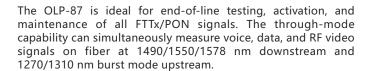


# OLP-87/87P

# 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 highperformance 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 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-touse solution that can help any technician become an instant fiber expert.



#### **BENEFITS**

- 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.



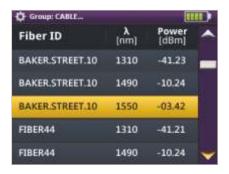
#### Simultaneously Displays All FTTx/PON Power Levels

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

	12:01	Ф 🎹
PON ONT 1310 nm	-01.	22 dBm
PON OLT 1490 nm	-10.	17 dBm
XGPON ONT 1270 nm	-21.	89 dBm
XGPON OLT 1578 nm	-37.	12 dBm
RF Video 1550 nm	-03.	39 dBm

# 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**

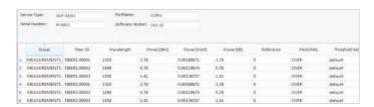
Whether using the IEC 61300-3-35 or customer-specific requirements, users can easily manage user-specified acceptance criteria with dedicated profiles for each requirement.



#### **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  $^{\text{TM}}$  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			
Options and Accessories			
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 mo	de		
Power measurement range			-40 to +13 dBm1
Maximum permitted input level		+17 dBm	
Spectral passband			1260 to 1280 nm
Upstream 1310 nm, burst mo	de		
Power measurement range	-40 to +13 dBm <sup>1</sup>	-40 to +13 dBm <sup>1</sup>	-40 to +13 dBm <sup>1</sup>
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		<u></u>	<u></u>
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 <sup>2</sup>	<1.5 dB <sup>2</sup>	<1.5 dB <sup>2</sup>
Power uncertainty	±0.5 dB <sup>2,3</sup>	±0.5 dB <sup>2,3</sup>	±0.5 dB <sup>2,3</sup>
Calibrated wavelengths FTTx mode	1310/1490 nm	1310/1490/1550 nm	1270/1310/1490/1550/1578 nm

<sup>1.</sup> Burst mode: -35 to +13 dBm

<sup>2.</sup> At 23°C  $\pm$  3°C, at calibrated wavelengths FTTx mod

<sup>3.</sup> At –7 dBm

<sup>4.</sup> At  $23^{\circ} \pm 3^{\circ}C$  at all calibrated wavelengths broadband mode

<sup>5.</sup> At –7 dBm

<sup>6.</sup> With VIAVI light sources

<sup>7.</sup> At -20 dBm

<sup>8.</sup> 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	1310	, 1430 IIII	1310/1430/1330 1111	1276, 1316, 1436, 1336, 1376 1111		
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	±(	D.5 dB <sup>4, 5</sup>	±0.2 dB (±5%) <sup>4,7</sup>	±0.2 dB (±5%) <sup>4,7</sup>		
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 functions6	Auto-λ / ľ	Multi-λ function	Auto-λ / Multi-λ function	Auto-λ / Multi-λ function		
General						
Technical						
Display		High-contras	t 3.5" color LCD with touch-screen functionality			
Display resolution	olution		0.01 dBm/0.001 μW			
Measurement units		dB, dBm, W				
ORL <sup>4, 8</sup>		>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				
		8x AA alkaline, or rechargeable LilON battery pack (option)				
Optical connectors			SC Switchable Optical Adapter (FC, ST and LC also available)			
Recommended recal. Inte		3 years	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	−20 to +70°C (−4 to 158°F)			

- 1. Burst mode: -35 to +13 dBm
- 2. At 23°C  $\pm$  3°C, at calibrated wavelengths FTTx mod
- 3. At -7 dBm
- 4. At 23°  $\pm$ 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	



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