PROLITE - 45

QUICK REFERENCE GUIDE

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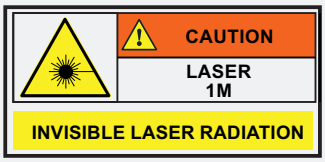
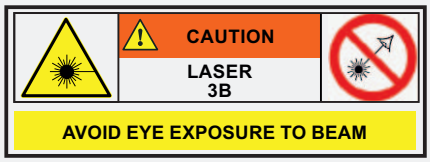
SAFETY RULES

* Safety is not guaranteed if the operating instructions are not strictly followed.
* This is a class I equipment, for safety connect it to a power supply with an earth terminal.
* Observe all specified supply and measurement ratings.
* Remember that voltages above 70 V DC or 33 V AC rms are dangerous.
* Use this instrument under the specified environmental conditions.
* Make sure that the laser source is switched off when cleaning any optical connectors.
* When the equipment is in operation, always avoid looking directly into the optical output. Although laser radiationis invisible, it can cause serious damage to eyesight.
* Any other changes to the equipment must be carried out by qualified personnel.





FRONT VIEW

1. 5" touch screen
2. Laser Indicator
3. Home Key
4. Start / Stop
5. Escape Key
6. Power ON/OFF key & Battery Charging Indicator

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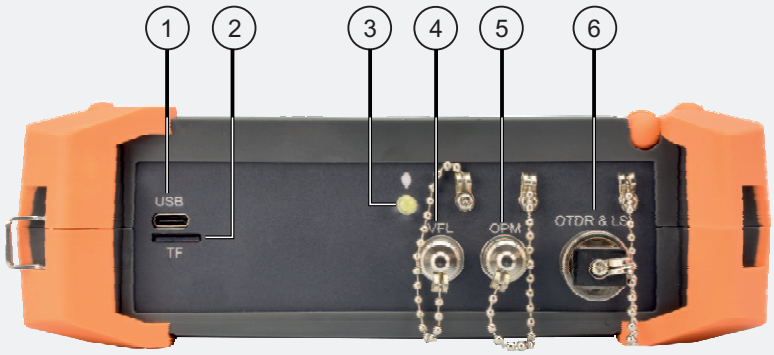
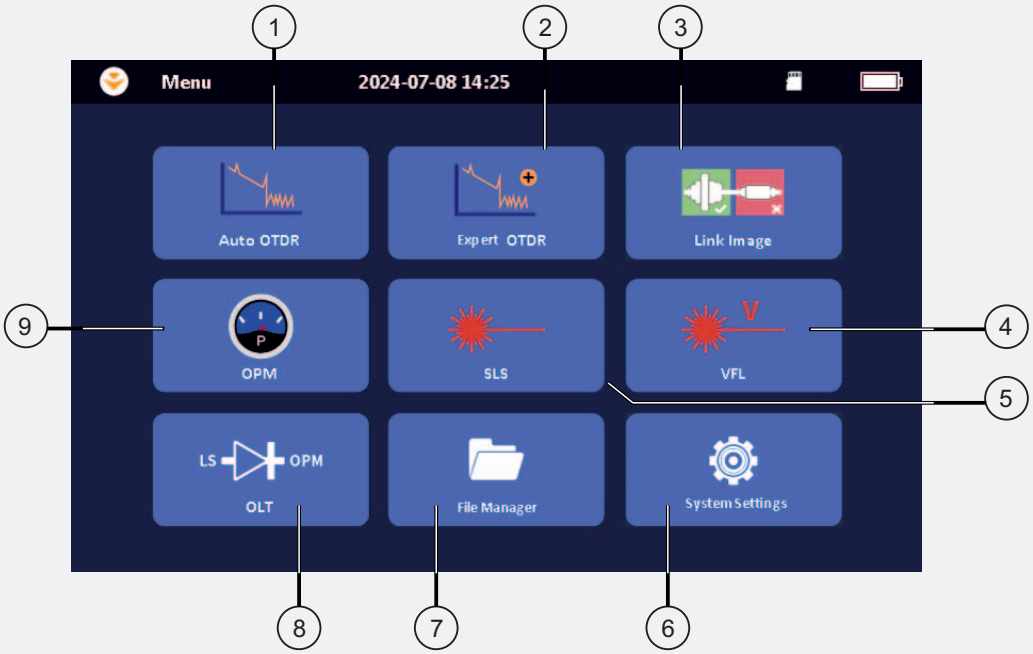
TOP VIEW



