# Ascentac
# Optical Time Domain Reflectomete
Ascentac OTDR700



## Intelligent and High Integrated Instrument with SmartView Design

Ascentac OTDR700 Series, Optical Time Domain Reflectometer,  is an advanced instrument for troubleshooting, measuring and recording status of fiber-optic networks. The high resolution and narrow event dead-zone enable fiber-optic status in installation, operation and maintenance to be analyzed  comprehensively and precisely. The feature of built-in power meter, light source, loss meter and VFL (optional) makes it a truly multipurpose and ideal instrument for fiber-optic-related measurement.

Ascentac OTDR700 Series utilizes one-touch automatic measurement which can avoid test setup errors and smart view in the linear way which simplifies results interpretation. The distance of each event, total loss, total return loss and Pass/Fail result will be directly indicated. These test results can also be stored and converted to PC for copy and saving as the record for future reference.

Ascentac OTDR700 Series offers on-site technicians the most outstanding performance and incredible experience.

### Benefits

- 5 fiber-optic test functions in one unit (OTDR, Power meter, Light source, Loss meter, VFL)
- Event dead zone less than 1.5m & Attenuation dead zone less than 4.5m
- Up to 256000 sampling points
- Multiple-wavelength for single-mode
- One-button operation
- Automatic Pass/Fail analysis

### Application

- Construction, deployment and maintenance of FTTH
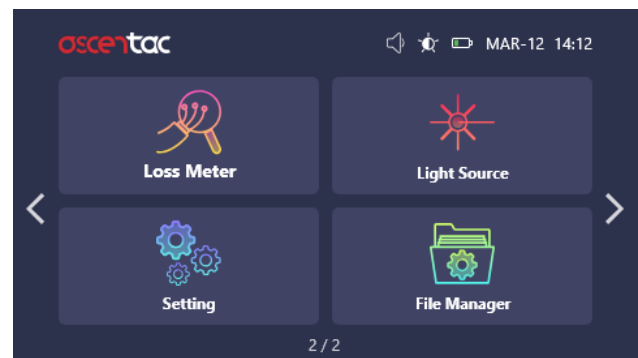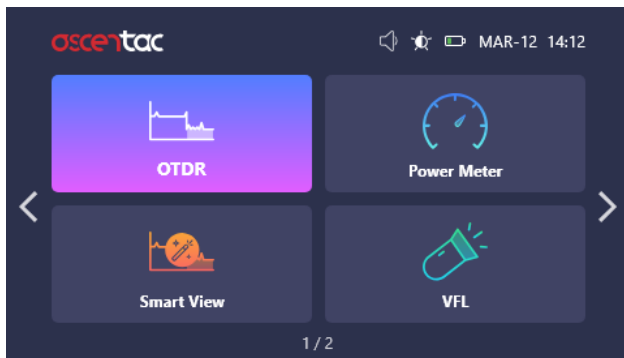- CATV network testing
- Metro network testing

## Description

① Portable & lightweight

② Power status indicator

③ Laser-on indicator

④ One-touch automatic measurement
Intuitive interface for easy use

⑤ Shatter-resistant sleeve & IPx3 (Protected against spraying water)

⑥ Outdoor-enhanced 4.3 inch TFT color touch LCD with backlight function (Comfortable to read display for any abominable environments)
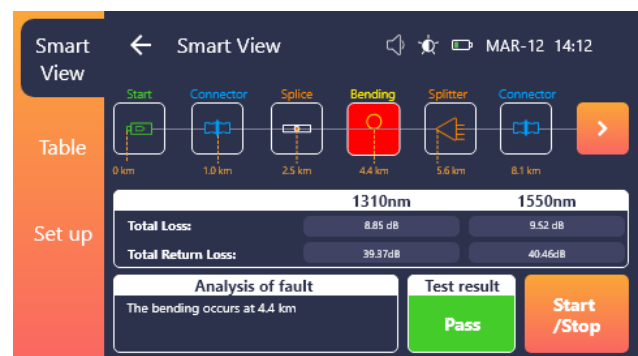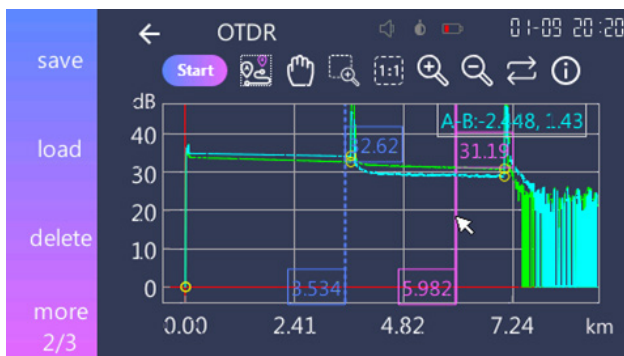


## Multifunction

The OTDR 700 Series is a highly integrated instrument. It combines all essential fiber testers (OTDR, Power meter, Light source, Loss meter, VFL) in one set. The minimum investment makes the maximum value.





