Enabling Australia's Field Technicians to build, troubleshoot and maintain better communications networks.

This reference material is provided by TMG Test Equipment, VIAVI's **only** Master Distributor for Contractors in Australia

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VIAVI
OLP-87/87P

SmartClass Fiber PON Power Meter and Microscope

The VIAVI Solutions OLP-87 is an FTTx/PON power meter for use in qualifying, activating, and troubleshooting B-PON, E-PON, G-PON, and next-generation, high-speed 10 G PONs such as XG-PON and 10G-EPON networks. As part of the VIAVI Solutions SmartClass™ Fiber family, the OLP-87 combines a high-performance λ-selective FTTx/PON meter with pass/fail fiber inspection analysis into one portable solution. These combined capabilities guarantee service providers a lifetime of system performance from their network connectivity and gives contractors an essential tool for delivering best-in-class, reliable networks to their customers.

The OLP-87 is ideal for end-of-line testing, activation, and maintenance of all FTTx/PON signals. The through-mode capability can simultaneously measure voice, data, and RF video signals on fiber at 1490/1550/1578 nm downstream and 1270/1310 nm burst mode upstream.

The OLP-87 is compatible with the P5000i digital analysis microscope so users can check fiber end-face quality and get pass/fail acceptance results with one button push. The OLP-87P features an integrated patch-cord microscope (PCM) for added value and improved workflow efficiency.

Users can easily save test results and generate certification reports to document work quality. Integrating these capabilities into one system drives technician behavior toward implementing today's best practices in a seamless workflow that optimizes efficiency and reliability so they complete the job right—the first time.

The handheld OLP-87 can be used anywhere today's fiber technicians go, up poles or down holes. Technicians get ultimate flexibility and performance from this powerful, easy-to-use solution that can help any technician become an instant fiber expert.

KeyFeatures

- First universal PON meter with B-PON, E-PON, G-PON, and new XG-PON/10G-EPON networks test support

- Field-portable λ-selective PON power meter with through-mode capability

- Available in 1310/1490 nm, 1310/1490/1550 nm, and 1270/1310/1490/1550/1578 nm versions

- Burst mode measurement of 1270 nm and 1310 nm upstream signals

- High-performance broadband power-meter option

- Automated pass/fail fiber inspection analysis with optional P5000i microscope

- Integrated patch-cord microscope version

- On-board fiber inspection and test results storage

- Data transfer and remote control via USB via USB, Ethernet or optional WiFi connection

- Smart-Reporter certification software to create customized reports

- Modern, smartphone-style user interface with touch screen

- Rugged, weather-proof design

Become an Instant Fiber Expert with SmartClass Fiber

✓ **Integration**   Combines inspection and testing

✓ **Automation**   Pass/fail certification

✓ **Ease of use**   Intuitive smartphone-style user interface

Intuitive Smartphone-Style User Interface

High-contrast, color touch screen with menu icons.

Simultaneously Displays All FTTx/PON Power Levels

Shows OLT downstream signals at 1490, 1550, and 1578 nm along with ONT upstream burst mode signals at 1270 and 1310 nm.

Store Inspection and Measurement Readings on the Device

Store up to 10,000 measurement results on the device or, for additional storage, a USB host with a pluggable memory key.

User-Definable Pass/Fail Acceptance Criteria

Whether using the IEC 61300-3-35 or customer-specific requirements, users can easily manage user-specified acceptance criteria with dedicated profiles for each requirement.

Comprehensive Data Management and Report Generation

Easily generate certification reports that prove your quality of work meets industry standards or customer specifications using Smart Reporter™ PC software.

- Easily store measurement data at the press of a button

- Manage data and store results on the instrument

- Download measurement results to a PC via a USB interface

Perform Broadband Power Measurements

Combines Power Measurements in One Handheld Device

Providing selective power measurements for PON applications and broadband (BB-PM), OLP-87 3-wavelength and 5-wavelength versions provide a separate high-performance broadband power meter option with universal push/pull optical adapters (UPP) for easy and accurate power measurements.

Benefits of a Separate Broadband Power Meter

- A highest absolute accuracy of ±0.2 dB, due to a free-space optical interface and InGaAs photodiode, avoids fiber/fiber coupling uncertainty

- Easy adaptation of any 2.5 mm and optional 1.25 mm connector type using a universal UPP adapter

- Easy cleaning due to direct access to the photodiode surface

- Tone detection for fiber identification

- Auto lambda function, compatible with all VIAVI sources

Inspect and Test Fiber Anywhere

Combines Inspection and Test in One Handheld Device

Use either the onboard PCM or connect a P5000i digital analysis microscope to inspect fiber end faces and eliminate poor-quality components from entering your network.

Benefits of Using P5000i and PCM Together

Working with both the P5000i and PCM:

- Optimizes technician performance with tools designed for workflow

- Improves network activation with a reliable, repeatable processes

- Ensures test leads are safely stored when not in use

- Enables quick and easy inspection of both female (bulkhead) and male (patch cord) fiber connectors without changing tips

Automatic Image Centering

This convenient feature centers the fiber image on the screen.

