Sosnowa 2B
55-300 Szczepanów
tel: +48 71 307 07 55

shinewaytech Optical reflectometer for single-mode cables PalmOTDR P31C 38/37/37dB 1310/1550/1625nm with PPM, PON ADVANCED

2 473400 000006 >

link to the product:
https://intersell.pl/gb/967-shinewaytech-optical-reflectometer-for-single-mode-cables-palmotdr-p31c-38-37-37db-1310-1550-1625nm-with-ppm-mon-advanced-2473400000006.html

Manufacturer: ShinewayTech

Referention number: PalmOTDR-P31C-SI

Full product description

PalmOTDR P31C-SI Reflectometer

After purchasing the reflectometer, you can (on request) benefit from free training in our training center or two days of paid training including welding and measurement knowledge.

PalmOTDR optical reflectometers are specialized devices for locating events and fiber optic damage, as well as for printing measurement reports and certification of fiber optic routes. The reflectors in this series offer all standard wavelengths: 850/1300/1310/1490/1550/1625/1650nm (in configuration - one, two or three selected lengths in one device) and different dynamic ranges so that the device can be adapted to any requirement. For example, for normal P2P connections in modern single-mode networks, measurement in windows 1310 and 1550nm will be ideal, multimode cable networks will be measured in windows 850 and 1300nm, verification in the construction phase in passive fiber networks e.g. FTTH in addition to the 1490nm window and solving fiber optic problems in live PON and measurement for large telecoms such as Orange, Netia in their passive networks in the 1625nm window with filter (1650nm in Poland not yet used).

All reflectometers have a menu and full manual in Polish.

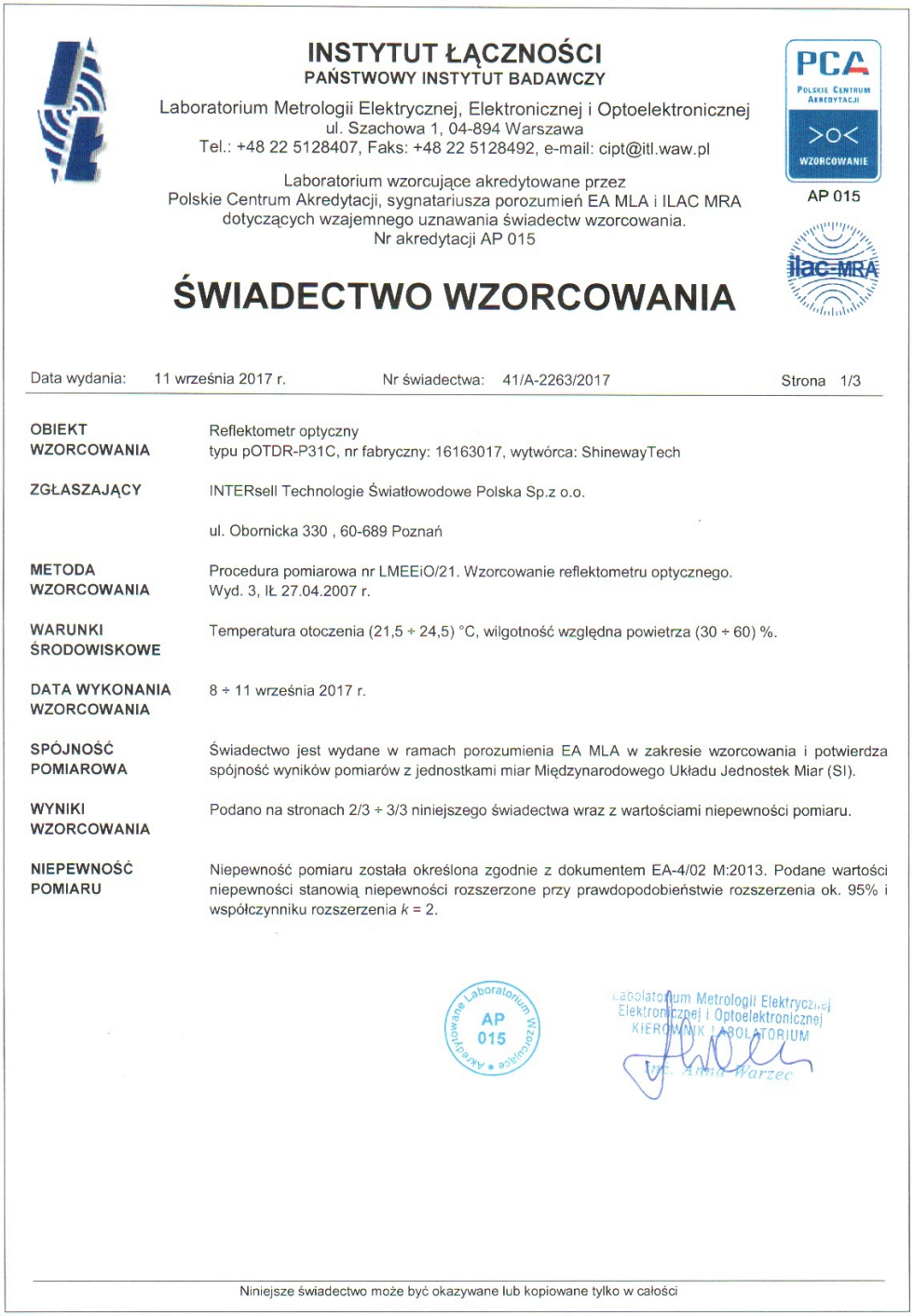
PalmOTDR is available in two versions: BASIC and ADVANCED (with additional modules). Version information can be found in the product name and specification table.

