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The founders and team members of TTI have a wealth of experience in the Photonics and Fiber Optics test and measurement industry dating back to the early 1970s when fiber was still in its infancy. After many years of ingenuity and dedication, we founded TTI in 1989 with the purpose of continuing to delight our customers, assist them in finding the best solutions, and keeping abreast of the technologies they deploy. Our roots may be in the Mohawk Valley Fiber Optic Industry of central New York, but our reach is global, and we pride ourselves in being a world class producer.

Our technology and product development experiences include design and marketing the world’s first commercial processor driven Optical Time Domain Reflectometer. Other historic developments include Radiometric Energy and Power Meters, Optical Choppers, Space Probe Mission Sensors, and the industry standard Electrically Calibrated Pyroelectric Radiometer.

Through our experiences the principle engineers at TTI are proud to have amassed over 100 years of combined experience in photonics and fiber optic instrumentation. We also are extremely proud to be one of the few USA developers and manufacturers of OTDRs and high tech photonics equipment, and look forward to maintaining this commitment.

Mike Mazzatti
Mike Mazzatti, President and CEO
Thank You for your Business!

Check out our product list and visit our website to view our latest advanced technologies.
Advanced features in a small package
The FTE-7100 CWDM MICROOTDR is the smallest OTDR of its type on the market today. This micro package can support up to 10 CWDM wavelengths. This full-featured OTDR with color touchscreen includes all the features expected in today’s hand held OTDR and more: bright color touch screen, project management, file storage, Fib-R-Map schematic event analysis, pass/fail threshold settings and onboard context-sensitive Express Help system to keep the learning curve as short as possible.

Easy-to-use
The MICROOTDR is user-friendly and supports portrait or landscape trace viewing. It operates in simple fault finder mode or expert modes.

Powerful and customizable
When equipped with the optional video scope, it is a powerful video inspection system with IEC61300-3-35 auto pass/fail capabilities. Other optional features include a broadband power meter and visual fault locator. The CWDM MICROOTDR is available in 4, 8 or ten wavelengths. Select from our stand wavelength offerings or design the OTDR as needed by ordering custom wavelength configurations.

Real-Time functionality
The OTDR is operated/charged with a standard 5V USB charging system, or use the USB cable to connect the OTDR to a laptop for full real-time operation on Windows®. It can also be operated via Bluetooth with a compatible Android phone or tablet.

Specifications
- Wavelength: 1271-1611nm +/- 3nm
- Dynamic Range: 32 - 34 dB (wavelength dependent)
- Pulse Width: 5 - 20,000 ns
- Units of Measurement: km, ft, kf, mi
- Event Dead zone: 1m
- Attenuation Dead Zone: 4m
- Resolution: 125 - 32m
- Distance Uncertainty: ±(0.75m + 0.005%/x distance + sampling resolution)
- Full Scale Distance Range: 0.25-260km SM
- Typical Real-time Refresh Rate: 2 Hz
- Group Index of Refraction (GIR): 1.024 - 2.048
- Linearity: ± .05 dB/db
- Memory Capacity: ~40,000
- Memory Type: Internal
- Power Supply / Charger: 5V, 1.2A USB Wall Charger
- Battery: Li-ion 6hr typ.
- Storage Temperature: -20 to 60 C
- Operating Temperature Range: -10 to 50 C
- Dimensions (w/out rubber boot): 6.25" L x 4.125" W x 1.875" H
- Weight: 1.5 lbs (0.7 kg)
- Communication ports: Bluetooth and USB
- Connector Styles: Choice of FC, SC
- Accessories Provided: Choice of FC and SC Adapters, 2 Stylus, 5V, 1.2A USB Wall Charger with USB Cable, Android Application, Windows Compatible Software, Rubber Boot and Manual on CD

Light Source
- Fiber Type: Singlemode
- Wavelengths: 1271-1611nm +/- 3nm Depending on (OTDR Wavelength Configuration)
- Output Power: -1 dBm
- Laser Safety Classification: Class I Safety Per FDA/CDRH and IEC-825-1 Regulation
- Modulation Modes: CW, 270 Hz, 1000 Hz, 2000 Hz

VFL (Option)
- Emitter Type: Laser
- Wavelength: 650nm ± 5nm
- Laser Safety Class: Class I Safety Per FDA/CDRH and IEC-825-1 1993
- Connector Type: 2.5mm Universal
- Output Power: 1mW Max.
The FTE-8200 Optical Spectrum Analyzer is one of the most rugged and affordable full featured Mini OSAs on the market. This C-band Hand-Held OSA is available in up to 98 channels with 50 and 100 GHz channel spacing. The FTE-8200 is simple and fast to operate with its touch screen operation and twice a second scan. It offers high end features such as power tilt monitoring for DWDM channel equalization.

