VIAVI Solutions

**SmartClass™ Fiber OLP-88/-88P TruePON**

Full-featured PON tester with fiber connector inspection

The VIAVI Solutions® OLP-88 TruePON tester is the ideal tool for field technicians dealing with GPON network service activation and for support teams charged with resolving service complaints and identifying the sources of issues. TruePON uses GPON data analysis for real-time measurement of fiber optic cable insertion loss, downstream and upstream power levels, ODN class, and for instantaneous identification of OLT-ID ONU/ONT-ID as well as rogue ONUs causing service issues.

The tester also inspects and certifies fiber end faces, critical steps that must be performed before making any fiber optic connection. With TruePON, technicians get ultimate flexibility and performance from a powerful, easy-to-use solution that instantly turns any user into a Fiber Smart technician.

**Key Benefits**

- Ensures first-time-right GPON network acceptance
- Reduces workflow complexity during service activation
- Speeds on-site troubleshooting and facilitates service recovery
- Drives optimal user workflows and behaviors to eliminate issues caused by poor practices

**Key Features**

- Wavelength-selective, through-mode power meter for 1310/1490/1550 nm signals
- Automatic ODN class detection and power-level pass/fail analysis
- In-service loss measurements
- OLT identification; ONU/ONT serial number extraction; rogue and alien ONU detection
- Low-insertion loss (<1.5 dB)
- Automated pass/fail fiber inspection analysis with built-in patch-cord microscope or optional P5000i probe
- Easy generation of professional certification reports

Connect and perform measurements anywhere in your PON network
Transforms GPON Service Activation and Troubleshooting

The comprehensive TruePON tester uses a new technology that enables precise GPON data analysis for faster, error-free service activations and advanced troubleshooting. Its sophisticated data analysis:

- Extracts GPON-specific data carried in the PON-ID standardized by ITU-T G.984.3 Amendment 3.
- Displays OLT transmitted power levels for in-service loss testing between an OLT and ONU/ONT.*
- Identifies the ONU/ONT by serial number and rogue or alien ONUs/ONTs in any GPON system

Saves Time

TruePon minimizes or eliminates the time needed to configure jobs at the office prior to a work session. It lets you start testing right away, extracting all relevant information (thresholds, ONT serial number, OLT-ID) directly from data carried in the GPON signals*.

Improves Field Technician Efficiency

Absent or wrong labeling of fiber cables in splitter cabinets can lead to incorrect customer/ONT connections. TruePon ensures the ONT is connected to the right OLT by identifying the OLT-ID carried by the PON-ID at any network location*.

Certifies Power Levels Automatically

When verifying power levels at a customer ONT, TruePON certifies that the service meets specifications by performing a fully automated power level certification. It performs downstream and upstream PON power level measurements (1310/1490/1550 nm) and automatically sets pass/fail thresholds in systems with PON-ID*.

Eliminates Human Errors While Ensuring Reliable Results

Service-activation is often performed by subcontractors who are dealing with hundreds of customer turn ups. To make sure test reports are error-free and authentic, TruePON analyzes GPON data to extract and display ONU/ONT serial numbers. It allocates ONU/ONT serial numbers according to the customer service contract, and automatically links service-activation results to the ONT/customer—ensuring the authenticity of test results.

* Requires activation of PON-ID functionality in G-PON systems according to ITU-T G.984.3 Amd3.
Qualifies In-Service Fiber Plant
During the construction phase, the fiber plant is qualified; end-to-end loss testing ensures that the fiber link complies with the loss budget. However, several years later, when new customers subscribe to the FTTH services, performance may not be intact. TruePON performs real-time, in-service, end-to-end loss measurements. It is the fastest way to qualify fiber links in an already-running network.

Facilitates Fast Service Recovery
Identifying and localizing a rogue ONU that degrades or disables customer service can be difficult. TruePON instantaneously detects the presence of a rogue or alien ONU/ONT, facilitating fast service recovery by isolating the faulty ONU/ONT for quick replacement.