- BASIC version - this is only a reflectometer that allows for reflexometric measurements with parameters depending on the model.
- ADVANCED version (VPSI) - the device can be additionally equipped with modules that extend the possibilities of analysis and measurement - built-in OPM optical power meter, visible VFL damage locator, stabilized SLS light source and inspection camera (using appropriate caps/adapters). A full description of these modules can be found below

Each device is accompanied by a calibration certificate (valid for 2 years, another calibration free of charge).

PalmOTDR reflectometers are devices with proven accuracy, so they can work even for the most demanding telecommunications. They are widely used on our market by subcontractors working for e.g. ORANGE, NETIA, INEA, TOYA, etc.

The following certificate concerns the calibration of the PalmOTDR-P31C device, which was carried out at the Polish Institute of Communications. We don't do calibration for every device we sell. Pil calibration should be done for each device on its own. Calibration is not necessary, each reflect meter sold has a calibration certificate issued by the manufacturer.



INSTYTUT ŁĄCZNOŚCI
PAŃSTWOWY INSTYTUT BADAWCZY

Laboratorium Metrologii Elektrycznej, Elektronicznej i Optoelektronicznej
ul. Szachowa 1, 04-894 Warszawa
Tel.: +48 22 5128407, Faks: +48 22 5128492, e-mail: cipt@itl.waw.pl

Laboratorium wzorcujące akredytowane przez
Polskie Centrum Akredytacji, sygnatariusza porozumień EA MLA i ILAC MRA
dotyczących wzajemnego uznawania świadectw wzorcowania.
Nr akredytacji AP 015