1. USB Type-C port for data transfer/charging
2. MicroSD Card
3. Flashlight
4. VFL Port
5. Optical Power Meter
6. OTDR and Laser Source Port

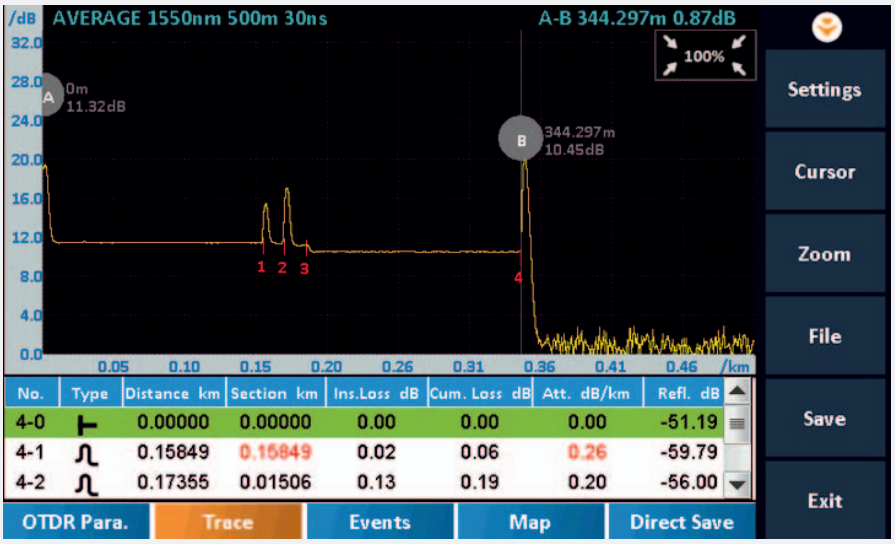
MAIN MENU



1. Auto OTDR
2. Expert OTDR
3. Link Image
4. Visual Fault Locator (VFL)
5. Stabilised Laser Source (SLS)
6. System Settings
7. File Manager
8. Optical Loss Test (OLT)
9. Optical Power Meter (OPM)

AUTO OTDR

The Auto OTDR function simplifies fiber optic measurement tests. With a single click, it activates an automated process that optimally configures the test parameters. The device comprehensively analyzes link events, including reflections, splices, and loss points. Using a Pass / Fail evaluation based on user-defined criteria, the Auto OTDR function efficiently guides users, even those without prior OTDR experience.

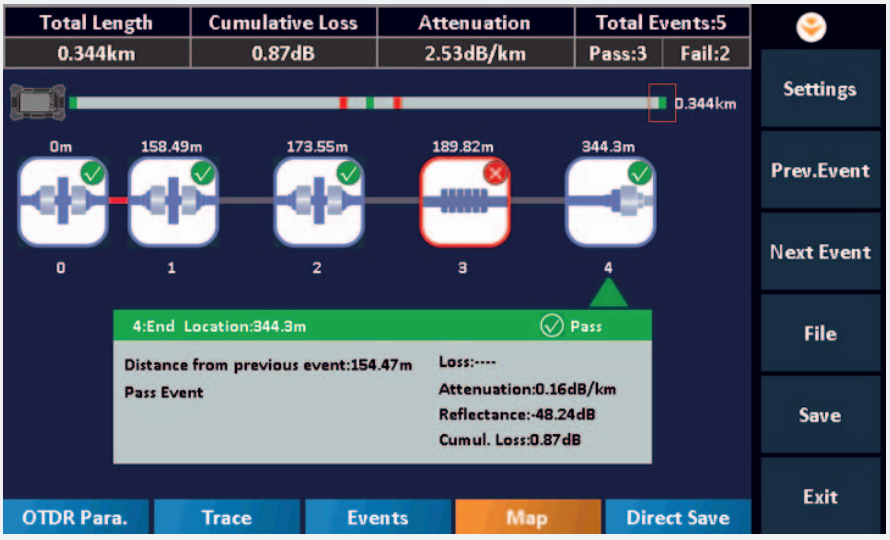


EXPERT OTDR

Expert OTDR mode allows users to configure various test parameters with greater precision for more optimal test results. The key is to have a general understanding of the state of the fiber optic cable to be evaluated before fine-tuning the parameters. In Expert OTDR mode, it is essential to configure the parameters according to the specific requirements of the test, as a correct configuration is essential to achieve accurate fiber optic measurements.