With a full set of selectable scale limits and thresholds, the FTE-8200 makes zeroing in on channel measurements easy. For flexibility the channel numbers are selected in wavelength or frequency. The information is displayed in graph, 6GHz line graph and table mode on the 4” bright auto rotating color touch screen. The FTE-8200 allows users to set pass/fail thresholds and can store up to 1000 tests that can be downloaded via the USB PC port. Documentation is fast and easy with the included Cert-Soft certification software. The onboard Help system assists new users in parameter setup and file manipulation.

The FTE-8200 offers an IEC61300-3-35 auto Pass/ Fail video inspection feature for use with the optional VIS-300 Video Probe.
The FTE8200-CWDM Channel Analyzer is rugged, affordable and easy to use. The standard CWDM hand held analyzer is available in 18 or 8 channels with 20 nm spacing. The 18 channel analyzer tests 1271-1611nm and the 8 channel tests 1471-1611nm. The FTE-8200-CWDM analyzer is simple and fast to operate with its touch screen interface and twice a second scan. This low cost, full featured CWDM Channel Analyzer is designed to withstand your field operations with power tilt feature with a full set of selectable scale limits. Information is displayed in graph mode which makes zeroing in on channel measurements easy and the user selects Pass/Fail thresholds that may be stored in a project base file system. Up to 4000 tests that can be saved and downloaded via the USB PC port and documented with the included certification software. Use the optional Video Inspection Scope and Probe with auto grading Fib-R-View system to ensure connector cleanliness prior to testing. The onboard Help system guides new users through operation and assists in parameter settings.

The FTE-8200-CWDM is housed in a water resistant enclosure with a robust protective boot.

### Features
- Pass/Fail Thresholds
- Available in 8 or 18 Channels
- Fast Real Time with <1/2 second Update
- Video inspection Scope and Probe Option
- Available with APC or UPC Connections
- Bar Graph
- Rugged Case w/Impact Resistant Boot
- Solid State Optics-No Moving Parts
- Easy Operation with Help Mode
- 4” Color Display
- 6hr Battery Life
- Stores 4000 test
- USB/PC Port

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength Range</td>
<td>18 Channel 1271-1611nm</td>
</tr>
<tr>
<td>Channel Pass Band</td>
<td>±6.5nm</td>
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<tr>
<td>Channel Power Range</td>
<td>+5dBm to -50dBm</td>
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<tr>
<td>Absolute Accuracy</td>
<td>±1 dB</td>
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<td>Max Composite Power</td>
<td>±23dBm</td>
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<td>PDL</td>
<td>±0.2dB</td>
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<td>Adjacent Channel Isolation</td>
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<td>Measurement Time</td>
<td>&lt; 1/2 Second</td>
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<td>Readout Resolution</td>
<td>0.01dB</td>
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<tr>
<td>Return Loss</td>
<td>&gt;40dB</td>
</tr>
<tr>
<td>Optical Interface</td>
<td>Universal (FC/SC), UPC or APC</td>
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<tr>
<td>Graphical Display</td>
<td>Bar Graph</td>
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<tr>
<td>Display</td>
<td>4 in Color TFT</td>
</tr>
<tr>
<td>Dimensions</td>
<td>6.25&quot; L x 4.125&quot; W x 1.875&quot; H</td>
</tr>
<tr>
<td>(159mm L x 105mm W x 48mm H)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1.5 lbs</td>
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<tr>
<td>Battery</td>
<td>Rechargeable Li-Ion - 6 hours operating time</td>
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<td>Power</td>
<td>5V, 1.2A USB Wall Charger</td>
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<tr>
<td>Environmental</td>
<td>Operation -10°C to 50°C</td>
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<tr>
<td>Accessories Included</td>
<td>5V, 1.2A USB Wall Charger with USB Cable,</td>
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<td></td>
<td>Interchangeable FC and SC adapters/ APC or UPC,</td>
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<td></td>
<td>Certsoft Reporting Software Suite,</td>
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<td></td>
<td>Manual on CD and Rubber Boot</td>
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<td>Ordering Information:</td>
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<td>FTE-8200-CWDM-X-X-X</td>
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<td>Channel Count</td>
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<td>Video Scope/Probe Option</td>
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<tr>
<td>Optical Connector</td>
<td>U = UPC</td>
</tr>
<tr>
<td></td>
<td>A = APC</td>
</tr>
</tbody>
</table>

**TTE reserves the right to change specifications without notice.**

**If the ordered part number contains a specified connector style, the FTE-8200 will be built with a fixed connector of choice. (not interchangeable)**
Features
- Models up to 39dB dynamic range
- 1 Meter Dead Zone
- Touch Screen
- Video Scope With Auto Pass/Fail Option
- VFL & Power Meter Options
- Bluetooth Android Tablet Operation
- Fib-R-Map Event Analyzer
- Macro Bend and Bidirectional Analysis
- Full Auto, Construction and Expert Modes
- SM, MM, Triple, Quad & CWDM Units
- Instant On, Immediate Scan
- Live Fiber Detection
- Onboard Memory of ~40,000 traces
- CW / Fiber Identifier Light Source
- CertSoft Report Software
- Real-Time System ORL

Available in a Variety of Models
The FTE-7100 is available in a wide variety of models. It is available in Dual SM or MM and SM/MM Quad wave as well as CWDM and PON versions.

