pass/Fail results for Loss and Power, but want to disable Pass/Fail indication for the ODN class.




▶ See "Memory Management" on page 29 how to change the individual Pass/Fail settings.

## Selecting a location

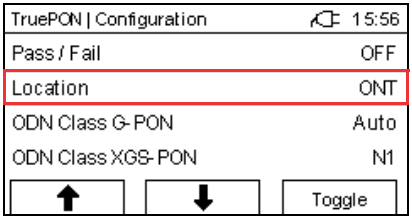
The Pass/Fail thresholds depend on the measurement location:

- **ONT:** This is a fixed setup of thresholds for the ONT
- **Custom:** This is a editable setup of thresholds.

▶ To change the **Custom** settings, see "Memory Management" on page 29.

**To select a location:**

1. In the **Home** screen press **[□□■]**.
   *The Config menu opens.*



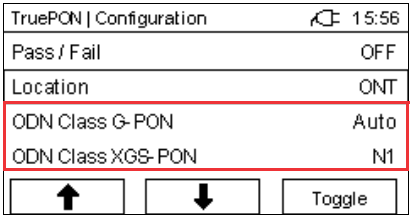

2. Press **[■□□]** or **[□■□]** to select **Location**.
3. Press **[□□■]** to toggle between **ONT** and **Custom**.
4. Press **[MODE]** to close the menu.

## Setting the ODN class

The ODN class can be set to **Auto** or an specific class individually for G-PON and XGS-PON.

**To set the ODN class:**

1. In the **Home** screen press the **Config** key.
   *The **Config** menu opens.*




2. Press **[■□□]** or **[□■□]** to select **G-PON** or **XGS-PON**.
3. Press **[□□■]** to step trough the ODN classes:
   – **G-PON:** Auto > B > B+ > C > C+ > C++ > Auto >...
   – **XGS-PON:** Auto > N1 > N2 > E1 > E2 > Auto >...
4. Press **[MODE]** to close the menu.

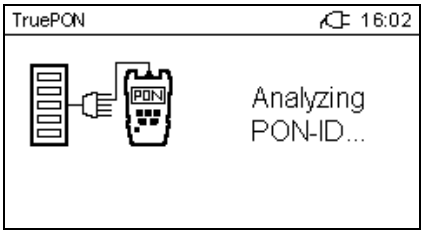
## Performing a TruePON measurement

To get TruePON measurement results a TruePON measurement must be started.

**To perform a measurement:**

✓ Set ODN class (see "Setting the ODN class" on page 25).
✓ Select Pass/Fail display mode (see "Selecting a Pass/Fail display mode" on page 23).

1. In the **Home** screen short press **[□■□]** to start measurement.
   *The running measurement is displayed on the screen.*




   *If **Dual** was selected, the ONT-IDs are displayed in an overview. If G-PON or XGS-PON was selected, the measurement details are displayed immediately.*

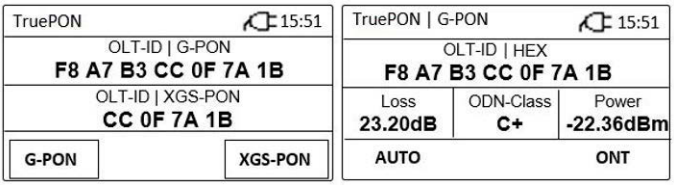



Fig. 7 Results display: overview (left), detail (right)

2. If **Dual** was selected, press **[■□□]** or **[□□■]** to display **G-PON** or **XGS-PON** measurement details.
3. Press **[MODE]** to return to the previous screen.

## Recalling measurement results

After leaving the measurement details screen, the permanent measured power levels are displayed in the Home screen. From there the last TruePON measurement results can be recalled.

**To recall the last measurement results:**

✓ The Home screen is displayed.

