VIAVI

SmartClass™ Fiber

OLT-85 and –85P Inspection-Ready Optical Loss Test Sets

The SmartClass Fiber OLT-85 and –85P combine a fiber inspection microscope, optical power meter (OPM), and optical light source (OLS) in one versatile test instrument. The compact instrument provides the essential fiber tests—inspection, power, insertion loss, and continuity—for multimode and single-mode networks.

Viavi Solutions™ merges a highly accurate optical power meter and up to four light sources in one compact test instrument to create a test set that precisely and automatically measures insertion loss error-free. The ultra-sensitive power meter combined with stabilized light sources can measure fiber loss up to 85 dB for single-mode and up to 65 dB for multimode. Its specific wavelength combinations make it ideal for qualifying and certifying long-haul, metro, and access telecommunication networks as well as data center and local area networks.

Adding the P5000i digital analysis microscope to the OLT-85 and -85P lets users check fiber end-face quality with pass/fail acceptance results at the push of a button.

The OLT-85P features an integrated patch-cord microscope (PCM) for added value and improved workflow efficiency.

Threshold settings for pass/fail indications and the intuitive touch screen interface transforms users into instant fiber experts without the need for special training. Automatic functions, such as Auto-λ and real-time Multi-λ functionalities avoid handling errors and significantly speed up test time. The OLT-85 and -85P are fully compatible with other members of the SmartClass Fiber family (OLS, OLP, and ORL) that also have these automatic functions.

Users can easily save test results (power, insertion loss, and fiber inspection) with a real-time stamp to generate on-board certification reports. FiberChekPRO™ PC software enables users to easily upload test results to a PC for post-processing.

The OLT-85 and -85P inspection-ready optical loss test sets can be used anywhere today's fiber technicians go, up poles or down holes. Technicians gain ultimate flexibility and performance from this powerful easy-to-use solution that can instantly transform any technician into a fiber expert.

Key Benefits

- Complete jobs faster, correctly, and on time—the first time—with this unique integrated fiber inspection microscope, optical power meter, and optical light source

- Battery-operated, field-portable instrument provides a full day of autonomy

- Ability to transfer data and to control remotely via USB or Ethernet interface

- Shielded housing for extreme accuracy in RF environments

- Rugged, weather-proof design ideal for outdoor use

Key Features

- Optical power meter with 900 settable wavelengths and high dynamic range accuracy for testing multimode and single-mode fiber

- Dual and quad light source versions with encircled flux (EF)-compliant launch conditions at 850 nm

- In-service loss test option

- 3.5" color touch screen with integrated stylus

- Automated pass/fail fiber inspection analysis with optional P5000i microscope; a version is available with an integrated PCM