Micro Size with Large Capability
This small touch screen OTDR may give up some size, but give nothing away in functionality. The auto rotating screen offers a large clear trace view.

Project Management
Use the parameter screen to enter all parameter and threshold settings for a project, name the project and store files to the active project folder. Use stored projects to recall testing parameters for consistency in test setup.

Loss Test Set and VFL
The FTE7100 can support an optional Power Meter and/or VFL. When used with other TTI equipment the power meter’s auto wavelength recognition will speed testing and help eliminate user error.

Fib-R-View - Integrated Video Inspection
Ensure accurate test and protect equipment from damage by inspecting the fiber under test at the selected wavelength. This is ideal to use if unfamiliar with OTDR testing or if the approximate length of the fiber is not known.

Schematic View Trace Analysis
The FTE7100 displays trace analysis in schematic and table views. The trace analysis screen gives users the ability to quickly review the fiber and determine if it meets measurement criteria with its Pass/Fail capabilities.

Auto Test
The Auto Test feature does a quick test of the fiber conditions, sets the range and pulse width, then produces a trace of the fiber under test at the selected wavelength. This is ideal to use with other TTI equipment the power meter’s auto wavelength recognition will speed testing and help eliminate user error.

File Storage and File Transfer
The FTE-7100 supports onboard storage for ~40,000 traces. Trace files are easily transferred for use with the CertSoft reporting software suite via USB ports.

CertSoft2 Software Suite
CertSoft2 reporting software. Reports can include trace graph, schematic and table analysis, loss test table and connector image.

CertSoft2 Software Suite
- Intuitive Expert Parameter Screen
- Large, Easy-to-Read Trace/Events/Icons and Measurements
- Fib-R-Map Schematic Event Analysis

Specifications
- Wavelength: 850, 1300, 1310,1550 and 1625 ±20nm (CWDM Wavelengths 1471-1611nm ±20nm)
- Dynamic Range: 26±20dB MM, 34/33.5dB SM, 38/35/36/34dB (CWDM wavelengths 35dB)
- Pulse Width: 5 - 20,000 ns
- Units of Measurement: km, ft/kf, mi
- Event Dead Zone: 1m
- Attenuation Dead Zone: 3m
- Resolution: 125 - 32m
- Distance Uncertainty: ±0.75m + 0.005% x distance + sampling resolution
- Full Scale Distance Range: 0.25-64km MM, 0.25-256km SM
- Typical Real-time Refresh Rate: 2 Hz
- Group Index of Refraction (GIR): 1.024 - 2.048
- Linearity: ±.05 dB/db
- Memory Capacity: ~40,000 traces
- Memory Type: Internal
- Power Supply/Charger: Universal
- Weight: 1.5 lbs (0.7 kg)
- Connector Styles: Choice of FC, ST, SC, 1.25mm, 2.5mm universal, FC, SC and ST Adapters. 2 stylus, Windows Compatible Software, Rubber Boot and Manual on CD

Ordering Information
- FTE-7100-CWDM-S 1471/1611nm Dual Wavelength MICROTDR
- FTE-7100-CWDM-CL 1551/1571/1591/1611nm Dual Wavelength MICROTDR
- FTE-7100-CWDM-5 1471/1491/1511/1531/1551nm Dual Wavelength MICROTDR

Laser Safety
Class IIFDA21 CFR1040.10 &1040.11 IEC 825-1: 1993

Power Meter (Optional)
- Detector Type: InGaAs
- Connector Type: ST, FC, SC, 1.25mm and 2.5mm Interchangeable
- Calibrated Wavelengths: 850,1300,1310,1490,1550 and 1625nm
- Power Measurement Uncertainty: ±0.18 dB under reference conditions, ± 0.25 dB from 0 to -65 dBm, ± 0.35 dB from 0 to +5 dBm and from -65 to -77 dBm
- Units of Measurement: dbm, dB
- Resolution: 0.1 dB

Light Source
- Fiber Type: Singlemode, Multimode
- Wavelengths: 850/1300,1310,1490,1550 and 1625nm ±20nm
- Output Power: 0 dBm +1dBm @ 1625nm)

Terahertz Technologies Inc. 12
www.teratec.us | (888) U.S.-OTDRS
(888) U.S.-OTDRS | Terahertz Technologies Inc. 13
Fiber Optic Test Equipment

FTE-7000A-DWDM OTDR

**98 Channel Tunable OTDR**
Conduct optical time domain reflectometry test at wavelengths for DWDM channels 14-62.5 in the C Band of the ITU Grid.

**Tunable Laser Source**
Operates as a CW or pulsed Tunable laser source.

**Touch Screen Operation**
There are three methods of operation for the FTE-7000A. There is a hard-button method directly on the units keypad, the bright 4-inch display allows for touch screen operation, and if a larger display is desired, this OTDR may be operated via Bluetooth on any compatible Android device.

