

## SKYSHL SS322T-4MB3

# SKYSHL SS322T-4MB3 OTDR Fiber Tester User Manual

Model: SS322T-4MB3 | Brand: SKYSHL

## 1. INTRODUCTION

### 1.1. Overview

The SKYSHL SS322T-4MB3 is a versatile Optical Time Domain Reflectometer (OTDR) designed for comprehensive fiber optic network testing. This device integrates multiple functions including OTDR, Optical Power Meter (OPM), Optical Light Source (OLS), and Visual Fault Locator (VFL). It supports both single-mode (SM) and multimode (MM) fiber testing across various wavelengths and dynamic ranges, making it suitable for identifying and analyzing fiber link events, losses, and faults.

### 1.2. What's in the Box

Upon unpacking, please verify that all items listed below are present and in good condition:

- 1\*SS322T-4MB3 SM & MM OTDR Fiber Tester
- 2\*SM FC-FC fiber optic patch cables
- 2\*MM FC-FC fiber optic patch cables
- FC+SC+LC+ST connectors
- FC-SC, FC-ST, FC-FC, FC-LC flange
- USB cable
- Power adapter
- USB disk
- User Manual
- Carrying bag
- Cleaning swabs



Figure 1: SKYSHL SS322T-4MB3 OTDR Fiber Tester and included accessories.



Figure 2: Detailed package list for the SS322T-4MB3 SM+MM Fiber OTDR.

### 1.3. Product Overview Video

Watch this video for a 360-degree overview of the SKYSHL SS322T OTDR.

Video 1: SKYSHL SS322T OTDR 360 demo video.

## 2. SAFETY INFORMATION

Please read and understand all safety precautions before operating the device. Failure to comply with these warnings may result in injury or damage to the equipment.

- **Laser Radiation:** This product emits invisible laser radiation. Avoid direct exposure to the laser beam. Never look directly into optical connectors or fiber ends when the device is active.
- **Eye Protection:** Always wear appropriate laser safety glasses when working with fiber optic equipment.
- **Power Supply:** Use only the power adapter supplied with the device. Using an incorrect adapter may damage the unit and void the warranty.
- **Battery Safety:** The device contains a Lithium Metal battery. Do not disassemble, crush, or expose the battery to extreme temperatures or fire. Dispose of batteries according to local regulations.
- **Environment:** Operate the device in a clean, dry environment. Avoid exposure to dust, moisture, and extreme temperatures.
- **Cleaning:** Use only approved cleaning methods and materials for optical connectors to prevent damage and ensure accurate measurements.

## 3. PRODUCT FEATURES

The SKYSHL SS322T-4MB3 OTDR Fiber Tester offers a robust set of features for comprehensive fiber optic analysis:

- **Multi-Wavelength and Dynamic Range:** Supports MM (850nm+1300nm) and SM (1310nm+1550nm) wavelengths with dynamic ranges of MM (27dB+31dB) and SM (33dB+31dB), enabling testing up to 120km for single-mode fibers.
- **Integrated Functions:** Combines OTDR, Visual Fault Locator (VFL-650nm, 2km), Optical Power Meter (OPM-850nm~1650nm/-60~+3dB), and Optical Light Source (OLS-MM(850nm+1300nm)+SM(1310nm+1550nm)) in a single handheld device.
- **Short Event/Attenuation Dead Zones:** Features extremely short event dead zones (SM: 0.5m | MM: 0.7m) and attenuation dead zones (SM: 3.0m | MM: 5.0m) for precise detection of close-range faults.
- **Intelligent and Reliable Operation:** Includes automatic test, planned test, and event mapping functions. Supports smart APP connectivity (Android/IOS/Windows) and PC software for data viewing, sharing, analysis, and saving.
- **Broad Connector Compatibility:** Fully compatible with APC and UPC SC, FC, ST, and LC connectors, meeting diverse testing requirements.



Figure 3: Front view of the SKYSHL SS322T-4MB3 OTDR Fiber Tester.

