

# OLP-39G and OLP-39X

## SmartPocket V2 TruePON Testers



VIAVI Solutions OLP-39 TruePON Testers quickly, easily, and conveniently measure power levels and loss in fiber/FTTx networks, plus G/XGS-PON PON-ID data analysis (TruePON). Easy-to-use for technicians in all conditions, the SmartPocket V2 offers a dedicated and cost-optimized solution for testing and troubleshooting fiber/PON services in the field and fits perfectly in your pocket. The smart and rugged OLP-39 also includes unprecedented data storage capacity supported by result downloads to a PC.

## APPLICATIONS

- Measuring optical power levels and link insertion loss for both G/E-PON and XGS/10G-EPON networks
- Analyzing PON-ID for G-PON and XGS-PON to detect OLT-ID, ODN class and loss based on ToL
- Multi-service PON/FTTH deployment and installs

## BENEFITS

- Ensures correct OLT port connectivity for first time install success (based on PON-ID)
  - Minimise activation delays and meet targets for installs per day
  - Reduce fault escalations and troubleshooting expenses
  - Avoid install abandonments and early life failures due to borderline installs
- Supports co-existence of G & XGS-PON on the same PON for migration to 10G services
- Ready when you need it - ultra-high reliability and high availability
  - Dependable, German design
  - Designed with outdoor environment in mind
  - Low power consumption for extended continuous use
  - Instant On – no boot time
- Easy to use
  - High-Visibility backlit graphical display with context-sensitive softkey
  - Clear pass/fail information

## FEATURES

- Single test port connection for dual wavelength measurement
- Selective power level measurements for both G/E-PON and XGS-PON/10G-EPON services
- TruePON PON-ID analysis and in-service insertion loss for G and XGS-PON
- Storage for > 1000 test results and PC download capability
- 3-year recalibration period

## Features and Benefits

### Ultra-reliable German design

Built for rugged, outdoor use  
Still fits in your pocket!

### Improved protection cap

can be fully opened

### Huge storage capacity

> 1000 test results

### Softkey flexibility

### Multiple power options (4-way)

2x Alkaline AA, 2x NiMH AA rechargeable,  
AC power adapter, USB

**New high-visibility graphical display**  
with backlight

**Innovative low-power design**  
exceptionally long battery life  
over 15 hrs. continuous  
operation

**USB-C interface**  
powering, offload of results,  
connection to PC



- The OLP-39G has a single mounted SC adapter providing simultaneous selective power measurement and TruePON PON-ID data analysis of G-PON (1490 nm).
- The OLP-39X has a single mounted SC adapter providing simultaneous selective power measurement and TruePON PON-ID data analysis of both G-PON (1490 nm) and XGS-PON (1577 nm) wavelengths.

## Instant On – Easy to Use - Good To Go In No Time

Instant on means SmartPocket V2 is ready as soon as you are, no waiting for an instrument to boot up, it is there the instant you need it. A high visibility back-lit display makes SmartPocket V2 usable in all lighting conditions, indoors and outdoors, and combined with the super simple user navigation means you can close out more jobs per day

## Filtered Measurements and Single Test Port

Filtered measurements are necessary when there is more than one service wavelength present on a PON, broadband power meters are simply not suitable in such conditions as they will combine and sum the power from multiple wavelengths providing incorrect measurement results. In addition, broadband power meters do not distinguish or identify the wavelength being measured so you may have good power levels but cannot tell if it is a G/E-PON or XGS/10GE-PON service which could lead to the incorrect ONU/ONT installation or replacements leading to service activation delays.

The OLP-39 allows for simultaneous filtered measurement of both G/E-PON (1490 nm) and XGS-PON/10G-EPON (1577 nm) wavelengths with a single fiber connection, an ideal solution for networks delivering services from two different providers over the same PON in a coexistence model, and for installers who must move regularly between G/E-PON and XGS-PON/10G-EPON networks and future proofed for service providers delivering G/E-PON today and considering upgrading or migrating to XGS-PON/10G-EPON.

## TruePON Analysis and In-service Insertion Loss

Missing, incorrect or illegible labelling of ports in drop terminal cabinets or on drop fibers can lead to incorrect customer to OLT connections resulting in services that don't turn up on the first visit or time-consuming backoffice work to reprovision service to the actual connected OLT port. TruePON analysis ensures that you have the right drop terminal and confirms that the drop fiber is connected back to the correct OLT port by reading the OLT serial and port numbers carried within the downstream PON-ID data. TruePON information is also attached to stored measurement results and provides an audit trail / birth certificate which documents power level(s) and OLT connectivity at time of install. TruePON analysis extracts specific data carried in the G-PON & XGS-PON PON-ID standardized by ITU-T G.984.3 Amendment 3.