## SmartView Design

The OTDR 700 Series not only has the traditional OTDR trace but also makes measured results displayed in icons. Technicians can assess the status of the fiber-optic cable in the easiest and quickest way.

# What is an OTDR?

OTDR, short for optical time domain reflectometer, is designed for testing the performance of newly installed fiber-optic links and detecting problems that may exist.
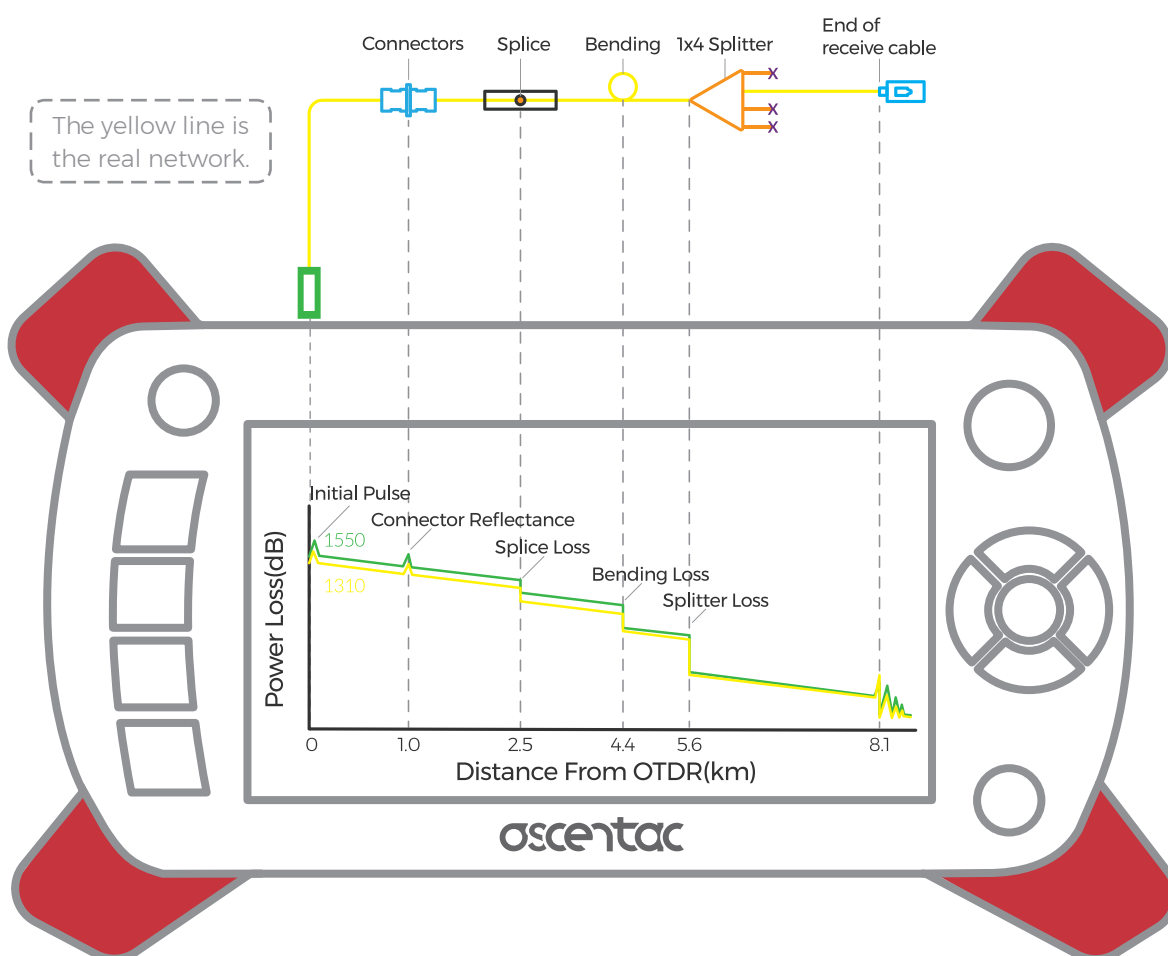
It can calculate the fiber length & attenuation and locate faults. It is an excellent instrument for troubleshooting and fault locating.

# How does an OTDR work?

OTDR will send an optical pulse down the fiber and produce a "trace" (a graph of optical power in dB versus the length of the fiber) based on the return signal to present the measurement of the fiber.

The trace can be stored for reference. Comparisons can be made between the original trace and later trace if problems arise.