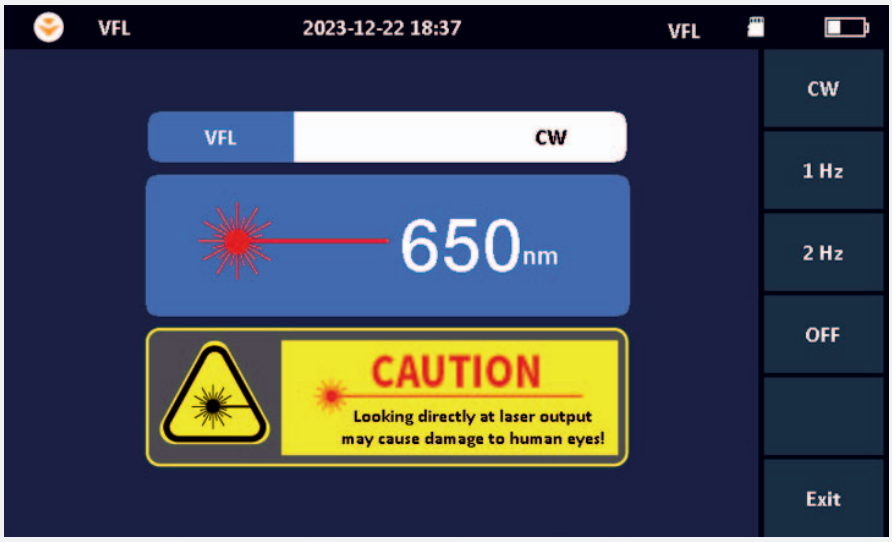
LINK IMAGE

The "Link Image" function is a graphical representation of each event in the fiber optic link. It can display each event with a Pass/Fail analysis, providing a direct visualization of all test results. The test result shows detailed information about each event and the entire fiber link. Each event has a Pass/Fail evaluation.



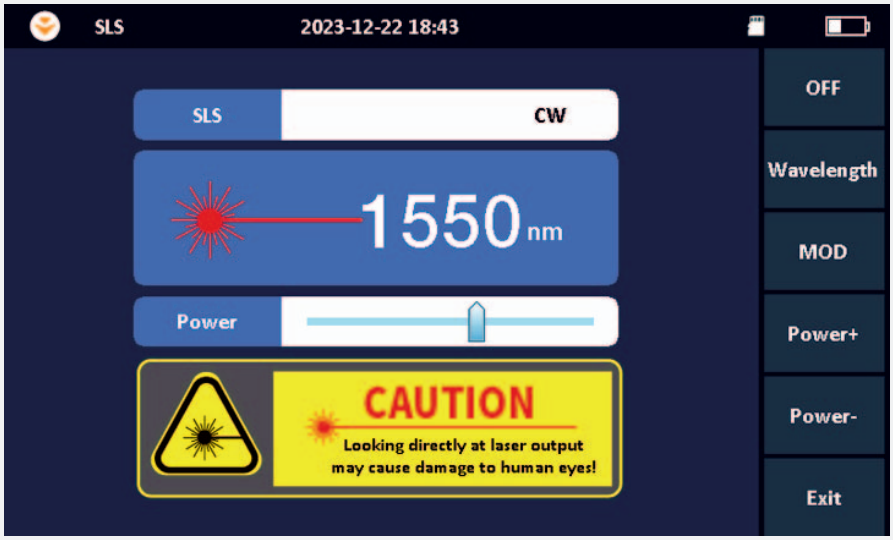
VISUAL FAULT LOCATOR (VFL)

The Visual Fault Locator (VFL) is an indispensable tool for fiber optic technicians, allowing for the quick and precise identification of faults in cables. It works by emitting a visible red light (650nm) that travels through the fiber, revealing any problems along its path. It locates excessive bends, breaks, or damage to the fiber. The propagation of both continuous and intermittent red light detects anomalies, indicating their exact location. It is very useful for conducting end-to-end continuity tests and verifying if there are any interruptions in the cable, ensuring optimal data transmission.



