FX81/FX81T

1G/10G PON Optical Power Meters



FX81T



FX81 5WL

Optical power meter for installation, service activation and troubleshooting of B/GPON, XG(S)-PON, EPON and 10G-EPON fiber networks. Pass-through design to measure multiple downstream and upstream signals simultaneously for ONU/ONT verification or non-pass through/terminated OLT 1490/1577nm verification.

Key Features

- Compatible with both GPON and EPON fiber networks
  - GPON and XG(S)-PON test applications
  - EPON and 10G-EPON test applications
- 3 models available:
  - 2 λ non-pass-through/terminated DS: 1490/1577nm (FX81T)
  - 4 λ pass-through DS: 1490/1577nm, US: 1310/1270nm
  - 5 λ pass-through DS: 1490/1550/1577nm, US: 1310/1270nm
- Concurrent measurements display
- Fixed SC/APC Interface for ONU and OLT test ports
- Programmable thresholds with Pass/Fail indication
- Optional broadband power meter with universal adapters
  - WaveID support when paired with compatible VeEX source
- Non-volatile storage for 1920 OPM
- Flexible data transfer, test result management and report generation options using:
  - LT-Sync PC software (microUSB or optional Bluetooth)
  - Fiberizer™ Mobile OLTS software (microUSB or Bluetooth)
  - Fiberizer™ Desktop Plus or Fiberizer™ Cloud
- High contrast LCD - visible outdoors, programmable backlight for indoor or low light conditions
- Battery: Built-in, rechargeable Li-polymer
- Battery operating time (with backlight):
  - FTTx PON mode: >25 hours

Key Specifications

- Wavelength-selective level measurements:
  - GPON per ITU-T G.984.2
  - XG(S)-PON per ITU-T G.9807.1
  - EPON & 10G-EPON per IEEE 802.3av
  - RF video (RVO)
- Calibrated wavelengths
  - GPON and EPON: 1310/1490 nm
  - XG(S)-PON and 10G-EPON and 1270/1577 nm
  - RF video (RVO): 1542 to 1560 nm
- xPON Power Measurement range (Pass-through):
  - Burst mode at 1270 and 1310 nm: -35 to +10 dBm
  - CW mode at 1490 and 1577 nm: -40 to +12 dBm
  - RF video (RVO) at 1550 nm: -40 to +25 dBm
  - Pass-through Insertion Loss: ≤1.5 dB
- Optical Return Loss @ 1550 nm: ≥55 dB
- Display resolution: 0.1 dB
- Optional Broadband Optical Power Meter (BB-OPM)
  - Calibrated wavelengths (nm): 850/1300/1310/1490/1550/1625/1650
  - CW measurement range (dBm): -50 to +25

Fiberizer™ Software

Fiberizer is a family of VeEX fiber software applications that streamlines results storage, test reporting, work-flow integration and process compliance.

Fiberizer Mobile OLTS (FMOLTS) is an App for Android mobile devices. OPM/PON test data saved in the FX8x series test can be transferred via USB cable or optional Bluetooth connection to a phone/tablet for report generation and subsequent processing.

Fiberizer Cloud is an online repository where you can store, analyze and process all your fiber test results. This unique cloud solution provides superior centralized test data management and advanced report generation - since it's a full online web service, technicians can upload, process or access test data from almost any location, at any time.

Fiberizer Desktop-Plus is a Windows® PC software application that enables comprehensive test data analysis and report generation. The software supports transfer of test data to Fiberizer Cloud or VeSion R-server for additional test data operations.

R-Server Workforce/Productivity System

A centralized server application designed for medium-to-large service providers facing the enormous challenge of managing and coordinating hundreds or even thousands of installations per day. The VeSion R-Server collects field test results for billing/record keeping purposes and simplifies inventory management. Used in conjunction with Fiberizer Mobile, this back-office application reduces customer call-backs and associated truck rolls, maximizing workforce efficiency and lowering operational costs.



Optical Specifications[1]

xPON Power Meter	FX81 4WL	FX81 5WL	FX81T
Calibrated wavelengths (nm)	1270/1310/1490/1577	1270/1310/1490/1550/1577	1490/1577
Continuous data measurement range (dBm) - OLT			
- 1490 nm	-40 to +12		-45 to +13
- 1577 nm	-40 to +12		-45 to +13
Burst data measurement range (dBm) - ONT/ONU			
- 1270 nm	-35 to +10		n/a
- 1310 nm	-35 to +10		n/a
RF Video data measurement range (dBm)			
- 1550	n/a	-40 to +25	n/a
Spectral Passband (nm)[2]			
- 1270	1260 to 1280	1260 to 1280	n/a
- 1310	1300 to 1320	1300 to 1320	n/a
- 1490	1480 to 1500	1480 to 1500	1480 to 1500
- 1550	n/a	1542 to 1562	n/a
- 1577	1572 to 1582	1572 to 1582	1572 to 1582
Power measurement accuracy, (dB)[3,4,5]	±0.5		
Pass-Through Insertion Loss, (dB)[4]	≤1.5		n/a
Linearity, (dB)	±0.1		
Display Resolution (dB)	0.1		
Results	dBm with Pass/Fail Threshold indicator		
Interface (with dust cap protection)	Fixed SC/APC, >55dB reflectance		

Broadband Optical Power Meter (Optional for FX81T and FX81 4WL)	
Wavelength Range	800 to 1700
Calibrated wavelengths (nm)	850/1300/1310/1490/1550/1625/1650
	Optional - CWDM ITU-T 694.2 Grid
Detector type	InGaAs
Measurement range	-50 to +25
Power Accuracy, % (dB)	±5 (±0.22)
Linearity, % (dB)	±2.5 (±0.11)
Readout Resolution (dB)	±0.01
Tone Detection (Hz)	270/330/1000/2000
Wave ID (Auto λ detection)	Compatible with VeEX Light Source
Optical Adapters (interchangeable)	SC, LC, FC, ST, Universal 2.5 or Universal 1.25 ferrule

General Specifications

Size:	164.39 x 100 x 46.93 mm (H x W x D)	Connectivity:	Data transfer via micro USB or Bluetooth (optional)
Weight:	420 g (0.93 lbs.)		
Construction:	Polycarbonate chassis, rubber holster, 1 meter drop tested	Display:	High contrast LCD (128 x 64 pixels)
		Operating Temp:	-10 °C to +50 °C
Battery:	Rechargeable Li-Polymer, PON >25 h	Storage Temp:	-20 °C to +70 °C
Power Supply:	Micro USB interface, 5 VDC charger	Humidity:	0% to 95%, non-condensing

VeEX
The Verification Experts

CE

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