AP 015

ŚWIADECTWO WZORCOWANIA

Data wydania: 11 września 2017 r. Nr świadectwa: 41/A-2263/2017 Strona 1/3

OBIEKT WZORCOWANIA	Reflektometr optyczny typu pOTDR-P31C, nr fabryczny: 16163017, wytwórca: ShinewayTech
ZGŁASZAJĄCY	INTERsell Technologie Światłowodowe Polska Sp.z o.o. ul. Obornicka 330 , 60-689 Poznań
METODA WZORCOWANIA	Procedura pomiarowa nr LMEEiO/21. Wzorcowanie reflektometru optycznego. Wyd. 3, IŁ 27.04.2007 r.
WARUNKI ŚRODOWISKOWE	Temperatura otoczenia (21,5 ÷ 24,5) °C, wilgotność względna powietrza (30 ÷ 60) %.
DATA WYKONANIA WZORCOWANIA	8 ÷ 11 września 2017 r.
SPÓJNOŚĆ POMIAROWA	Świadectwo jest wydane w ramach porozumienia EA MLA w zakresie wzorcowania i potwierdza spójność wyników pomiarów z jednostkami miar Międzynarodowego Układu Jednostek Miar (SI).
WYNIKI WZORCOWANIA	Podano na stronach 2/3 ÷ 3/3 niniejszego świadectwa wraz z wartościami niepewności pomiaru.
NIEPEWNOŚĆ POMIARU	Niepewność pomiaru została określona zgodnie z dokumentem EA-4/02 M:2013. Podane wartości niepewności stanowią niepewności rozszerzone przy prawdopodobieństwie rozszerzenia ok. 95% i współczynniku rozszerzenia $k = 2$.

AP 015

Laboratorium Metrologii Elektrycznej Elektronicznej i Optoelektronicznej
KIEROWNIK LABORATORIUM
mgr Anna Warzec

Niniejsze świadectwo może być okazywane lub kopiowane tylko w całości

The certificate and the results of calibration can be found in the "Downloads".

Features:

- Versatile application, ideal for LAN/WAN/FTTx certification and troubleshooting,
- Measurement in sm single mode networks: 1310/1490/1550, 1625/1650 nm (with filter), up to 50dB,
- Measurement in multimode MM networks: 850/1300nm, 21/24dB,
- Fault detection, fiber length/loss measurement, connector/weld/splitter/macro bend/end-of-fibre detection,
- Built-in PON power meter for triple-play live measurement (real-time three-threaded testing),
- ADVANCED version: stabilized light source, SM/MM power meter and VFL damage locator (optional),
- Testing active fibres in FTTx/testing by splitter (1625/1650nm with filter),
- Identifying the splitter and the end of the fibre,
- Automatic/manual testing (2 point, 5 point)/averaging/real-time,
- Pass/fail estimation and ORL test,
- Quick start (less than 5 seconds),
- Great user interface,
- Handy and lightweight (1kg),
- Keyboard shortcuts: push-and-test
- Memory: up to 1000 results,
- Bellcore close-up format (.sor),
- PC software for measuring data processing and reporting,
- USB data interface (driver-free),

- Multiple languages: PL/EN/DE/IT/FR/ES/PT/RU/KR/VN/CN, etc.,
- 8 hours of working time / 20 hours of standby time,
- Shock resistance (fall test from 2m),
- CE, FCC, FDA certifications.

