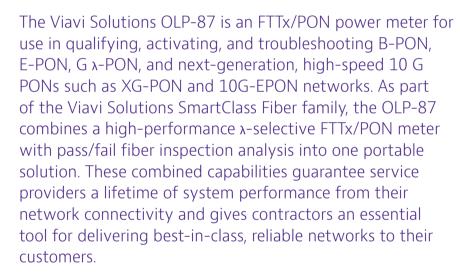


OLP-87/87P

SmartClass™ Fiber PON Power Meter and Microscope



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.



- Complete jobs faster, correctly, and on time—the first time: Uniquely integrates fiber inspection and test for an efficient, easy-to-use solution that promotes best practices for handling fiber
- Analysis with pass/fail results on one handheld device: Automatically certifies fiber end-face condition and easily measures FTTx/PON power, making even new technicians fiber experts
- Easily generates certification reports: Prove that work quality meets industry standards and customer specifications
- Use it anywhere: Hands-free carrier for easy use inside homes or up on telephone poles
- Prepares for 10 G PON upgrades: First universal PON meter with B-PON, E-PON, G-PON, and new XG-PON/10G-EPON networks test support

KeyFeatures

- 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 for 1270 nm and 1310 nm upstream signals
- High-performance broadband power-meter option with universal-adapter interface
- 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
- 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.



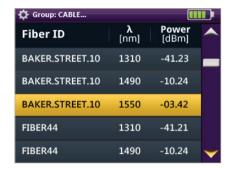
Simultaneously Displays All FTTx/PON Power Levels

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

	12:01	(i)
PON ONT 1310 nm	-01.2	22 dBm
PON OLT 1490 nm	-10.	7 dBm
XGPON ONT 1270 nm	-21.8	3 9 dBm
XGPON OLT 1578 nm	-37.	2 dBm
RF Video 1550 nm	-03.3	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

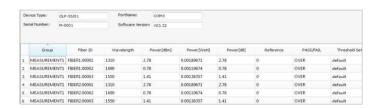
Whether using the IEC 61300-3-35 or customer-specific requirements, users can easily manage user-specified acceptance criteria with dedicated profiles for each requirement.



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™ 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 1310-1490 nm	OLP-87 1310/1490/1550 nm	OLP-87 XG-PON 1270/1310/1490/1550/1578 nr
Functionality			
Two-port through mode			
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)			
Downstream OLT signal (1490 nm)	•		•
Downstream OLT signal (1578 nm)			•
Downstream RF video signal (1550 nm)			•
Upstream ONT signal (1270 nm)			•
Upstream ONT signal (1310 nm)	•		
Broadband power meter	Fiber coupled	Universal adapter (option)	Universal adapter (option)
Upstream OLT signal (1310 nm)	•		
Fiber inspection			
via external probe P5000i (option)	•		
via integrated patch cord microscope	OLP-87P version	OLP-87P version	OLP-87P version
FTTx Mode			1
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 1330 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	1260 to 1360 nm	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	1480 to 1500 nm	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		+21 dBm	+21 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	1310/1490 nm	1390/1490/1550 nm	1270/1310/1490/1550/1578 nm

^{1.} Burst mode: -35 to +13 dBm

^{2.} At 23°C ± 3°C, at 1270/1310/1490/1550/1578 nm

^{3.} At -7 dBm

Power Meter	OLP-87 1310-1490 nm	OLP-87 1310/1490/1550 nm	OLP-87 XG-PON 1270/1310/1490/1550/1578 nm	
Broadband Mode				
Interface	fiber coupled	free space (2.5 mm UPP adapter) (1.25 mm UPP optional)	free space (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 ^{1,2}	±0.2 dB (±5%) ^{1, 4}	±0.2 dB (±5%) ^{1, 4}	
Wavelength range	1260 to 1625 nm	1260 to 1625 nm	1260 to 1625 nm	
Calibrated wavelengths	1310/1490/1550/1625 nm	1310/1490/1550/1625 nm	1310/1490/1550/1625 nm	
Wavelength 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 lambda and TWIN test mode ³	Yes	Yes	Yes	

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 ^{1,5}	>60 dB		
Fiber inspection	Via external probe P5000i (option) with individual naming		
Live image	320 x 240 x 8 bit grey, 10 fps		
Threshold sets	>1000 configurable threshold sets with individual naming		
Data memory	10.000 measurement results		
Data readout	Via client USB interface or Ethernet		
Remote control capability	Via USB		
Electrical interfaces	2 x USB host, 1x micro USB, Ethernet		
Power supply	Four-way powering: NiMH/dry betteries/Li-ion pack/AC power supply 12 V internal charging for Li-ion-pack		
Optical connectors	Interchangeable Fixed	SC/FC/ST/LC/DIN SC	
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. At 23° ±3°C at all calibrated wavelengths
- 2. At -7 dBm
- 3. With Viavi light sources
- 4. At -20 dBm
- 5. Valid for APC versions only

Ordering Information

Description	Part Number
Stand-Alone Units	
OLP-87 FTTx power meter 1310/1490 nm, PC	2305/01
OLP-87 FTTx power meter 1310/1490 nm, APC	2305/21
OLP-87 FTTx power meter 1310/1490 nm, SC-APC	2305/26
OLP-87 FTTx power meter 1310/1490/1550 nm, PC	2305/11
OLP-87 FTTx power meter 1310/1490/1550 nm, APC	2305/31
OLP-87 FTTx power meter 1310/1490/1550 nm, SC-APC	2305/36
OLP-87P FTTX power meter, dual-mag patch cord module, 1310/1490/1550 nm, SC-APC	2306/36
OLP-87 XG-PON power meter 1310/1270/1490/1550/1578 nm, SC-APC	2305/66
OLP-87P XG-PON power meter, dual-mag patch cord module 1310/1270/1490/ 1550/1578 nm, SC-APC, PCM	2306/66
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

Description	Part Number	
Included Items		
Stand-Alone Units		
SmartClass Fiber instrument		
SCASE2 soft shoulder case for SmartClass Fiber too	ls	
Electronic tool kit with manual, data sheet, and Smart Reporter software on USB stick		
Two optical adapters: SC type or selectable SC/FC/DIN/ST/LC in universal version		
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		
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	
SCASE2 soft shoulder case for SmartClass Fiber tools	2128/03	



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