## OTDR OPM OLS and VFL

SS322T integrates all basic optical fiber test tools, and it more convenient to carry and test

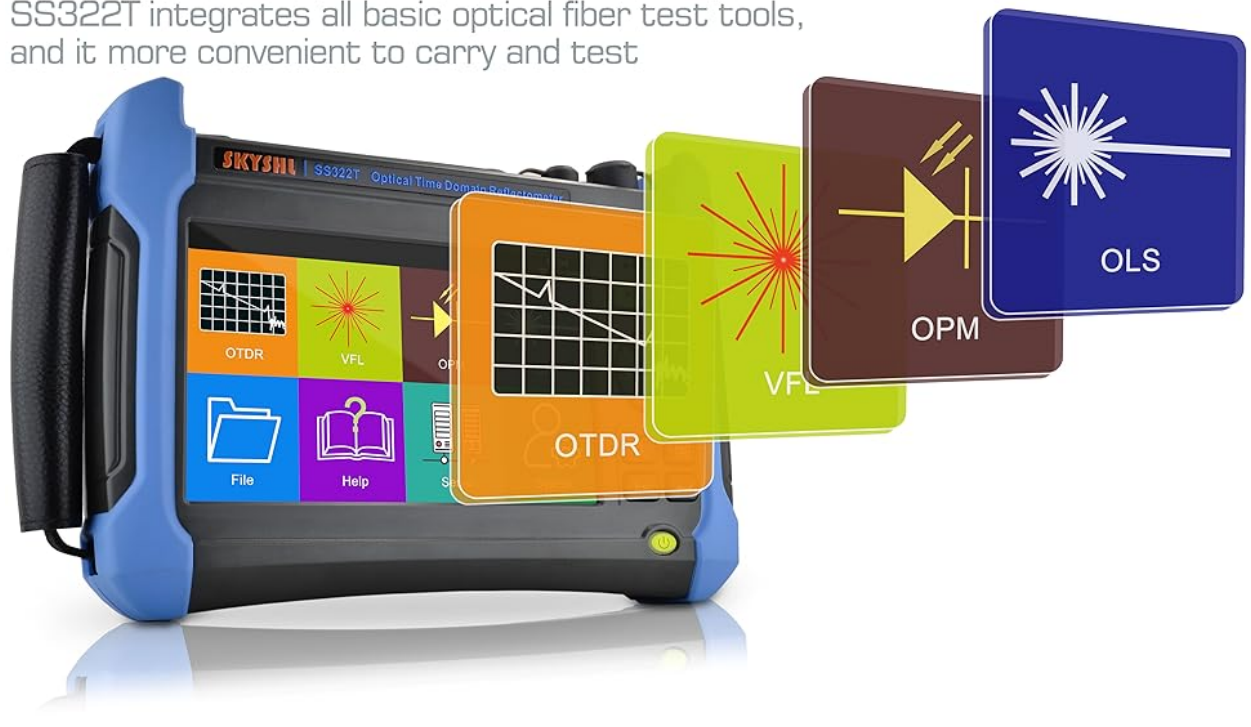


Figure 4: The SS322T integrates OTDR, OPM, OLS, and VFL functions.

## 4. SETUP

### 4.1. Initial Inspection

Before first use, inspect the device for any visible damage. Ensure all accessories are present as per the packing list. Charge the device fully using the provided power adapter.

### 4.2. Powering On/Off

Press and hold the power button located on the front panel to turn the device on or off. The device will display an initialization screen upon startup.

### 4.3. Connecting Fibers

Properly clean all fiber optic connectors before connecting them to the OTDR. Use the appropriate adapter (FC-SC/ST/LC) for your fiber type. Ensure the interface type (UPC/APC) matches your fiber for accurate measurements.

Watch this video for a demonstration on connecting the OTDR with a testing fiber.

Video 2: SKYSHL SS322T OTDR test fiber demo.

## 5. OPERATING INSTRUCTIONS

### 5.1. OTDR Testing

To perform an OTDR test:

1. From the main menu, select the 'OTDR' icon.
2. Navigate to **Setup > Mea. Par.** to configure test parameters.
3. Adjust settings such as Wave (wavelength), Mode (Auto/Manual), Time (measurement duration), Pulse (pulse width), and Range (measurement range).
4. Select 'Average' or 'Real-Time' to start the test. 'Average' provides a more stable trace, while 'Real-Time' shows live updates.