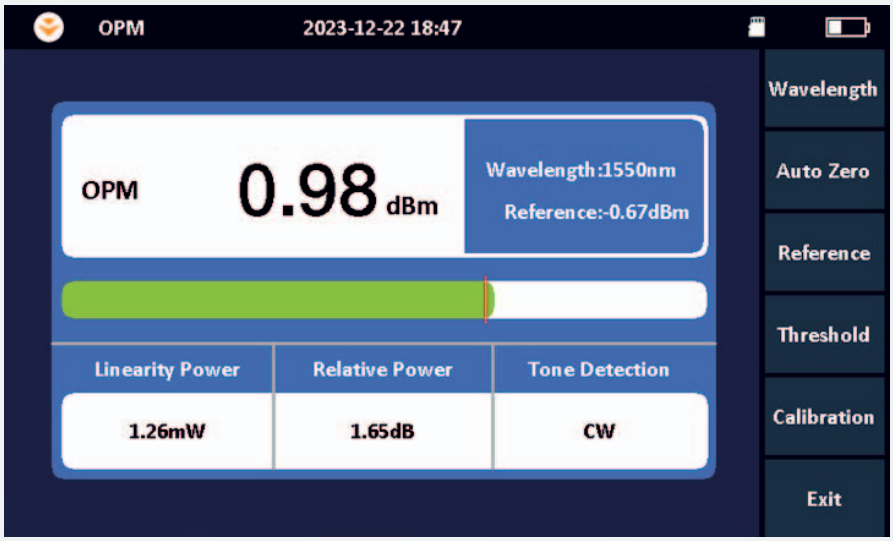
STABILIZED LASER SOURCE

The stabilized laser source is the perfect complement for fiber optic testing. It is an indispensable accessory for OTDR equipment as it shares the optical port and operates at the same working wavelengths (1310 / 1550nm). The output power is adjustable and the light modulated at 270 Hz / 330 Hz / 1 kHz / 2 kHz facilitates fiber identification.



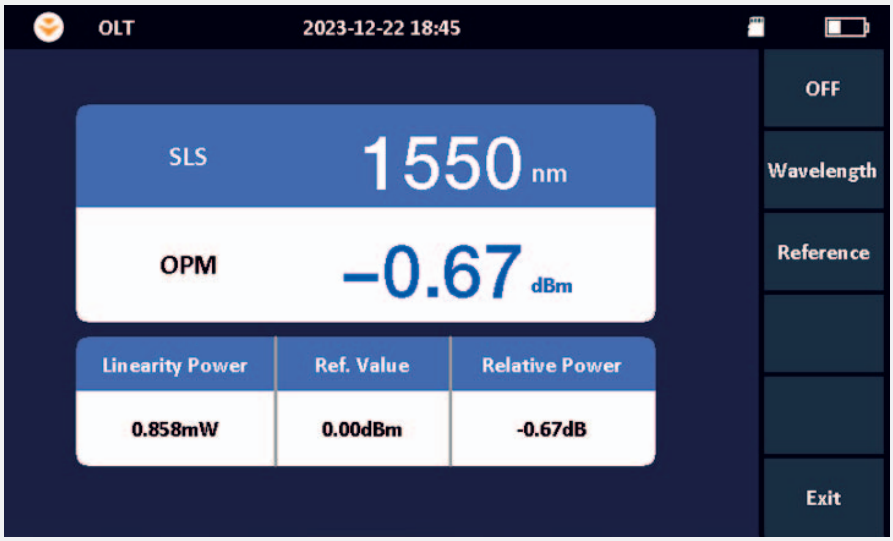
OPTICAL POWER METER

This function is used to measure the output power of the power meter, allowing for correction of the instrument's power value in daily tests. Ensure the protective cap is placed on the optical power test output and verify the connection is completely airtight. The meter is compatible with seven wavelengths: 850, 1300, 1310, 1490, 1550, 1625, and 1650 nm."