Ultimate Portability and Organization

The hands-free carrier stores all essential tools, such as the inspection microscope, visual fault locator, and cleaning materials, in an organized, portable system that you can take with you to every job.

Specifications

Power Meter	OLP-87/87P 1310/1490 nm	OLP-87/87P 1310/1490/1550 nm	OLP-87/87P XG-PON 1270/1310/1490/1550/1578 nm
Functionality			
B-PON (ITU-T G983.x)	■	■	■
G-PON (ITU-T G984.x)	■	■	■
E-PON (IEEE 802.3av)	■	■	■
XG PON (ITU-T G.987)			■
10G-EPON (IEEE 802.3av)			■
RF video signals 1550nm		■	■
Broadband power meter	■	Option	Option
FTTx Mode			
Upstream 1270 nm, burst mode			
Power measurement range			−40 to +13 dBm[1]
Maximum permitted input level			+17 dBm
Spectral passband			1260 to 1280 nm
Upstream 1310 nm, burst mode			
Power measurement range	−40 to +13 dBm[1]	−40 to +13 dBm[1]	−40 to +13 dBm[1]
Maximum permitted input level	+17 dBm	+17 dBm	+17 dBm
Spectral passband	Broadband	1260 to 1360 nm	1290 to 1330 nm
Downstream 1490 nm			
Power measurement range	−50 to +13 dBm	−50 to +13 dBm	−50 to +13 dBm
Maximum permitted input level	+15 dBm	+15 dBm	+15 dBm
Spectral passband	Broadband	1480 to 1500 nm	1480 to 1500 nm
Downstream 1578 nm			
Power measurement range			−50 to +13 dBm
Maximum permitted input level			+15 dBm
Spectral passband			1573 to 1583 nm
RF video signals 1550nm			
Power measurement range		−50 to +26 dBm	−50 to +26 dBm
Maximum permitted input level		+27 dBm	+27 dBm
Spectral passband		1535 to 1565 nm	1535 to 1565 nm
Pass-through insertion loss	<1.5 dB[2]	<1.5 dB[2]	<1.5 dB[2]
Power uncertainty	±0.5 dB[2,3]	±0.5 dB[2,3]	±0.5 dB[2,3]
Calibrated wavelengths FTTx mode	1310/1490 nm	1310/1490/1550 nm	1270/1310/1490/1550/1578 nm

1. Burst mode: -35 to +13 dBm
2. At 23°C ± 3°C, at calibrated wavelengths FTTx mod
3. At −7 dBm
4. At 23˚ ±3˚C at all calibrated wavelengths broadband mode
5. At −7 dBm
6. With VIAVI light sources
7. At −20 dBm
8. Valid for APC versions only

Specifications continued

Power Meter	OLP-87/87P 1310/1490 nm	OLP-87/87P 1310/1490/1550 nm	OLP-87/87P XG-PON 1270/1310/1490/1550/1578 nm
Broadband Mode			
Optical interface	on OLT port (SC switchable adapter)	Separate port (2.5 mm UPP adapter) (1.25 mm UPP optional)	Separate port (2.5 mm UPP adapter) (1.25 mm UPP optional)
Power measurement range	−50 to +13 dBm	−50 to +13 dBm	−50 to +13 dBm
Maximum permitted input level	+15 dBm	+15 dBm	+15 dBm
Power uncertainty	±0.5 dB[4, 5]	±0.2 dB (±5%)[4, 7]	±0.2 dB (±5%)[4, 7]
Calibrated wavelengths broadband mode	1310/1490/1550/1625 nm	1310/1490/1550/1625 nm	1310/1490/1550/1625 nm
Wavelength range, settings	1260 to 1625 nm in 1 nm steps	1260 to 1625 nm in 1 nm steps	1260 to 1625 nm in 1 nm steps
Tone detection	270 Hz 1 kHz/2 kHz	270 Hz 1 kHz/2 kHz	270 Hz 1 kHz/2 kHz
Auto functions[6]	Auto-λ / Multi-λ function	Auto-λ / Multi-λ function	Auto-λ / Multi-λ function
General			
Technical			
Display	High-contrast 3.5″ color LCD with touch-screen functionality		
Display resolution	0.01 dBm/0.001 µW		
Measurement units	dB, dBm, W		
ORL[4, 8]	>60 dB		
Fiber inspection	Via external probe P5000i (option) with individual naming, and via integrated patch cord microscope for OLP-87P versions		
Live image	320 x 240 x 8 bit grey, 10 fps		
Threshold sets	>1000 configurable threshold sets with individual naming, and via integrated patch cord microscope for OLP-87P versions		
Data memory	10.000 measurement results		
Data readout	Via client USB interface		
Remote control capability	Via USB or Ethernet		
Electrical interfaces	2 x USB host, 1x micro USB, Ethernet		
Power source	AC adaptor, 8x AA alkaline, or rechargeable LiION battery pack (option)		
Optical connectors	SC Switchable Optical Adapter (FC, ST and LC also available)		
Recommended recal. Inte	3 years		
Dimensions (H x W x D) OLP-87 OLP-87P	208 x 112 x 64 mm/750 g (8.2 x 4.4 x 2.5 in/1.6 lb) 208 x 153 x 64/850 g (8.2 x 6.0 x 2.5 in/1.85 lb)		
Operating temperature range	−10 to +55°C (14 to 122°F)		
Storage temperature range	−20 to +70˚C (−4 to 158°F)		