**Fib-R-Map Trace Analysis**
The FTE7000A displays trace analysis in schematic and table views. The trace analysis screen gives users the ability to quickly review the fiber and determine if it meets measurement criteria with its pass/fail capabilities.

**Fib-R-View - Integrated Video Inspection**
Ensure accurate test and protect equipment from damage by inspecting connectors with the integrated one-touch auto-center, and one-touch auto pass/fail fiber optic video inspection system.

**Auto Test**
The Auto Test feature does a quick test of the fiber conditions, sets the range and pulse width, then produces a trace of the fiber under test at the selected wavelength. This is useful to quickly review the fiber and determine if it meets measurement criteria with its pass/fail capabilities.

**File Storage and File Transfer**
There is onboard storage for up to 1000 traces. Trace files are transferred for use with the CertSoft2 software suite via USB/PC ports.

**CertSoft2 Software Suite**
Project reporting and documentation is fast and easy with the supplied CertSoft2 reporting software. Reports can include trace graph, schematic and table analysis, loss test table, and connector image.

**Project Management**
Use the parameter screen to enter all parameter and threshold settings for a project, name the project and store files to the active project folder.

**OTDR Specifications**
- **Standard Wavelengths:** 1527.6-1666.31nm @ 0.4 and 0.8nm Spacing
- **Dynamic Range:** 35 dB
- **Pulse Width:** 5 - 20,000 ns
- **Units of Measurement:** km, ft/kf, mi
- **Event Dead zone:** 1m
- **Attenuation Dead Zone:** 4m
- **Resolution:** 125 - 24m
- **Distance Uncertainty:** ±0.75m + 0.005% x distance + (sampling resolution)
- **Full Scale Distance Range:** 0.25-256km
- **Typical Real-time Refresh Rate:** 2 Hz
- **Group Index of Refraction (GIR):** 1.024 - 2.048
- **Power Setting Resolution:** 0.01 dB
- **Output Power Range:** 3 dBm to 11 dBm
- **Power Setting Resolution:** 0.01 dB
- **Power Variation over Wavelength Range:** ±0.5 dB
- **Minimum Channel Spacing:** 50 GHz (0.4nm)
- **Fiber Type:** 9/125 µm
- **±Relative Intensity Noise:** -140 dB/Hz

**Tunable Laser Source**
- **Frequency Range:** 191.4 - 196.25 THz (Channels 14-62.5)
- **Accuracy:** 1.5 GHz
- **Line Width:** 1 MHz
- **Side Mode Suppression Ratio:** 45 dB
- **Output Power Range:** 3 dBm to 11 dBm
- **Power Setting Resolution:** 0.01 dB
- **Power Variation over Wavelength Range:** ±0.5 dB
- **Minimum Channel Spacing:** 50 GHz (0.4nm)
- **Fiber Type:** 9/125 µm
- **±Relative Intensity Noise:** -140 dB/Hz

**General Specifications**
- **Graphical Display:** 4 in Color Touch Screen
- **Power Supply / Charger:** Input 100-240V 50-60Hz, 0.6A / Output 19V, 1.2A
- **Battery / Operating Time:** Rechargeable Li-ion / 10 hour
- **Storage Temperature:** -20 to 60 C
- **Operating Temperature Range:** -10 to 40 C
- **Dimensions (w/out rubber boot):** 8 5/8” L x 4 5/16” W x 2 3/8” H (219mm L x 109mm W x 60mm H)
- **Weight:** 1.7 lbs
- **Communications / Ports:** USB-PC
- **Connector Styles:** FC, SC Interchangeable
- **Universal Power Adapter w/US, UK, Continental Europe, and Australian Plugs, Interchangeable FC and SC Adapters, CertSoft2 Software, Rubber Boot, Manual on CD and 2 stylus

**Ordering Information**
- **FTE-7000A-DWDM**
  - C Band DWDM Tunable OTDR/Laser Source 1527.4nm - 1565.4nm
  - VIS300 Video Probe for FTE7500 Series

**Fib-R-Map Schematic**

**Intuitive Expert Parameter Screen**

**Laser Safety**
- **Visible Fault Locator**
- **Tunable Laser Source**

**Wall Plug Adapters**
- **CertSoft2 Report Software with .sor Capability**
- **Onboard Memory of ~1000 Traces**
- **CertSoft2 Report Software with .sor Capability**
- **Fiber Optic Test Equipment**

**Features**
- Tunable OTDR with 98 C Band Wavelengths
- Tunable CW/Pulsed Laser Source
- 50 and 100 GHz Spacing
- Touch Screen and Keypad
- Full Auto, Construction and Expert Modes
- Fib-R-Map Comprehensive Event Analyzer
- Fib-R-View Auto Pass/Fail/Centering Scope
- 96 Channels (15-62.5) on the ITU Grid
- 10 Hour Li-ion Batter Pack w/2 Hr. Charge
- Bidirectional Trace Analysis with Certsoft
- Onboard Memory of ~1000 Traces
- CertSoft2 Report Software with .sor Capability