In-service insertion loss measurement, utilizing G or XGS-PON PON-ID data, enables techs and installers to ensure that the end-to-end optical loss of the PON is within specification before proceeding with an installation or confirms that optical loss is out of specification and provides the information to support troubleshooting or to justify a trouble/fault ticket escalation.

## Superior Battery Life and Powering Options

Taking measurements and performing the certification of a fiber install is the final step to closing out tasks while you are still on-site. Without test equipment powered and ready to go you run the risk of missing a deadline or having to make a site re-visit to finish a job. To avoid this the SmartPocket V2 a low power consumption design for extended continuous use and supports 4-way powering with field replaceable NiMH rechargeable, off the shelf alkaline batteries, AC powering and power over USB. Meaning that you will never be short of power for long or need to wait for unit batteries to recharge.

## Low Cost of Ownership

3 years calibration interval means no extra annual charges and your equipment will meet requirements for reporting and certifying (i.e. to be in calibration)

## Test and Report Field Measurement

VIAVI Smart Reporter reporting software lets users quickly and efficiently download test results data from the power meter's memory with just a few clicks. After it is downloaded, the software reporting functions let users generate and customize professional certification reports.

Report date: Thursday, January 14, 2021

### Optichek Report - Sample 01

**Technician Information**

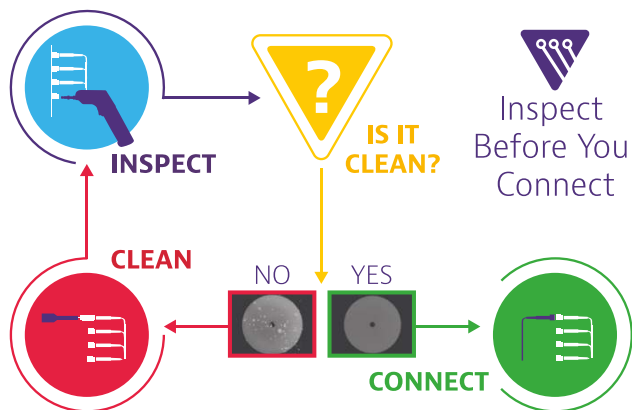
Company Name: Technician AG  
 Technician Name: Mr. Technician  
 Address: Technician Street  
 Postal Code: 72764  
 City: Maulbronn  
 State: Baden-Württemberg  
 Country: Germany  
 Phone: 0163438578  
 Email: technician@office.com

**Device Information**

Device Type: GLP355C/14  
 Calibration Date: 2021/0AN/12  
 Serial Number: A-0443  
 Software Version: 3333V01.00.00

**Measurement results**

Fiber ID	λ [nm]	Power [dBm]	Power [μWatt]	Power [dB]	Reference [dBm]
2021-01-24715-42-46	1310	-20.52			
2021-01-24715-43-46	1310	-20.82			
2021-01-24715-42-58	1310		11.22		
2021-01-24715-45-02	1490			-19.80	0.00
Room-03, Fiber-901	1490			36.15	-56.37
Room-03, Fiber-902	1550	-22.86			
Room-03, Fiber-903	1550	-23.09			



## Inspect Before You Connect (IBYC)

Contamination is the number 1 reason for troubleshooting optical networks. Proactive inspection and cleaning of fiber connectors can prevent poor signal performance, equipment damage, and network downtime.

# Specifications for SmartPocket V2

## Power Meters and selective PON Power Meter

	OLP-35V2	OLP-35SC	OLP-38V2	OLP-37XV2
Photo Diode	InGaAs	InGaAs	InGaAs (coated)	InGaAs
Spectral Range	Broadband (800...1650 nm)			Passband (1270...1500 nm, 1540...1650 nm)
Wavelength Setting	800...1650 nm, step size 1 nm	800...1650 nm, step size 1 nm	800...1650 nm, step size 1 nm	1490 nm, 1577 nm
Resolution	0.01 dB, 0.001 $\mu$ W	0.01 dB, 0.001 $\mu$ W	0.01 dB, 0.001 $\mu$ W	0.01 dB, 0.001 $\mu$ W
Measurement Range for Power Level	-65...+10 dBm	-65...+10 dBm	-50...+26 dBm	-45...+13 dBm
Max. Power Level	+16 dBm	+16 dBm	+27 dBm	+15 dBm
Measurement Uncertainty	$\pm$ 0.2 dB ( $\pm$ 5%) at ref. conditions	$\pm$ 0.2 dB ( $\pm$ 5%) at ref. conditions	$\pm$ 0.2 dB ( $\pm$ 5%) <sup>1</sup>	$\pm$ 0.5 dB ( $\pm$ 12%) at ref. conditions
Number of Calibrated Wavelengths	8 (850, 980, 1310, 1490, 1550, 1577, 1625, 1650 nm)	8 (850, 980, 1310, 1490, 1550, 1577, 1625, 1650 nm)	8 (850, 980, 1310, 1490, 1550, 1577, 1625, 1650 nm)	2 (1490, 1577 nm)
Tone Detection	270 Hz, 330 Hz, 1 kHz, 2 kHz	270 Hz, 330 Hz, 1 kHz, 2 kHz	270 Hz, 330 Hz, 1 kHz, 2 kHz	270 Hz, 330 Hz, 1 kHz, 2 kHz
Auto functions <sup>2</sup>	Auto- $\lambda$ / Multi- $\lambda$			Auto- $\lambda$ / Multi- $\lambda$ <sup>3</sup>