For detailed settings on connection and reflectance loss, refer to the video below:

Video 3: SS322T OTDR Connect and Reflectance Loss Settings.

To adjust analysis thresholds:

Video 4: SS322T OTDR Analyze Threshold Settings.

## 5.2. Optical Power Meter (OPM)

The OPM function measures the optical power of a fiber optic signal. Connect the fiber to the OPM port and select the OPM function from the main menu. The device will display the measured optical power in dBm.

## 5.3. Optical Light Source (OLS)

The OLS function provides a stable light source for fiber testing. Connect the fiber to the OLS port and select the OLS function. You can choose the desired wavelength (e.g., 850nm, 1300nm, 1310nm, 1550nm) and output power.

## 5.4. Visual Fault Locator (VFL)

The VFL function emits a visible red laser light (650nm) into the fiber to quickly locate breaks, bends, or poor connections. Connect the fiber to the VFL port and activate the function. Visible light escaping from the fiber indicates a fault location.

## 5.5. Event Map/Graphics Function

The Event Map/Graphics function simplifies fault analysis by presenting a clear, intuitive graphical representation of events along the fiber link. This mode helps identify splicing points, adapters, fractures, bends, and fiber ends.

## OTDR Test Event Type

Perfectly show various events through the test curve

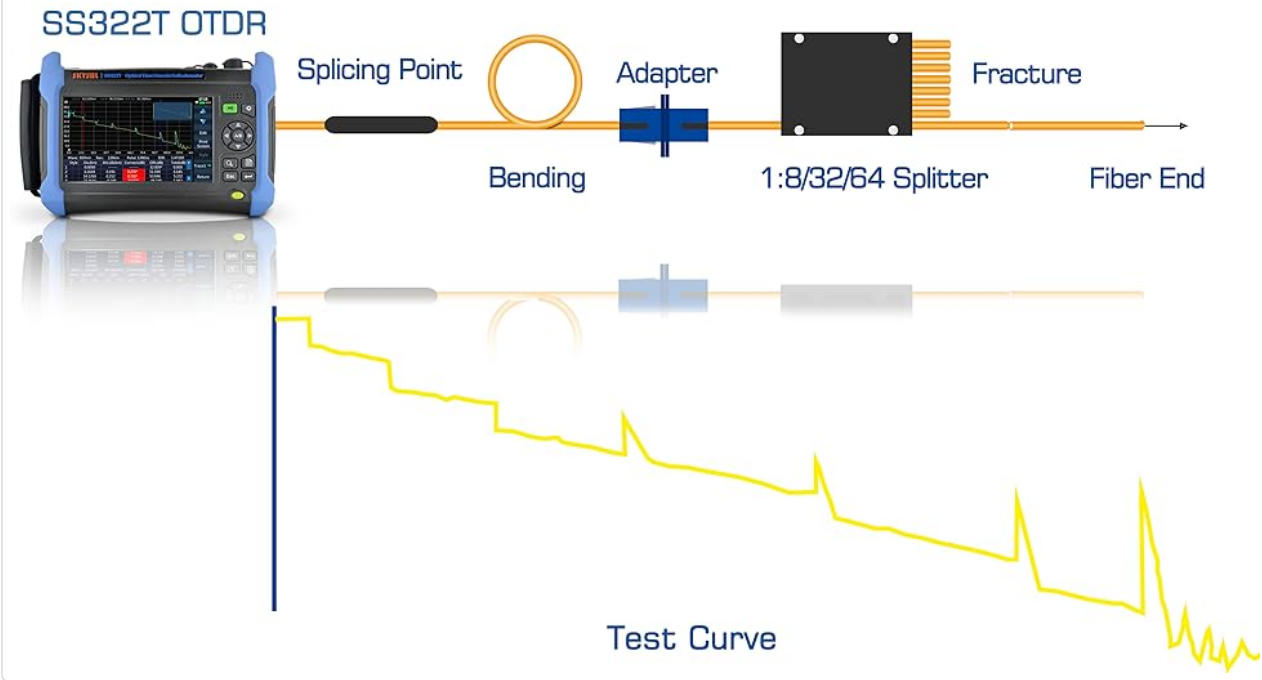


Figure 5: OTDR Test Curve illustrating various event types.