**CAUTION**
- DO NOT STARE INTO BEAM
- CLASS II LASER PRODUCT
- WAVELENGTHS 1528 -1568
- LASER RADIATION

**Visi300 Video Probe for FTE7500 and FTE7000 Series**

**CAUTION**
- VIS300 Video Probe for FTE7500 and FTE7000 Series
- WITH OPTICAL INSTRUMENTS
- CLASS 1M LASER PRODUCTS
- DO NOT VIEW DIRECTLY

**Side Mode Suppression Ratio (SMR) Spec:**

- **Accuracy:** 1.5 GHz
- **Line Width:** 1 MHz
- **Side Mode Suppression Ratio:** 45 dB

**Group Index of Refraction (GIR) Spec:**

- **Accuracy:** 1.5 GHz
- **Line Width:** 1 MHz
- **Side Mode Suppression Ratio:** 45 dB

**Ordering Information**

- **FTE-7000A-DWDM**
  - C Band DWDM Tunable OTDR/Laser Source 1527.4nm - 1565.4nm
  - VIS300 Video Probe for FTE7500 and FTE7000 Series

**Fib-R-View Auto Pass/Fail/Centering Scope**

**Fib-R-Map Comprehensive Event Analyzer**

**CertSoft2 Report Software with .sor Capability**

**Onboard Memory of ~1000 Traces**

**CertSoft2 Report Software with .sor Capability**
FTE-8100 Mini Optical Spectrum Analyzer

98 Channel DWDM Analyzer
The FTE-8100 Handheld OSA tests up to 98 channels. Select 50GHz or 100GHz channel spacing in the C band of the ITU Grid

Pass/Fail Thresholds
User selectable Pass/Fail thresholds are indicated on the main graphical display by a highlighted background with failed channels falling outside the highlighted area. In the table view, failed measurements are easily identified by being shown in red.

Auto Test button
With its one button Auto Test feature, full set of selectable scale limits and thresholds, the FTE-8100 makes zeroing in on channel measurements easy.

Power/Gain Tilt
The Hand Held FTE-8100 offers high end features such as power tilt for DWDM channel equalization and gain tilt to adjust EDFA gain flatness.

Fib-R-View - Integrated Video Inspection
Ensure accurate test and protect equipment from damage, by inspecting connectors with the integrated one touch auto-center, and one touch auto pass/fail fiber optic video inspection system.

Onboard Help System
Use the onboard help text for a quick guide to the functions and features available on the FTE8100.

Storable Test Configurations
File and recall testing configurations for later use.

Information Display
For flexibility the channel numbers are selected in wavelength or frequency and the information is displayed in graph or table mode

Onboard File Storage
There is file storage for up to 1000 tests that may be downloaded to a PC and viewed with supplied CertSoft reporting software.

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength Range</td>
<td>C-Band DWDM 1527.8 -1566.31nm (196.25 Thz - 191.4THz)</td>
</tr>
<tr>
<td>Channel Spacing</td>
<td>50GHz, 100GHz</td>
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<tr>
<td>Wavelength Accuracy</td>
<td>±0.1nm</td>
</tr>
<tr>
<td>Channel Power Range</td>
<td>+10dBm to -50dBm</td>
</tr>
<tr>
<td>Absolute Accuracy</td>
<td>±1 dB</td>
</tr>
<tr>
<td>Max Composite Power</td>
<td>±28 dBm</td>
</tr>
<tr>
<td>PDL</td>
<td>±0.15dB</td>
</tr>
<tr>
<td>Optical Rejection Ratio</td>
<td>400Bc (650GHz)</td>
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<td>Measurement Time</td>
<td>&lt; 1/2 Second</td>
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<tr>
<td>Readout Resolution</td>
<td>0.01dB</td>
</tr>
<tr>
<td>Return Loss</td>
<td>&gt;40dB</td>
</tr>
</tbody>
</table>

General

Optical Interface: Universal UPC (FC/SC) (Optional APC)
Graphical Display: Bar Graph and Table View
Display: 4 in Touch Color TFT
Dimensions: 8 5/8" L x 4 5/16" W x 2 3/8" H (219mm L x 109mm W x 60mm H)
Weight: 1.6 lbs
Battery: Rechargeable NiMH - 6 hours operating time
Power: Input 100-240VAC, 50-60Hz, 0.3A, Output 9V, 0.67A
Environmental: Operation -10°C to 40°C
Accessories Included: Universal power supply with mains for US, UK, CE and AU. Interchangeable FC and SC adapters, CertSoft software suite and manual, USB cable and rubber boot

Ordering Information

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<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>FTE-8100C</td>
<td>C-Band Fiber Optic Spectrum Analyzer</td>
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<tr>
<td>VIS-300</td>
<td>TTI Video Probe</td>
</tr>
</tbody>
</table>