<sup>1</sup>When used with SC/PC connectors  
<sup>2</sup>When used with VIAVI light sources  
<sup>3</sup>In Broadband mode

## TruePON Testers

	OLP-39G	OLP-39X
Photo Diode	InGaAs	
Spectral Range	Passband (1480...1500 nm)	Passband (1480...1500 nm, 1575...1580 nm)
Wavelength Setting	1490 nm	1490 nm, 1577 nm
Resolution	0.01 dB, 0.001 $\mu$ W	
Measurement Range for Power Level	-35 ... +10 dBm	
Measurement Range for PON-ID	GPON: -30 ... 0 dBm	GPON: -30 ... 0 dBm XGS-PON: -25 ... 0 dBm
Maximum Power Level	+ 20 dBm (continuously) + 26 dBm (< 30 min)	
Measurement Uncertainty	$\pm$ 0.5 dB ( $\pm$ 12%) at ref. conditions	
Number of Calibrated Wavelengths	2 (1490, 1577 nm)	

## KITS

	OMK-35V2	OMK-36V2	OMK-38V2
Light Source Wavelengths	1310, 1550 nm	850, 1300, 1310, 1550 nm	1310, 1550 nm
Light Source Output Power (typical)	-3 dBm	-20 dBm / -3 dBm	-3 dBm
Optical Power Meter Power Rang	-65 to +10 dBm	-65 to +10 dBm	-50 to +26 dBm

## GENERAL INFORMATION

General (typical at 25°C)	
Data storage	1000 results
Data download capability	USB-C for PC transfer
Power Supply	
Dry batteries	2x Mignon (AA) Alkaline 1.5 V
Rechargeable batteries	2x Mignon (AA) NiMH 1.2 V
AC operation	via USB-C and Universal Power Adapter
Operating time	45 hrs. (OLP-35V2/-35SC/-38V2 and OLP-37XV2), 15 hrs. (OLP-39 versions) and 25 hrs. (OLS) with the dry batteries
Environmental Conditions	
EMI/ESD	CE compliant
Recommended calibration interval	3 years
Operating temperature	-10 to +55 °C (14 to 131 °F)
Storage temperature	-20 to +70 °C (-4 to +158 °F)
Dimensions (H x W x D)	30 x 80 x 150 mm (1.2 x 3.1 x 5.9 in)
Weight	200 g (0.45 lb)

## ORDERING INFORMATION

Description	Catalog Number
OLP-35V2 - Broadband Power Meter with UPP Adapter	OLP-35V2
OLP-35SC - Broadband Power Meter with fixed SC Adapter	OLP-35SC
OLP-37XV2 - Selective PON Power Meter SC mounted FC enclosed	OLP-37XV2
OLP-37XV2 and Broadband SW option (already installed)	OLP-37XV2-INCL-BB
Broadband SW option for OLP-37XV2 via SmartReporter	2335/94.01G
Broadband SW option for OLP-37XV2 via StrataSync and Mobile Tech App (MTA) - requires StrataSync account	2335/94.01S
OLP-38V2 - High Power Broadband Power Meter with UPP Adapter	OLP-38V2
OLP-39G - TruePON Tester Terminate Mode GPON	OLP-39G
OLP-39X - TruePON Tester Terminate Mode GPON and XGS-PON	OLP-39X
SW Upgrade OLP-39G to OLP-39X	2336/94.01
OMK-35V2 - SM Test Kit with OLP-35V2 and OLS-35V2	OMK-35V2
OMK-36V2 - SM+MM Test Kit with OLP-35V2 and OLS-36V2	OMK-36V2
OMK-38V2 - High Power SM Test Kit with OLP-38V2 and OLS-35V2	OMK-38V2

Each device includes 2x AA alkaline batteries, a quick start guide, neck strap and a belt bag. The Power Meters and TruePON Testers also include a USB connection cable type C.