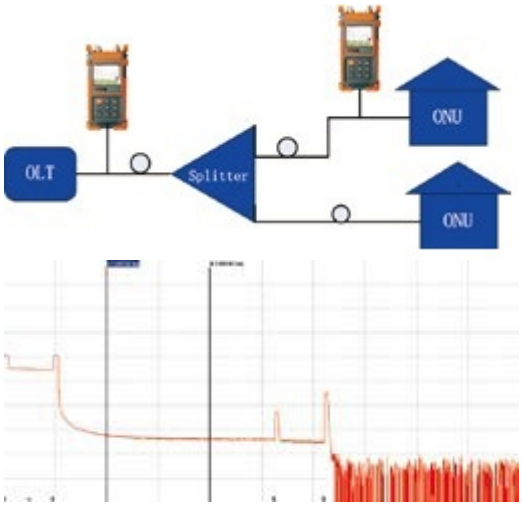
Product specification

Technical parameters	
Device model	palmOTDR-P31C-SI (ADVANCED)
Wavelength (± 20) [nm]	1310/1550/1625 (1625nm can be converted to 1650nm)
Dynamic range [dB] (1)	38/37/37
EDZ [m] (2)	0.8
ADZ [m] (2)	4.5
Range (selectable) [km]	0.1, 0.3, 0.5, 1.3, 2.5, 5, 10 @850nm 0.1, 0.3, 0.5, 1.3, 2.5, 5, 10, 20, 40, 80 @1300nm 0.3, 1.3, 2.5, 5, 10, 20, 40, 80, 120, 160, 240 @inne
Pulse width	10ns, 30ns, 100ns, 300ns, 1µs @850nm 10ns, 30ns, 100ns, 300ns, 1µs, 2.5µs @1300nm 5ns, 10ns, 30ns, 100ns, 300ns, 1µs, 2.5µs, 10µs, 20µs @inne
Averaging time	Fast, 15s, 30s, 1min, 2min, 3min
Distance measurement accuracy	± (1m + 5x10^-5 x distance + sampling space)
Damping detection accuracy [dB/dB]	± 0.05
Reflection Detection Accuracy [dB]	± 4
Connector	SM: SC/APC
General parameters	
Dimensions (width x length x height) [mm]	110 x 70 x 220 (4.3 x 2.7 x 8.7 inches)
Weight [kg]	1 (2.2 lbs)
Power	Adapter AC NiMH Battery
Battery life [h]	8 (continuous operation) 20 (standby)
Charging time [h]	Less than 4
Connectivity	Usb
Memory	1000 results
Working conditions	Ambient temperature: -20 to 50 [°C] Relative humidity: 0 to 95 [%] (no condensation)
Storage conditions	Ambient temperature: -40 to 70 [°C] Relative humidity: 0 to 95 [%] (no condensation)

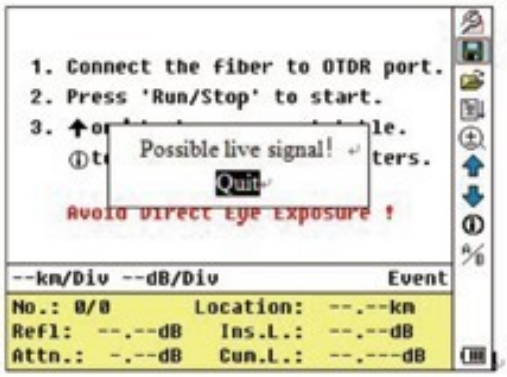
Notes to specifications:
The specification describes the guaranteed performance of the instrument, measured with typical PC connectors. Uncertainties resulting from the refection factor of the fibre are not taken into account.
(1) Measured at max. pulse and averaging time of 3 minutes.
(2) Dead zone measurement conditions: reflections. was 0.6 km, then the day before. reflections. was <-45dB, the EDZ is measured with a pulse width of 10ns; The ADZ is measured with a pulse width of 10ns.

The PalmOTDR series offers

- **PON power meter** - its presence depends on the model. The integrated PON power meter can actively test all PON signals (1310/1490/1550nm) anywhere on the network. We can attach it both between splitters, from the OLT side or at the ONU (ONT) itself. On some models (e.g. P11C and P31C), the built-in PON optical power meter offers measurements in 1310/1490/1550nm windows depending on the ONU or OLT port we use.
- **Modern algorithms** - thanks to the use of state-of-the-art algorithms, even an operator with a small knowledge resource will be able to correctly interpret events occurring in the fiber using the optional OTDR LinkImage software.
- Testing the active fiber anywhere on **the FTTH network (1625nm with filter) and through a splitter (with spliter and end-of-fiber identification)** - a technology ideal for a working FTTH PON network (e.g. GPON, EPON, GEPON), does not require us to disconnect the entire network segment if we need to measure e.g. at a new subscriber.