Video Inspection System with IEC61300-3-35 pass/fail grading zone system

Main DWDM Scan Screen with 96 Channel Displayed

Features
- 98 Channel DWDM Testing
- Available for CWDM Channels
- Integrated Video Inspection System
- 4" Color Touch Screen
- Selectable First Channel Setting
- 50 or 100 GHz DWDM Channel Spacing
- Pass/Fail Thresholds
- Fast <1/2 Second Update
- Bar Graph and Table Modes
- Auto Test Zooms in on Active Channels
- Interchangeable Fiber Optic Connectors
- Storable Parameter Settings
- Solid State Optics-No Moving Parts
- Easy Operation with Help Mode
- 6 hr Battery Life
- Impact Resistant Boot
- USB/PC Ports

Specifications are subject to change without notice
**FTE-6100 Tunable Laser Source**

The TLS is available with 98 channels on the ITU Grid at channel Spacing down to 50 GHz (0.4nm).

**Onboard help system**
Use the onboard help text for a quick guide to the functions and features available on the FTE-6000

**TLS Display**
The TLS displays output power and wavelength, frequency or ITU channel on a bright 4" color touch display.

**Simple to Use**
Designed for simple operation and suited for field or lab use. The user has the ability to set the step size, power level, dwell time, and whether the sweep moves up or down the scale.

**Start Up**
The FTE-6100 offers a fast start up with minimal warm up and provides stable wavelength and power outputs.

**Rugged**
The FTE-6000 is manufactured in our rugged splash-proof housing with a highly protective boot.

**Fib-R-View - Integrated Video Inspection System**
Ensure an accurate test and protect equipment from damage by inspecting connectors with the integrated one-touch auto-center, and one-touch auto pass/fail fiber optic video inspection system.

**Visual Fault Locator**
The Visual Fault Locator determines the precise location of breaks or severe micro-bends in a fiber or cable under test by visually checking fiber for leaks of visible light.

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**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
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<tbody>
<tr>
<td>Frequency Range</td>
<td>191.4 - 196.25THz (1527.6-1566.31nm)</td>
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<tr>
<td>ITU Channels</td>
<td>14 - 62.5</td>
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<tr>
<td>Accuracy</td>
<td>+/-1.5 GHz</td>
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<tr>
<td>Line Width</td>
<td>1 MHz</td>
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<tr>
<td>Side Mode Suppression Ratio</td>
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</tr>
<tr>
<td>Output Power Range</td>
<td>6 dB</td>
</tr>
<tr>
<td>Maximum Output Power</td>
<td>13 dBm (Typ.)</td>
</tr>
<tr>
<td>Power Setting Resolution</td>
<td>0.01 dB</td>
</tr>
<tr>
<td>Power Accuracy</td>
<td>+/-1 dB</td>
</tr>
<tr>
<td>Minimum Channel Spacing</td>
<td>50 GHz (0.4nm)</td>
</tr>
<tr>
<td>Fiber Type</td>
<td>9/125 µm</td>
</tr>
<tr>
<td>Relative Intensity Noise</td>
<td>-140 dBHz</td>
</tr>
<tr>
<td>Display</td>
<td>4 in Color TFT</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8 5/8 &quot; L x 4 5/16&quot; W x 2 3/4&quot; H (219mm L x 109mm W x 60mm H)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.75 lbs</td>
</tr>
<tr>
<td>Battery</td>
<td>Li-Ion 12 hr typ.</td>
</tr>
<tr>
<td>Power</td>
<td>Input 100-240VAC, 15VDC Output</td>
</tr>
<tr>
<td>Environmental Operation</td>
<td>Operation -10°C to + 40°C</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Universal power supply with mains for US, UK, CE and AU, Interchangeable FC and SC adaptors, USB Cable, Manual and Rubber Boot</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice.
Features

- Touch Screen, Keypad or Bluetooth Control
- CW & Fiber Identifier Light Source
- Up to 39dB Dynamic Range
- 1 Meter Dead Zone
- Fib-R-View Auto Pass/Fail/Centering Scope
- Auto-Wavelength Power Meter
- Bidirectional Trace Analysis with CertSoft2
- Fib-R-Map Event Analyzer
- SM, MM, Triple and Quad Units Available
- Full Auto, Construction and Expert Modes
- Live Fiber Detection
- Onboard Memory of ~1000 traces
- Dual Trace with Macro Bend Analysis
- Instant On, Immediate Scan

Available in a Variety of Models

The FTE-7000A is available in a wide variety of models. Listed here are the standard Dual and Quad wavelength units as well as our Extended range and Economy units. Also presented in the brochure are the DWDM, CWDM and PON versions.

Fib-R-View - Integrated Video Inspection

Ensure accurate test and protect equipment from damage by inspecting connectors with the integrated one touch auto-center, and one touch auto pass/fail fiber optic video inspection system.