Stands Up to Harsh Field Conditions
Compact and lightweight (<1 kg), TruePON is a ruggedized tool for field technicians working indoors and outdoors. It runs for up to 12 hours on battery power, and is easy to operate using a simple and user-friendly color touch-screen display. TruePON stores up to 10,000 test results and connects to efficient StrataSync™ test-data management via USB, Ethernet, and WiFi interfaces. It also includes an APC connector with a switchable adapter system.

Drives Best Practices
More than 75% of fiber network troubleshooting can be attributed to connector contamination. TruePON, optionally equipped with a built-in patch-cord microscope, helps ensure that fiber technicians follow best practices. It integrates automatic pass/fail certification for fiber connectors for optimal user workflows and behaviors that eliminate poor practices.

* Requires activation of PON-ID functionality in G-PON systems according to ITU-T G.984.3 Amd3.
The SmartClass Fiber Product Family

✓ Integration — combines inspection and testing
✓ Automation — pass/fail certification
✓ Ease of use — intuitive touch-screen user interface

SmartClass Fiber tester with P5000i analysis microscope

SmartClass Fiber tester with patch-cord microscope

SmartClass Fiber tester with P5000i and patch-cord microscopes

OLP-37 PON/RFOG Power Meter
- Power level measurements of 1490/1550/1610 nm downstream signals

OLP-37X G/XGS-PON Power Meter
- Power level measurements of 1490/1577 nm downstream signals

OLP-87 NG-PON2 Power Meter
- Simultaneous selective power level measurements of 1596.34/1597.18/1598.04/1598.89 nm downstream and 1595-1603 nm upstream signals
- Fiber connector inspection

OLP-87 PON/ XG-PON Power Meter
- Power level measurements of 1490/1550/1578 nm downstream and 1270/1310 nm upstream signals
- Fiber connector inspection

OLP-88 TruePON Tester
- Power level measurements of 1490/1550 nm downstream and 1310 nm upstream signals
- ONT/OLT/ONU identification
- Detection of alien/rogue ONU/ONTs
- In-service loss testing
- Fiber connector inspection
### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Availability</th>
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</table>
| **Two-port through mode for upstream and downstream power level measurements**<sup>1</sup> | Downstream OLT signal (1490 nm)  
Upstream ONT signal (1310 nm burst mode)  
Downstream RF video signal (1550 nm) |
| G-PON Data Analysis |  
Identification of ONU/ONT serial numbers<sup>2</sup>  
ODN class detection and auto threshold setting<sup>3</sup>  
In-service insertion loss test with auto pass/fail analysis<sup>3</sup>  
OLT identification<sup>3</sup>  
Detection of alien/rogue ONUs<sup>2</sup> |
|  | Included  
GPON-ID software option  
GPON-ID software option  
GPON-ID software option  
GPON-ID software option |
| Fiber Inspection |  
With external probe  
With integrated patch cord microscope<sup>4</sup> |
|  | P5000i option  
OLP-88P version |

1. For B-PON (ITU-T G.983.x), E-PON (IEEE 802.3), G-PON (ITU-T G984.x) signals.  
2. For G-PON signals according ITU-T G.984 (without PON-ID).  
4. Burst mode: −35 to +13 dBm.  
5. At 23°C ±3°C, at 1310/1490/1550 nm, at −7 dBm.

### FTTx Measurements

| Power |  
Upstream ONT signal (1310 nm)<sup>5</sup>  
Power measurement range | −40 to +13 dBm<sup>4</sup>  
Maximum permitted input level | +17 dBm  
Spectral passband | 1290 to 1330 nm |
| Downstream OLT signal (1490 nm) |  
Power measurement range | −40 to +7 dBm  
Maximum permitted input level | +9 dBm  
Spectral passband | 1480 to 1500 nm |
| Downstream RF video signal (1550 nm) |  
Power measurement range | −40 to +26 dBm  
Maximum permitted input level | +27 dBm  
Spectral passband | 1550 to 1560 nm |