OPTICAL LOSS TEST (OLT)

The "Link Image" function is a graphical representation of each event in the fiber optic link. It can display each event with a Pass/Fail analysis, providing a direct visualization of all test results. The test result shows detailed information about each event and the entire fiber link. Each event has a Pass/Fail evaluation.



FILE MANAGER

The file manager is an indispensable tool for organizing and managing the files stored in the PROLITE-45. The user can save, open, rename, or delete images or acquisition traces using this function.

OTDR TRACE SOFTWARE

The Trace Manager software can be used interchangeably by inserting the microSD card into a computer or by using it directly through a USB cable connected to the computer. The PROLITE-45 software allows users to display, analyze, and edit trace files, generate and print comprehensive test and analysis reports in various formats.

- Trace Visualization.
- Batch editing and printing.

The figure shows a graphical representation of the fiber optic cable length, confirming a measurement of 36 meters.

DESCRIPTION EVENTS TYPES

TYPE	DESCRIPTION
	OTDR Port: Represented at the beginning of the trace, symbolizes the connection point between the equipment and the fiber optic cable. It is typically equipped with an SC/UPC connector, a standard type of connector for these tests. This port emits short-duration laser pulses that travel through the fiber optic cable.
	Reflection event: Represented by higher peaks or markers on the trace, occur when the light signal emitted by the OTDR encounters an abrupt change in the fiber's refractive index. This can be caused by splices, connectors, or fiber defects such as breaks, microbends, or other fiber imperfections.
	Non-Reflection event: Represented by gradual changes or steps in the trace, these occur when the light signal experiences a gradual loss of power as it travels through the fiber. This can be caused by absorption, where the light is absorbed by the fiber material, scattering, where the light is scattered in different directions within the fiber, or diffusion, where the light is scattered irregularly within the fiber. The amount of loss, reflected in the slope of the step, is measured in decibels (dB) and is associated with the event's length.
	End of optic fiber link: Represented by the end of the trace, indicates the point where the light signal can no longer propagate. This can be caused by the physical end of the fiber or by an interruption such as a break or a poor connector.

SPECIFICATIONS

SCREEN	5 inch capacitive touch screen for easily operation and quick response
PULSE WIDTH **Single mode fibre**	3 ns ~ 20 µs
WAVELENGTH	1310 / 1550 nm
DYNAMIC RANGE	24 / 22 dB
DEAD ZONE **EDZ (event)** **ADZ (attenuation)** **Distance** **Average time**	1.5 m 8 m 500 m, 1, 2, 4, 8, 16, 32, 64, 100 km 5 s, 15 s, 30 s, 1 min, 2 min, 3 min
ACCURACY **Distance measurement**	± (1 m x 5x10^{-5} x Dist. + sample space)
CONNECTOR TYPE	SC / APC Interchangeable SC, ST
VISUAL FAULT LOCATOR (VFL) **Wavelength** **Output power** **Modulation** **Connector**	 650 nm ⩾ 10 mW CW / 1 Hz / 2 Hz Universal
OPTICAL POWER METER **Calibrated wavelengths** **Power rangeDetectro Type** **Connector**	 850, 1300, 1310, 1490, 1550, 1625, 1650 nm -50 ~ + 26 dBm InGaAs Universal
CONNECTIVITY (Data Interface)	Type C USB Port (Charge Port and PC data transfer)
POWER SUPPLY **Battery** **Power adaptor** **Battery operation time**	 Li-Ion 3,7 V, 6.600 mAh 5 V DC, 2 A (included) 8 hours of continuous operation, 20 hours standby
OPERATING ENVIRONMENTAL CONDITIONS **Operating temperature** **Storage temperature** **Humedad Relativa**	 De -10ºC ~ 50ºC De -40ºC ~ 70ºC De 0 ~ 95% (Non-condensing environment)
MECHANICAL FEATURES **Dimensions** **Peso**	 190 (W.) x 130 (H.) x 65 (D.) mm 0.7 kg (battery included)

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