Schematic View Trace Analysis

The FTE7000A displays trace analysis in schematic and table views. The trace analysis screen gives users the ability to quickly review the fiber and determine if it meets measurement criteria with its Pass/Fail capabilities.

Auto Test

The Auto Test feature does a quick test of the fiber conditions, sets the range and pulse width, then produces a trace of the fiber under test at the selected wavelength. This is ideal to use if unfamiliar with OTDR testing or if the approximate length of the fiber is not known.

Integrated Loss Test Set

The FTE7000A has an integrated Loss Test Set. When used with compatible equipment from TTI’s 1500 series or other TTI OTDRs the auto wavelength recognition will speed testing and help eliminate user error. Not available on quad wavelength units.

File Storage and File Transfer

Contains onboard storage for up to ~1000 traces. Trace files are easily transferred for use with the CertSoft software suite via USB/PC ports.

CertSoft2 Software Suite

Project reporting and documentation is fast and easy with the supplied CertSoft2 reporting software. Reports can include trace graph, schematic and table analysis, loss test table and connector image.

Project Management

Use the parameter screen to enter all parameter and threshold settings for a project, name the project and store files to the active project folder. Use stored projects to recall testing parameters for consistency in test setup.

Light Source

Fiber Type: Singlemode, Multimode
Available Wavelengths: 850, 1300, 1310, 1490, 1550, 1625 nm ±20 nm
Output Power: 0 dBm (-3dBm @ 1625 nm)
Laser Safety Classification: Class I Safety Per FDA/CDRH and IEC-825-1 Regulation
Modulation Modes: CW, 270 Hz, 1000 Hz, 2000 Hz
Specifications are subject to change without notice.

Ordering Information

FTE-7000A-8513 MM 850/1300nm OTDR with LTS
FTE-7000A-1315 SM 1310/1550nm OTDR with LTS
FTE-7000A-QUAD Quad Wavelength 850/1300/1310/1550nm OTDR with LTS
FTE-7000A-EXT Extended Range SM, 1310/1550 OTDR, 36/39 dB with LTS and Video Scope Capability
FTE-7000A-ECON 34/33dB, 1310/1550nm, Dual Wave Singlemode Economy OTDR (No PM or Video Scope Capability)
VIS-300 Video Probe
Add a “C” to the end part the number for CATV version LTS.
Fiber Optic Test Equipment

FTE-7000A-PON OTDR

Touch Screen Operation
There are three methods of operation for the FTE-7000A. There is a hard button method directly on the units keypad, the bright 4 inch display allows for touch screen operation and if a larger display is desired, this OTDR may be operated via Bluetooth on any compatible Android device.

Auto-Grade Fault Finder Mode
One button scans the fiber under test, selects best parameters at the selected wavelength and displays event analysis and schematic views of the data.

Schematic View Trace Analysis
The FTE7000A displays trace analysis in schematic and table views. The trace analysis screen gives users the ability to quickly review the fiber and determine if it meets measurement criteria with its Pass/Fail capabilities.

Auto Test
The AutoTest feature does a quick test of the fiber conditions, sets the range and pulse width, then produces a trace of the fiber under test at the selected wavelength. This is ideal to use if unfamiliar with OTDR testing or the approximate length of the fiber is not known.

Integrated Loss Test Set
The FTE7000A has an integrated Loss Test Set. When used with compatible equipment from TTI’s 1500 series or other TTI OTDRs the auto wavelength recognition will speed testing and help eliminate user error. (Not available on quad wavelength units)

File Storage and File Transfer
There is onboard storage for up to ~1000 traces. Trace files are easily transferred for use with the CertSoft software suite via USB/PC ports.

CertSoft Software Suite
Project reporting and documentation is fast and easy with the supplied CertSoft reporting software. Reports can include, trace graph, schematic and table analysis, loss test table and connector image.

Project Management
Use the parameter screen to enter all parameter and threshold settings for a project, name the project and store files to the active project folder.

Features
- 38 dB Dynamic Range
- Touch Screen, Keypad or Tablet Control
- 10 Hour Battery Life.
- CW & Fiber Identifier Light Source
- Bluetooth Android Vi Operation
- Fib-R-View Auto Pass/Fail/Centering Scope
- Auto-Wavelength Power Meter
- Real-time System ORL
- Bidirectional Trace Analysis with Certsoft
- Fib-R-Map Event Analyzer
- Full Auto, Construction and Expert Modes
- Live Fiber Detection
- Onboard Memory of ~4000 traces
- CertSoft Report Software with .sor Capability
- Dual Trace with Macro Bend Analysis