1. Burst mode: -35 to +13 dBm
2. At 23°C ± 3°C, at calibrated wavelengths FTTx mod
3. At −7 dBm
4. At 23˚ ±3˚C at all calibrated wavelengths broadband mode
5. At −7 dBm
6. With VIAVI light sources
7. At −20 dBm
8. Valid for APC versions only

Ordering Information

Description	Part Number
Stand-Alone Units	
OLP-87 FTTx power meter 1310/1490 nm, SC-APC	2305/26
OLP-87 FTTx power meter 1310/1490/1550 nm, SC-PC	2305/11
OLP-87 FTTx power meter 1310/1490/1550 nm, SC-APC	2305/36
OLP-87 XG-PON power meter 1310/1270/1490/1550/1578 nm, SC-APC	2305/66
Stand-Alone Units with Patch Cord Microscope	
OLP-87P FTTX power meter, 1310/1490/1550 nm SC-APC, with integrated patch cord microscope (PCM)	2306/36
OLP-87P XG-PON power meter, 1310/1270/1490/ 1550/1578 nm, SC-APC, with integrated patch cord microscope (PCM)	2306/66
Options	
OLP-87 Broadband optical power meter option (for 3-wavelengths and 5 wavelengths OLP-87/87P versions)	2305/94.01
WiFi software option including USB WiFi adapter	2327/90.21
Accessories	
PS4 power supply, for SmartClass Fiber, 12 V/2 A	2305/90.01
RBP2 rechargeable battery packfor SmartClass Fiber; Li-ion battery 3.7 V/20 W/hr	2305/90.02
UC4 hands-free carrier for SmartClass Fiber	2128/01
UC4P hands-free carrier for SmartClass Fiber with PCM	2128/02
USB cable USB-A to micro-USB	K 807
SC-2 soft shoulder case for SmartClass Fiber tools	2128/03
2.5mm UPP adapter for OLP-87 Broadband Optical Power Meter Option (2305/94.01)	2307/90.02
1.25mm UPP adapter for OLP-87 Broadband Optical Power Meter Option (2305/94.01)	2307/90.03
SC/APC switchable adapter	2155/00.06
Kits	
OLP-87 1310/1490 SC-APC basic kit	FIT-8726
OLP-87 1310/1490 SC-APC pro kit	FIT-8726-PRO
OLP-87 1310/1490/1550 SC-APC basic kit	FIT-8736
OLP-87 1310/1490/1550 SC-APC pro kit	FIT-8736-PRO
OLP-87P 1310/1490/1550 SC-APC, pro kit	FIT-8736P-PRO
OLP-87 XG-PON power meter 1310/1490/ 1550/1270/1578 nm SC-APC, basic kit	FIT-8766
OLP-87 XG-PON power meter 1310/1490/1550/1270/1578 nm SC-APC, pro kit	FIT-8766-PRO
OLP-87P XG-PON power meter 1310/1490/1550/1270/1578 nm SC-APC, pro kit	FIT-8766P-PRO

Ordering Information continued

Description	Part Number
Included Items	
Stand-Alone Units	
SmartClass Fiber instrument	
SC-2 soft shoulder case for SmartClass Fiber tools	
Two SC switchable optical adapters	
Quick start manual and safety instructions	
Dry batteries (8x)	
Additional Items in Basic Kits	
P5000i Digital Inspection Microscope	
Inspection tips and adapters (bulkhead: SC, APC, and LC, Patch cord: 2.5 mm, 2.5 mm APC, and 1.25 mm)	
Power supply for SmartClass Fiber (12 V)	
FiberChekPRO software installation Disk	
USB cable USB-A to micro-USB	
Additional Items in Pro Kits	
P5000i Digital Inspection Microscope	
Inspection tips and adapters (bulkhead: SC, APC, and LC, patch Cord: 2.5 mm, 2.5 mm APC, and 1.25 mm)	
Cleaning materials for 2.5 and 1.25 mm (bulkhead and patch cord)	
Hands-free carrier for SmartClass Fiber	
Rechargeable battery for SmartClass Fiber (Li-ion)	
FFL-050 visual fault locator with 2.5 and 1.25 mm adapter	
Power supply for SmartClass Fiber (12 V)	
FiberChekPRO software installation disk	
USB cable USB-A to micro-USB	

VIAVI Care Support Plans

Increase your productivity for up to 5 years with optional VIAVI Care Support Plans:

- Maximize your time with on-demand training, priority technical application support and rapid service.
- Maintain your equipment for peak performance at a low, predictable cost.

For more Information: go to viavisolutions.com/viavicareplan

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration
BronzeCare	Technician Efficiency	Premium	✓	✓	✓		
SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