## Event Map/Graphics Analysis Mode

Maximization makes testing simple and perfectly locates and identifies network components and faults



Figure 6: Event Map/Graphics Analysis Mode for simplified fault location.

Learn how to use the event map/graphics function:

Video 5: SKYSHL SS322T OTDR Event Map/Graphics Function.

### 5.6. Data Management

The device allows for saving, loading, and managing test data. You can store results internally or transfer them to external storage.

### 5.6.1. Copying Files

Files can be copied between internal memory, SD card, and USB disk.

Video 6: SKYSHL SS322T OTDR copies files between SD card.

### 5.6.2. Deleting Files

Files can be deleted from the device's storage.

Video 7: SKYSHL SS322T OTDR delete file from OTDR.

### 5.6.3. Importing EI/SOR Curves

The device supports importing EI or SOR test curves from a U-disk for analysis.

Video 8: SKYSHL SS322T OTDR Import EI Sor Test Curve.

### 5.6.4. Creating PDF Reports

Generate professional PDF test reports directly from the device.

Video 9: SKYSHL SS322T OTDR Create PDF test report.

### 5.6.5. Smart APP Connectivity

Connect the SS322T to smart devices (Android/IOS/Windows) and PC via the Smart APP module to view, share, analyze, and save test curves.

## Smart APP Module\*

The SS322T can be connected to Android devices and PC by the APP module and can view, share, analyze, and save test curves on Android devices.



Figure 7: Smart APP Software for Android and Windows connectivity.

## 6. MAINTENANCE

### 6.1. Cleaning Connectors

Regularly clean all optical connectors and adapters using lint-free wipes and optical-grade cleaning solution. Contaminated connectors can lead to inaccurate measurements and damage to the device.

## 6.2. Battery Care

To prolong battery life, avoid fully discharging the battery frequently. Store the device in a cool, dry place when not in use for extended periods, and recharge it periodically.

## 6.3. Storage

When not in use, store the OTDR in its protective carrying case to prevent dust accumulation and physical damage. Keep it away from direct sunlight, high humidity, and extreme temperatures.

# 7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your SS322T-4MB3 OTDR Fiber Tester.

Problem	Possible Cause	Solution
No power/Device won't turn on	Low battery; Faulty power adapter; Device malfunction	Charge the battery; Use the original power adapter; Contact technical support if issue persists.
Inaccurate OTDR measurements	Dirty connectors; Incorrect test parameters; Damaged launch cable	Clean all connectors; Verify test settings (wavelength, pulse, range); Inspect and replace launch cable if damaged.
VFL not working	VFL port blocked; VFL laser damaged	Ensure VFL port is clear; Contact technical support for repair.
Cannot connect to Smart APP	Bluetooth/Wi-Fi disabled; Incorrect app settings; Incompatible device	Enable Bluetooth/Wi-Fi on both devices; Check app connection settings; Ensure your smart device is compatible (Android only for current app).

# 8. SPECIFICATIONS

Feature	Detail
Model Number	SS322T-4MB3
Product Dimensions	9.84 x 7.09 x 2.17 inches
Item Weight	6.82 pounds
Wavelengths (MM)	850nm, 1300nm

Feature	Detail
Wavelengths (SM)	1310nm, 1550nm
Dynamic Range (MM)	27dB (850nm), 31dB (1300nm)
Dynamic Range (SM)	33dB (1310nm), 31dB (1550nm)
Max Test Distance (SM)	Up to 120km
Event Dead Zone (SM)	0.5m
Event Dead Zone (MM)	0.7m
Attenuation Dead Zone (SM)	3.0m
Attenuation Dead Zone (MM)	5.0m
VFL Wavelength	650nm
VFL Range	2km
OPM Wavelength Range	850nm~1650nm
OPM Power Range	-60~+3dB
Battery Type	1 Lithium Metal battery (included)
Manufacturer	SKYSHL

## 9. WARRANTY AND SUPPORT

The SKYSHL SS322T-4MB3 OTDR Fiber Tester comes with a **3-year free replacement warranty** and **lifetime maintenance**. For any technical assistance, please contact our **24-hour professional technical support** team. Our dedicated support staff is available to help you with setup, operation, troubleshooting, and any other inquiries you may have regarding your device.