▸ Long press **[□■□]**.
*The display is the same as after the starting the measurement.*

# 7 Settings

In the Settings menu you can do the following:

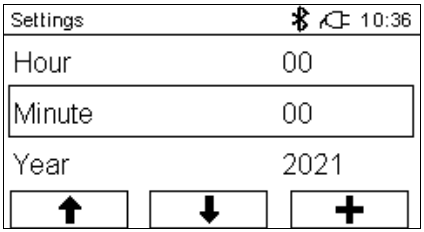
- Change general instrument settings and reset all settings
- Change some basic TruePon settings
- Switch Bluetooth and economy mode on/off

## The Settings menu

| Item | Settings | Description |
|---|---|---|
| **Hour** | 1 ... 12 | Current time: Hour |
| **Minute** | 1 ... 59 | Current time: Minute |
| **Year** | 2020 ... 2030 | Current time: Year |
| **Month** | 01 ... 12 | Current time: Month |
| **Day** | 01 ... 31 | Current time: Day |
| **About** | – | Shows device data including last calibration date |
| **Options** | – | Shows the installed options. |
| **Factory Reset** | Reset | ▸ Press **[✓]** to confirm setting.<br>▸ Press **[⮌]** to return to the settings menu. |
| **G-PON OLT-ID** | ASCII/HEX | Display ONT-ID in ASCII oder HEX code<br>▸ Press **[□□■]** to toggle HEX/ACII |
| **XGS-PON OLT-ID** | ASCII/HEX | Display ONT-ID in ASCII oder HEX code<br>▸ Press **[□□■]** to toggle HEX/ACII |
| **G-PON Custom Thr.** | 0 dBm ... -32 dBm | Set custom threshold for G-PON |
| **XGS-PON Custom Thr.** | 0 dBm ... -25 dBm | Set custom threshold for XGS-PON |
| **Bluetooth LE** | ON/OFF | Switch Bluetooth LE on/off |
| **Marginal Threshold** | 0 dB ... 2 dB | Select a dB value to define a window for the PASS/FAIL mode threshold. Measurement values for Loss or Absolute within this window will be displayed as "Marginal".<br>Thus, in PASS/FAIL mode 3 results are available: PASS/Marginal/FAIL. |
| **ECON** | ON/OFF | ON = ECON, OFF = PERM |

## Changing settings

1. Long press the **[MODE]** key.
   *The Settings menu opens.*




2. Press **[■□□]** or **[□■□]** to select an entry.

**To change a value:**

- Press **[□□■]** to edit it.
  – Press once to change one step at a time.
  – Hold down the key to increase the step change rate.

**To toggle between two settings:**

- Press **[□□■]** to toggle settings.

**To leave the Settings menu:**

- Press **[MODE]** key to close the Settings menu.

# 8 Memory Management

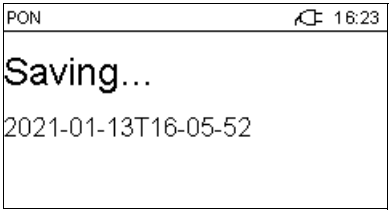
## General information

The OLP-39G/-39X allows you to save the measured power level values in a data memory and recall them as required.
**Up to 1000 results can be stored.**

**NOTE:** See also "Specifications" on page 34 for additional data management tools.

## Storing measurements

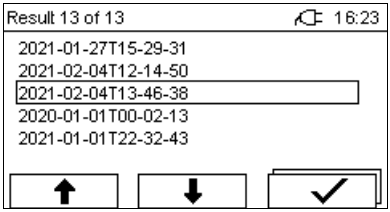
- Press **[🖬]** to save the current result.
  *The result is saved when "Saving ..." appears on the display and below the name of the currently saved data.*
  *The results are always stored with the current date-/ timestamp (e.g. 2021-01-13T16-05-52, corresponding to January 13'th 2021 at 16h:05min:52s)*



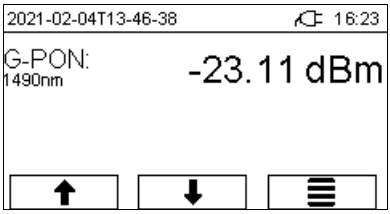

The new results are always appended successively at the last memory location, even if you clear a previously assigned memory location with a lower number.