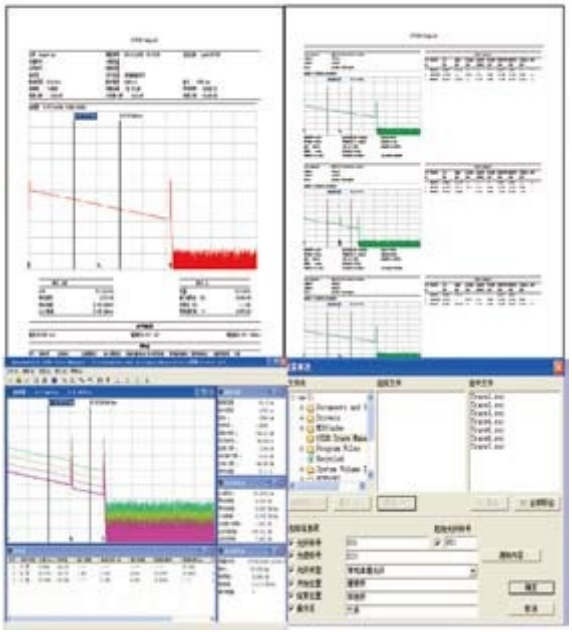


- **Optical signal control (real-time)** - During the 1310/1490/1550nm wavelength test, the signals transmitted in the tested fibre can not only affect otdr measurement, but also damage networked equipment (SDH/WDM/PON) and OTDR receiver. The palmOTDR series avoids this problem by starting with a pre-test operational communication test (with warning message option and auto-termination functions, in order to actually protect the measuring instrument and communication devices).

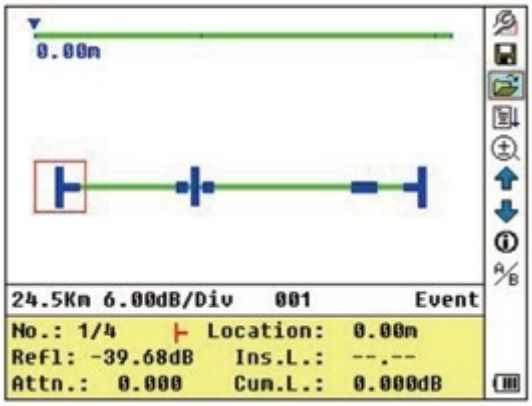


- **Optimized interface design - graphical** user interface (high-resolution color).

- **TraceManager** software - it allows you to view a trace, analyze events, edit and flexibly print, compare multiple tracks, optional two-way testing, CSV/ASCII report formats.



- **OTDR LinkImage software** - allows you to image the fiber.



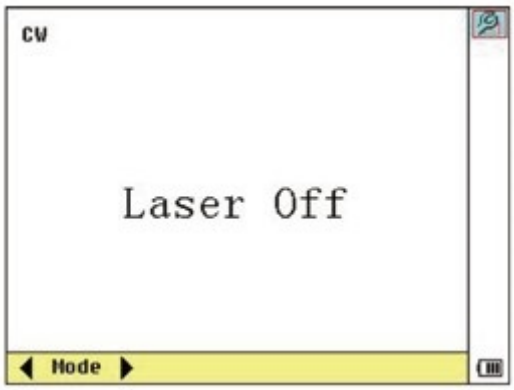
PalmOTDR Modules

The VFL module, stabilized light source (SLS) and optical power meter are standard on -VPSI models. The PON power meter module is standard on the P11C and P31C models.

- **Damage Locator Module (VFL)**

Module specification	
Wavelength (±20) [nm]	650
Output power [dBm]	to -7
Maximum measuring range [km]	5

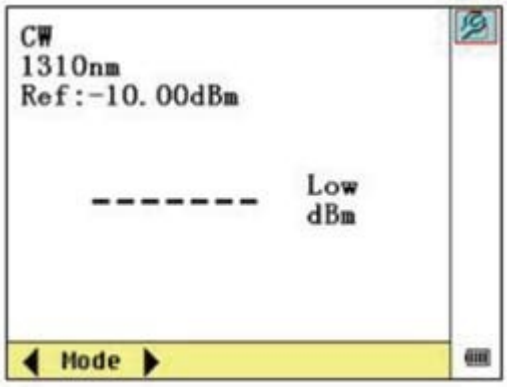
- **Stabilized Light Source Module (SLS)** - splits the optical port with palmOTDR and operates at the same working wavelength as palmOTDR