# OTDR Trace Based on the Real Network

# Specification

## OTDR Specification

| Wavelength (nm) | 1310 ± 20 | 1550 ± 20 | 1625 ± 5 | 1310 ± 20 & 1550 ± 20 | 1310 ± 20 & 1625 ± 5 | 1550 ± 20 & 1625 ± 5 |
|---|---|---|---|---|---|---|
| Dynamic Range (dB) | 33 | 31 | 31 | 30/28 | 30/28 | 28/28 |
| Pulse Width (ns) | 5 to 20000 | | | | | |
| Event Dead Zone (m) | < 1.5 | | | | | |
| Attenuation Dead Zone (m) | < 4.5 | | | | | |
| Testing Distance (km) | 0.1 to 260 | | | | | |
| Sampling Points (Points) | 256000 | | | | | |
| Distance Accuracy (m) | ± ( 1 + 0.003 % x distance + sampling resolution ) | | | | | |
| Optical Connector | SC/PC | | | | | |

## OPM Specification

| | |
|---|---|
| Power Range (dBm) | +6 to -65 |
| Accuracy (dB) | ± 0.3 |
| Resolution (dB) | 0.01 |
| Wavelength Range (nm) | 1310, 1490, 1550, 1625 |
| Optical Connector | SC/PC |

## OLS Specification

| Central Wavelength (nm) | 1310±20 1550±20 1625±5 | 1310±20 & 1550±20 1310±20 & 1625±5 1550±20 & 1625±5 |
|---|---|---|
| Output Power (dBm) | -4 | -7 |
| Stability (dB) | ± 0.5 | |
| Optical Connector | SC/PC | |

## VFL Specification

| | |
|---|---|
| Wavelength (nm) | 650±10 (Visible) |
| Output Power (mW) | 1 |
| Modulation Output | CW(Continuous Wavelength), 1Hz, 2Hz |
| Optical Connector | Universal 2.5mm |

## Display

4.3 inch ultra-bright TFT color touch LCD with backlight function

## Power Supply

| | |
|---|---|
| DC Input Voltage (V/Amp) | 5.0 / 4.0 |
| Battery Life (hours)(with backlight) | > 6 |

## Environment

| | |
|---|---|
| Working Temperature (°C) | 0 to +50 |
| Storage Temperature (°C) | -20 to +60 |
| Relative Humidity (%) | 5 to 95, Non-condensing |

## Dimensions and Weight

| | |
|---|---|
| Size (H x W x D) (mm) | 124 x 225 x 70.5 |
| Weight (g) (batteries included) | 850 |

## Others

| | |
|---|---|
| Interface | 1. Type-A USB<br>2. Mini USB<br>3. 10/100Mbps Ethernet RJ-45 |
| Ingress Protection | IPx3 |

## Standard Accessories

Main unit, Resistive touch pen, Adaptor cleaning sticks (2.5mm) 10pcs, Fiber cleaner, Carrying case, Shoulder strap, Lithium battery, Power adapter, Power cord, One-year warranty

# Ordering Information

## OTDR 01-007 XX

**OTDR Wavelength & Dynamic Range**
01：1310nm, 33dB
02：1550nm, 31dB
03：1625nm, 31dB
21：1310/1550nm, 30/28dBm
22：1310/1625nm, 30/28dBm
23：1550/1625nm, 28/28dBm

**Note :** 1. OTDR with built-in SC/PC adaptor.
2. Incl. Optical Light Source (OLS), wavelength & optical interface same with OTDR.
3. Incl. Visual Fault Locator (VFL) with output power 1mW and built-in universal 2.5mm tip sleeve.
4. Incl. Optical Power Meter (OPM) with power range from +6dBm to -65dBm and built-in SC/PC adaptor.

| Option | |
|---|---|
| **Battery** | |
| A0-00501 | 4.2V 10000mAh Lithium |
| **Adaptor & Power Cord** | |
| A0-00221 | AC Adaptor |
| A0-00222 | Power Cord with US Plug |
| A0-00223 | Power Cord with EU Plug |
| A0-00224 | Power Cord with UK Plug |
| A0-00225 | Power Cord with AU Plug |
| **Fiber Optic Cable** | |
| A0-00601 | Single Mode 9/125--SC/UPC to SC/UPC--2m |
| A0-00602 | Single Mode 9/125--SC/UPC to LC/UPC--2m |
| A0-00603 | Single Mode 9/125--SC/UPC to ST/UPC--2m |
| A0-00604 | Single Mode 9/125--SC/APC to SC/UPC--2m |
| A0-00605 | Single Mode 9/125--SC/APC to LC/UPC--2m |
| A0-00606 | Single Mode 9/125--SC/APC to SC/APC--2m |
| A0-00607 | Single Mode 9/125--FC/UPC to FC/UPC--2m |
| **Adapter Cleaning Sticks - 100 pcs/box** | |
| 02-0A110 | 1.25mm without ESD (Electro-Static Discharge) |
| 02-0A120 | 2.5mm without ESD (Electro-Static Discharge) |
| 02-0B110 | 1.25mm with ESD (Electro-Static Discharge) |
| 02-0B120 | 2.5mm with ESD (Electro-Static Discharge) |
| **Fiber Cleaner - 400 wipes/pc** | |
| 02-00411 | Reusable Fiber Cleaner--1 slot |
| 02-00412 | Reusable Fiber Cleaner--2 slots |
| 02-00421 | Cartridge--1 slot |
| 02-00422 | Cartridge--2 slots |

Example：OTDR 01-00701
Option: A0-00501, A0-00221, A0-00222, A0-00601