## Recalling measurements

1. Long press **[🖬]**.
   *The device shows the list of saved measurements.*



2. Press **[⬆]/[⬇]** to browse through the list.
3. Press **[✓]** to open the highlighted entry.
   *The selected measurement data is displayed.*

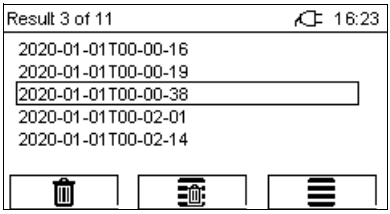



4. Press **[ ]** to return to the list or, press **[⬆]/[⬇]** to show next/previous result or press **[MODE]** to exit.

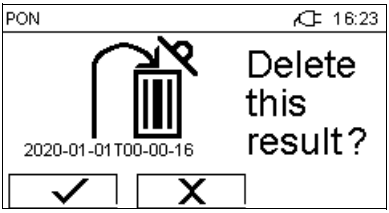
## Deleting measurements

✓ The device shows the list of saved measurements.

1. If you want to delete a single entry, use [⬆]/[⬇] to select it.
2. Long press **[✓]** to open the sub menu.




3. Press **[ ]** to delete the selected entry.
   or press **[ ]** to delete all results.
   *A dialog will ask you to confirm the deletion.*




4. Press **[✓]** to accept or press **[X]** to cancel.
5. Press **[ ]** to close the sub menu and to show the list of saved measurements or press **[MODE]** to exit.

**NOTE:** You cannot select and overwrite empty memory locations.

# 9 Data Export and Firmware Update

The USB interface or the Bluetooth® interface can be used for data export and firmware update.

## USB and SmartReporter

When using the USB interface the SmartReporter allows you to easily transfer stored measurement data to a PC and to update the firmware.

The SmartReporter reporting tool always contains the latest Firmware Revision for all your SmartPocket™ devices. You can download the latest SmartReporter version for free from: **https://updatemyunit.net/ > Application Software**.

- For more information about data export and firmware update via USB and SmartReporter please refer to the SmartReporter user manual.
- If the USB interface is used in an enviroment with high electromagnetic radiation, please use a Ferrit shielded USB cable

## Bluetooth® and MobileTech app / StrataSync cloud (future application)

You have also the choice to upload the saved data and to update the firmware using Bluetooth® via Viavi's MobileTech App into the StrataSync cloud.

- Please contact your Viavi representative for more information.

# 10 Maintenance

**⚠ WARNING**

**Invisible laser radiation**

**Maintenance or cleaning of the instrument while it is connected or operating may damage the instrument or injure you.**

- Make sure that the instrument is switched off and disconnected from all power sources and optical radiation sources before maintenance or cleaning.
- Do not open the instrument for maintenance or service. Service shall be performed by Viavi trained personnel only.

## Cleaning the test port

It is a good idea to check that the optical connections are clean and to clean them if necessary before starting measurements. Even very small dust particles on the end surfaces of the plugs or in the test adapters can adversely affect the accuracy of the measurement.

***NOTICE***

**Damage to the photo diode**

**Touching the photo diode could scratch the glass surface.**

- Be careful when cleaning the photo diode and do not use any rough cleaning materials.

1. Switch off the device.
2. Blow into the test adapter with compressed and clean air to remove dust.

**NOTE:** Cover the optical connections with the dust cap whenever they are not in use. This prevents them from getting dirty.

## Cleaning the instrument

If the device gets dirty through use, you can clean it using a soft cloth moistened with a mild solution of detergent.

***NOTICE***

**Water and cleaning fluids**

**The instrument may be damaged or destroyed if water or cleaning fluids penetrate it.**

- Make sure that water or cleaning fluids do not get inside the instrument.

