



OLTS-85/85P SmartClass™ Fiber Optical Loss Test Sets

Specifications



Power Meter

Specification	
Optical interface	Interchangeable adapter LC/PC, LC/APC (optional 2014-style adapters: SC, ST, FC, DIN, E2000 and UPP 2.5 mm and UPP 1.25 mm)
Detector type	InGaAs
Wavelength range/settings	800 to 1700 nm/in 1 nm steps
Calibrated wavelengths	850, 980, 1310, 1490, 1550, 1625 nm
Power Measurement Range	-75 to +15 dBm
Max. permitted input level	+15 dBm
Absolute measurement uncertainty ¹	±0.15 dB (±3.5%)
Overall measurement uncertainty ^{2,3}	850 nm ±0.35 dB ±0.25 nW 980 nm ±0.35 dB ±0.25 nW 1310 nm ±0.25 dB ±0.05 nW 1490 nm ±0.25 dB ±0.05 nW 1550 nm ±0.25 dB ±0.05 nW 1625 nm ±0.35 dB ±0.05 nW
Linearity	0.1 dB
Automatic offset nulling	Yes
Measurement units	dB, dBm, Watt
Display resolution	0.01 dB/0.0001 µW
Power meter functions	Absolute, relative, pass/fail, Auto λ, Tone detection
Warm-up time	None, instant-on

1. Valid for calibrated wavelengths 1310 nm, 1490 nm, 1550 nm at reference conditions, at -22 dBm (CW), 23°C ±3K, 9µm test fiber with SC/PC ceramic connector. Intrinsic uncertainty for calibrated wavelengths 850nm (at -20dBm), 980 nm (at -22dBm) and 1625 nm (at -22dBm) is ±0.25 dB (±6%)

2. -75 dBm to +26 dBm, -5°C to +45°C

3. Overall measurement uncertainty for 800 to 1700 nm:
800 nm to 1300 nm: ±0.7 dB ±25 nW
1300 nm to 1550 nm: ±0.4 dB ±5 nW
>1550 nm: ±0.7 dB ±5 nW

Light Source

Specification	Multimode	Single-Mode
Optical interface	Interchangeable adapter FC/PC (optional 2155-style adapters: SC, ST, and LC)	Interchangeable adapter SC/PC (optional 2155-style adapters: FC, ST and LC)
Source type and wavelengths	LED source 850 nm ± 20 nm 1300 nm ± 20 nm	Fabry-Perot laser diode 1310 nm ± 20 nm 1550 nm ± 20 nm
Spectral width	50/170 nm	5/5 nm
Launch condition	Encircled Flux compliant to TIA-526-14 and IEC 61280-4-1 ²	
Output power settable in 0.1 dB steps	-20 to -23 dBm	0 to -3 dBm
Stability ¹ 15 min/8 hr	±0.02/0.2 dB	±0.02/0.2 dB
Source modes	CW, tone, auto-λ, multi-λ	
Tone generator	270 Hz, 1 kHz, 2 kHz	

1. At constant temperature, after a 20-minute warm-up.

2. At the output of the EF-TRC. Variations between EF measurement equipment may occur but EF compliance can be expected with a 95% confidence factor. Valid for IEC 61280-4-1 at 850 nm.

Loss/Length (Tier 1)

Specification		Multimode	Single-Mode
Testing speeds ¹	Remote mode	<6 seconds	
	Loopback mode	≤3 seconds	
Pass/fail limit standards		TIA 568.3, ISO 11801 and ISO/IEC 14763-3, link validation	
Fiber types		50/125 μm or 62.5/125 μm	9/125 μm
Nominal test wavelengths		850/1300 nm	1310/1550 nm
Maximum length measurement		12 km	100 km
Length measurement accuracy ²		± 1.5 m plus ± 1% of length	
Loss measurement uncertainty ³		<0.2 dB	

- Two wavelengths, one direction, auto wavelength detection (excludes referencing and connection times).
- For multimode up to 1 km range, for singlemode up to 10 km range.
- After 20 min warm up, at constant temperature, no charging. For multimode loss measurements with 50/125 μm fibers (NA = 0.20). For single-mode loss measurements with 9/125 μm fibers (NA = 0.10).

Patchcord Microscope

Specification		
Optical interface	FMAE LC duplex (many other adapters available)	
Auto pass/fail analysis standards	IEC 61300-3-35 and custom limits	
Live image	320 x 240 x 8 bit grey, 10 fps	
Light source	Blue LED, 100.000+ hours life	
Lighting technique	Coaxial	
Magnification field-of-view low/high	Horizontal	740/370 μm
	Vertical	550/275 μm
External USB connected P5000i digital inspection probe supported		

General

Specification	OLTS-85	OLTS-85P
Display	High-contrast 3.5" color LCD with touch-screen functionality	
Data memory	Up to 10,000 loss test results (>1000 including inspection)	
Data readout	Via client USB interface, and wireless via USB WiFi/Bluetooth adapter (option)	
Electrical interfaces	2 x USB host, 1x micro USB, Ethernet	
Power supply	12 V, 2A with interchangeable wall plug for EU, UK, US, and AU	
Battery	Li-ion pack 3.7 V, 20 Wh (optional 8 NiMH/dry batteries)	
Battery life (Li-ion battery pack)	>12 hr	
Recommended recal. interval	3 years	
Dimensions (H x W x D)	208 x 112 x 64 mm (8.2 x 4.4 x 2.5 in)	208 x 153 x 64 mm (8.2 x 6.0 x 2.5 in)
Weight	750 g (1.6 lb)	850 g (1.85 lb)
Operating temperature range	-5° to +45° C (23° to 113° F)	
Storage temperature range	-25° to +55° C (-13° to 131° F)	