**G-PON Data Analysis at 1490 nm**  
−30 to +7 dBm

| Display resolution | 0.01 dBm/0.001 µW |
| Display units/information | dB, dBm, with pass/fail |
| ORL | >60 dB |
| Threshold sets | ITU-T G.984.3 or user-specific thresholds |
| Pass-through insertion loss<sup>1</sup> | <1.5 dB |
| Power uncertainty<sup>5</sup> | ±0.5 dB |
| Calibrated wavelengths | 1310/1490/1550 nm |
## Specifications

### General

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Display</strong></td>
<td>High-contrast 3.5 in color LCD with touch-screen functionality</td>
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<tr>
<td><strong>Fiber inspection capability</strong></td>
<td>With patch-cord microscope or external P5000i microscope (optional)</td>
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<tr>
<td><strong>Data memory</strong></td>
<td>Up to 10,000 PON results</td>
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<tr>
<td><strong>Data readout</strong></td>
<td>Via client USB interface</td>
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<tr>
<td><strong>Electrical interfaces</strong></td>
<td>2 x USB host, 1x micro USB, Ethernet</td>
</tr>
<tr>
<td><strong>Wireless interface</strong></td>
<td>WiFi client (optional)</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>12 V, 2 A with interchangeable wall plug for EU, UK, US, and AU</td>
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<tr>
<td><strong>Battery</strong></td>
<td>Li-ion pack 3.7 V, 20 Wh</td>
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<tr>
<td><strong>Battery life (Li-ion battery pack)</strong></td>
<td>&gt;12 hr</td>
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<tr>
<td><strong>Optical connectors</strong></td>
<td>APC with SC switchable adapters (FC, ST and LC adapters optional)</td>
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<tr>
<td><strong>Recommended recalibration interval</strong></td>
<td>3 years</td>
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<tr>
<td><strong>Dimensions (H x W x D)/ Weight</strong></td>
<td>OLP-88 208 x 112 x 64 mm; 750 g (8.2 x 4.4 x 2.5 in; 1.6 lbs)</td>
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<tr>
<td></td>
<td>OLP-88P 208 x 153 x 64; 850 g (8.2 x 6.0 x 2.5 in; 1.85 lbs)</td>
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<tr>
<td><strong>Operating temperature range</strong></td>
<td>−5°C to +45°C (23°C to 113°F)</td>
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<tr>
<td><strong>Storage temperature range</strong></td>
<td>−25°C to +55°C (−13°C to 131°F)</td>
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### Order Details

- **OLP-88 TruePON tester, 1310/1490/1550 nm**
  - Part Number: 2327/36
- **OLP-88P TruePON tester with patch-cord microscope, 1310/1490/1550 nm**
  - Part Number: 2328/36
- **Software Options**
  - **OLP-88 alien/rogue-ONU detection**
    - Part Number: 2327/94.01
  - **OLP-88 GPON-ID test**
    - Part Number: 2327/94.02
- **Hardware Options**
  - **WiFi option including USB WiFi adapter**
    - Part Number: 2327/90.21
- **Accessories**
  - **P5000i digital analysis microscope with 4 tips (FBPT-SC, FBPT-LC, FBPT-U25M, FBPT-U12M)**
    - Part Number: FBP-SD101
  - **ST switchable optical adapter for OLP-88**
    - Part Number: 2155/00.32
  - **LC switchable optical adapter for OLP-88**
    - Part Number: 2155/00.32
  - **Kit, RBP2 rechargeable battery (Li ion) and FBPP-PS4 power supply (12 V)**
    - Part Number: FITP-RCG1
  - **Power supply for SmartClass Fiber (12 V)**
    - Part Number: FBPP-PS4
  - **Rechargeable battery for SmartClass Fiber (Li ion)**
    - Part Number: FITP-RBP2
  - **UC4 hands-free carrier for SmartClass Fiber**
    - Part Number: FITP-UC4
  - **UC4P hands-free carrier for SmartClass Fiber with PCM**
    - Part Number: FITP-UC4P
  - **SCASE2 soft shoulder case for SmartClass Fiber tools**
    - Part Number: FBPP-SCASE2