- Onboard fiber inspection and test results storage with time stamp

Specifications

	OLT-85 (2325/01) OLT-85P (2326/01)	OLT-85 (2325/05) OLT-85P (2326/05)		
Operating Modes	Power Meter, Light Source, Loss Test Set			
Power Meter				
Detector type	InGaAs			
Power measurement range	−85 to +15 dBm			
Max. permitted input level	+15 dBm			
Intrinsic uncertainty[1]	±0.13 dB (±3%)			
Automatic offset nulling	Yes			
Wavelength range/settings	800 to 1700 nm, in 1 nm steps			
Calibrated wavelengths	850, 980, 1300, 1310, 1490, 1550, 1625 nm			
Display resolution	0.01 dB/0.001 µW			
Measurement units	dB, dBm, W			
Power meter functions	Absolute, relative, pass/fail			
Auto functions[2]	Auto-λ	Auto single-wavelength detection		
	Multi-λ	Auto multi-wavelength detection		
Tone detection	270 Hz, 1 kHz, 2 kHz			
Optical interfaces	2.5 mm UPP for FC, SC, ST, DIN, and E2000 connector types			
	1.25 mm UPP for LC and MU connector types (optional)			
Warm-up time	None, Instant-On			
Light Source				
Nominal wavelengths[3]	1310/1550 nm	MM	850/1300 nm	
		SM	1310/1550 nm	
Spectral width	<5 nm	MM	50/170 nm	
		SM	5/5 nm	
Launch conditions		EF compliant at 850 nm		
Output power (settable in 0.01 dB steps)	0 to −3 dBm	MM	−20 to −23 dBm	
		SM	0 to −3 dBm	
Stability[4] 15 min/8 hr	0.02/0.2 dB			
Source modes	CW, tone, Auto-λ[5], Multi-λ[5]			
Tone generator	270 Hz, 1 kHz, 2 kHz			
Optical interfaces	PC connector with interchangeable SC, FC, ST adapters			
General				
Laser class	Class 1 laser product (IEC 60825-1:2007)			
Display	3.5-in color LCD touch screen, 4:3 ratio			
Data readout	Via USB interface			
Remote control capability	Via USB or Ethernet			
Inspection functions	Live, freeze, store end-face image, auto pass/fail			
Data storage	Up to 10,000 test results time stamp; Abs. and rel. power results and inspection images (jpg)			
Electrical interfaces	USB 2.0 (2 x host, type A, 1 x device, Micro-B)			
Power source	AC adaptor, 8x AA alkaline, or rechargeable LiON battery pack (option)			
Power mode	Active, Auto-Off (programmable)			

General		
Battery life (continuous operation)	>10 hr (LiON)/>8 hr (alkaline)	
Dimension (H x W x D) and Weight	OLT-85	208 x 112 x 64 mm (8.2 x 4.4 x 2.5 in) 750 g (1.6 lb)
	OLT-85P	208 x 153 x 64 mm (8.2 x 6.0 x 2.5 in) 850 g (1.85 lb)
Operating temp. range	−5 to +45°C (23 to 113°F)	
Storage temp. range	−25 to +55°C (−13 to 131°F)	

Ordering Information

OLT-85 and OLT-85P Optical Loss Test Sets include:

- SmartClass Fiber instrument
- SC2 Soft Shoulder Case, for SCF tools
- Universal optical adapter UPP 2.5 mm for power meter
- Optical adapters for light source SC-type (mounted) and FC-type (interchangeable)
- Quick Start manual and safety instructions
- Alkaline batteries (8)

Description	Part Number
OLT-85 Loss Test Set 1310/1550 nm, PC	2325/01
OLT-85 Loss Test Set 850/1300/1310/1550 nm, PC	2325/05
OLT-85P Loss Test Set 1310/1550 nm, PC, with integrated patch-cord microscope (PCM)	2326/01
OLT-85P Loss Test Set 850/1300/1310/1550 nm, PC, with integrated patch-cord microscope (PCM)	2326/05
Options and Accessories	
P5000i digital analysis microscope with 4 tips	FBP-SD101
RBP2 Rechargeable LiON battery pack 3.7 V/20 W	2305/90.02
PS4 power supply, 12 V, 2 A	2305/90.01
RBP2 Rechargeable LiON battery pack with PS4 power supply	2305/90.04
UC4 hands-free carrier	2128/01
SC2 soft shoulder case	2128/03
FC-type optical adapter	2155/00.05
SC-type optical adapter	2155/00.26
ST-type optical adapter	2155/00.32
USB cable USB-A to Micro-USB	K 807
UPP adapter 2.5 mm type — SC/FC/ST/DIN	2307/90.02
UPP adapter 1.25 mm type — LC/MU	2307/90.03

1. Under reference conditions: at 1310 nm ±1 nm, −20 dBm (CW), 23°C ±3K, 9 µm test fiber with SC/PC ceramic connector
2. Works in conjunction with OLS-3x, OLS-5x, OLS-85, OLT-85, and ORL-85
3. ±20 nm
4. Between −5 to +45°C with ΔT = ±0.3 K after a 20-minute warm-up
5. Works in conjunction with OLP-3x, OLP-55, OLP-85, OLT-85, and ORL-85