# 11 SPECIFICATIONS

## OLP-39G/-39X

### G-PON (1490 nm downstream)

| | |
|---|---|
| Measurement range for power level | -35 to +10 dBm |
| Measurement Range for PON-ID | -30 to 0 dBm |
| Maximum power level | +20 dBm continuously<br>+26 dBm <30 min. |
| Spectral range | 1480 to 1500 nm |
| Measurement uncertainty | ±0.5 dBm[1)] |

1) At -10 dBm, at 23 °C ± 3 °C, at nominal wavelength

### XGS-PON (1577 nm downstream, OLP-39X only)

| | |
|---|---|
| Measurement range for power level | -35 to +10 dBm |
| Measurement Range for PON-ID | -25 to 0 dBm |
| Maximum power level | +20 dBm continuously<br>+26 dBm <30 min. |
| Spectral range | 1575 to 1580 nm |
| Measurement uncertainty | ±0.5 dBm[1)] |

1) At -10 dBm, at 23 °C ± 3 °C, at nominal wavelength

## General specifications

| | |
|---|---|
| Number of calibrated wavelengths | 2 (1490 nm, 1577 nm) |
| Optical adapter system | Fixed SC |

**Memory**

| | |
|---|---|
| Data storage | 1000 results |
| Data download capability | USB-C for PC transfer |

**Calibration interval**

| | |
|---|---|
| Recommended calibration interval | 3 years |

## Power supply

| | |
|---|---|
| Dry batteries | 2x Mignon (AA) Alkaline 1.5 V (never use batteries based on lithium) |
| Power consumption | 2.5 W max. |
| Operating life with dry/ rechargeable batterier | typ. 15 h (Bluetooth® off) |
| AC line operation | With separate 5 V DC USB adapter. Use EMC and Safety certified low energy adapters only. |
| Power saving | Auto power-off after approx. 20 min (can be disabled) |

## EMC and safety

| | |
|---|---|
| Electromagnetic compatibility (EMC) | EN 61326-1:2020 |
| Device safety | EN 61010-1:2010/A1:2019 |

## Environmental conditions

| | |
|---|---|
| Operating temperature range | -10 to +55 °C (14 to 131 °F) |
| Storage and transport | -40 to +70 °C (-40 to 158 °F) |
| Altitude | 2000 m max. (6500 ft. max.) |
| Pollution degree | 2 |
| Ingress protection | IP44 |
| Relative humidity up to +31 °C | 15 to 85 % |
| Absolute humidity > +31 °C | 1 to 29 g/m$^3$ |

Occasional condensation is tolerable as a limit condition.

## Dimensions and weight

| | |
|---|---|
| Dimensions (H x W x D) | 30 x 80 x 150 mm (1.18 x 3.15 x 5.90 in) |
| Weight (incl. batteries) | 200 g (0.44 lb) |

# 12 Ordering information

## OLP-39G, OLP-39X

| | |
|---|---|
| OLP-39G - TruePON Tester Terminate Mode GPON | OLP-39G |
| OLP-39X - TruePON Tester Terminate Mode GPON and XGS-PON | OLP-39X |

## Calibration report

| | |
|---|---|
| Calibration Report TruePON Testers (OLP-39G and OLP-39X) | 2302/90.04 |

## Accessories

| | |
|---|---|
| OCK-10 Cleaning Kit complete | 2229/90.21 |
| Alkaline batteries Mignon AA-Size LR6 (2 batteries required) | 2229/90.01 |
| USB 2.0 cable (Type A to Type C) | 2212/2619 |
| Universal AC Power Adapter | 2302/90.01 |

## Smart Reporter

Free download from www.updatemyunit.net/

# 13 Product Regulatory Compliance


- **All information about the product regulatory compliance can be found in the printed booklet “Safety, Disposal and Environmental Protection“ provided with your device.**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