Module specification	
Wavelength (±20) [nm]	Same as OTDR working wavelength

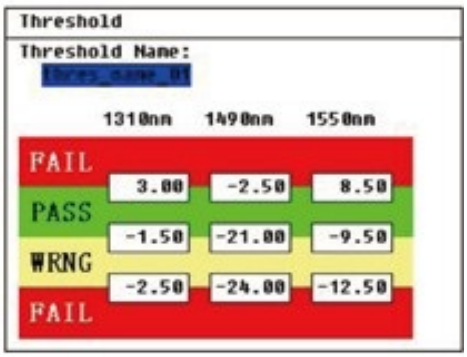
Output power [dBm]	to -7

- **Optical Power Meter Module (OPM)** - does not overheat, offers highly accurate measurement of absolute power value and power loss with zero offset option and reference settings, as well as power monitoring, setting the upper and lower limit



Module specification	
Calibrated wavelength (±20) [nm]	850, 1300, 1310, 1490, 1550, 162
Power range [dBm]	-70 to +6 (-60 to +6 @850nm)
Detector type	InGaAs
Display Resolution [dB]	0.01
Accuracy	±5% ±0.01nW (±0.5dB @850nm)
MOD Identification [kHz]	1, 2

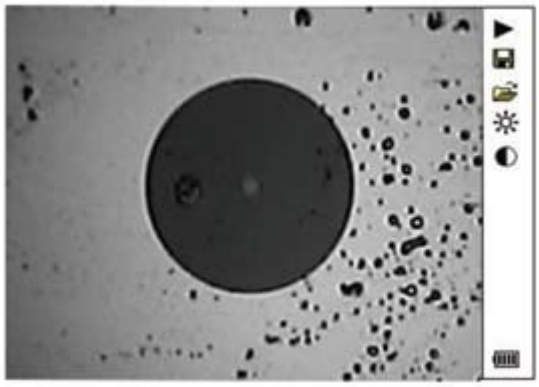
- **PON Power Meter Module (PON OPM)** - Integrating a PON power meter into a unit as small as palmOTDR improves productivity and makes certification and problem solving in FTTX an exciting experience. The PON power meter module can perform an active test of all PON signals (1310/1490/1550nm) at any point in the network, including pass-through, burst mode and Pass/Warning/Fail estimation functions. This helps to assess the quality of the transmission of PON signals.



Module specification	
Calibrated wavelength (±20) [nm]	1310, 1490, 1550
Measuring range [dBm]	For 1310: -40 to +8 (Burst mode: -30 to +8) For 1490: -40 to +8 For 1550: -40 to +20
Spectral throughput [nm]	1310±40 (@1310), 1490±10 (@1490), 1550±10 (@1550)
Power uncertainty [dB]	Up to 0.5
Display Resolution [dB]	0.01
Losses of intrusive losses [dB]	Up to 1.5
Threshold	60 user-defined threshold settings

Memory	1200 results

- **Optical Connector Inspector Module (MCI100)** - has fast focus knob, eye-safe and clear video, interchangeable connector tips (male and female, PC and APC, 1.25mm and 2.5mm, etc.)



Module specification	
Zoom	250X
Resolution [µm]	0.75
Focus	Manually adjustable
Standard adapters	25-U-M: FC/SC/ST/E2000 UPC male 125-U-M: LC/MU UPC male 25-U-F: FC/SC/ST/E2000 UPC female LC-U-F: LC UPC female
Optional adapters	125-A-M: LC/MU APC male 25-A-M: FC/SC/ST/E2000 APC male SC-A-F: SC APC female FC-A-F: FC APC female LC-A-F: LC APC female
Dimensions [mm]	165 x 38 x 35
Weight [g]	150

The contents of the set

Standard equipment

- Welder,
- Device
- FC/PC connector,
- NiMH battery,
- TraceManager Software (CD),
- USB cable,
- AC adapter,
- Case (cover),
- Warranty card,
- Calibration certificate,
- Quick Start Guide.
- LM100 function: LinkImage software.

Optional

- For ADVANCED version (palmOTDR-XXXX-VPSI): VFL module, optical power meter, stabilized light source and optical connector inspector module for palmOTDR,
- LM100 function: LinkImage software.