OTDR

| Wavelength | 1310, 1550, 1625nm ±20nm |
| Dynamic Range | 38/39/38dB SM |
| Pulse Width | 5 - 20,000 ns |
| Units of Measurement | km, ft/kf, mi |
| Event Dead Zone | 1m |
| Attenuation Dead Zone | 4m |
| Resolution | .125 - 24m |
| Distance Uncertainty | ±(0.75m x 0.005% x distance + sampling resolution) |
| Full Scale Distance Range | 0.25-256km SM |
| Typical Real-Time Refresh Rate | 2 Hz |
| Group Index of Refraction (GIR) | 1.024 - 2.048 |
| Linearity | ± 1 dBdBI |
| Memory Capacity | ~4000 Traces |
| Memory Type | Internal |
| Power Supply / Charger | Input 100-240VAC, 50-60Hz |
| Battery life | 12hr, Lithium-Ion |
| Storage Temperature | -20 to 60 C |
| Operating Temperature Range | 0 to 40 C |
| Dimensions | 8.08’’L x 4.56’’W x 2.36’’H |
| Weight | 8.8 lbs (.8 kg) |
| Communications ports | USB/PC Port, Bluetooth |
| Connector Styles | FC, ST, SC Interchangeable |

Accessories Provided
- Universal Power Adapter w/ interchangeable mains, Interchangeable FC and SC Adapters, Software, Manual and Protective Rubber Boot

Specifications are subject to change without notice.

Power Meter

| Detector Type | InGaAs |
| Connector Type | 1.25 and 2.5 universal, FC, ST and ST |
| Measurement Range | ±5 to -77dBm (CATV ±25 to -57dBm) |
| Calibrated Wavelengths | 850,1300,1310,1490,1550,1625nm |
| Units of Measurement | dBm, dB |
| Resolution | ±.01 dB |
| Power Measurement Uncertainty | ± 0.18 dB under reference conditions, ± 0.25 dB from 0 to -65 dBm, ± 0.35 dB from 0 to +5 dBm and from -65 to -77 dBm |

Specifications are subject to change without notice.

Light Source

| Available Wavelengths | 1310, 1550, 1625 nm ±20nm |
| Output Power | 0 dBm |
| Laser Safety Classification | Class I Safety Per FDA/CDRH and IEC-825-1 Regulation |
| Modulation Modes | CW, 270 Hz, 1000 Hz, 2000 Hz |

Specifications are subject to change without notice.

Accessories Provided

- VIS300 Video Probe

Specifications are subject to change without notice.

Ordering Information

FTE-7000A-PON
1310/1550/1625nm with 1625 Active, PON OTDR with Video Scope Capability (Probe Sold Separately)

VIS300 Video Probe

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www.teratec.us | (888) U.S.-OTDRS
(888) U.S.-OTDRS | www.teratec.us
**Features**

- 35 dB Dynamic Range
- 10 Hour Battery Life w/2 Hour Quick Charge
- Express Help System
- Touch Screen, Keypad or Tablet Control
- Auto-Grade Fault Finder
- CW & Fiber Identifier Light Source
- Bluetooth Android VI Operation
- Fib-R-View Auto Pass/Fail/Centering Scope
- Auto-Wavelength Recognition Power Meter
- Real-time System ORL
- Bidirectional Trace Analysis with Certsoft
- Fib-R-Map Event Analyzer
- Full Auto, Construction and Expert Modes
- Live Fiber Detection
- Onboard Memory of ~4000 traces
- CertSoft Report Software with .sor Capability
- Dual Trace with Macro Bend Analysis

**Integrated Loss Test Set.**

The FTE7000A has an integrated Loss Test Set. When used with compatible equipment from TTI’s 1500 series or other TTI OTDRs the autos wavelength recognition will speed testing and help eliminate user error. (Not available on quad wavelength units)

**File Storage and File Transfer.**

There is onboard storage for up to ~1000 traces. Trace files are easily transferred for use with the CertSoft software suite via USB/PC ports.

**CertSoft Software Suite**

Project reporting and documentation is fast and easy with the supplied CertSoft reporting software. Reports can include, trace graph, schematic and table analysis, loss test table and connector image.

**Project Management**

Use the parameter screen to enter all parameter and threshold settings for a project, name the project and store files to the active project folder.

**Touch Screen Operation**

There are three methods of operation for the FTE-7000A. There is a hard button method directly on the units keypad, the bright 4 inch display allows for touch screen operation and if a larger display is desired, this OTDR may be operated via Bluetooth on any compatible Android device.

**Auto-Grade Fault Finder Mode.**

One button scans the fiber under test, selects best parameters at the selected wavelength and displays event analysis and schematic views of the data.

**Schematic View Trace Analysis**

The FTE7000A displays trace analysis in schematic and table views. The trace analysis screen gives users the ability to quickly review the fiber and determine if it meets measurement criteria with its Pass/Fail capabilities.

**Auto Test**

The AutoTest feature does a quick test of the fiber conditions, sets the range and pulse width, then produces a trace of the fiber under test at the selected wavelength. This is ideal to use if unfamiliar with OTDR testing or the approximate length of the fiber is not known.

**Ordering Information**

Ordering Information (Probe Sold Separately)

- **FTE-7000A-S** 1471/1491/1511/1531nm, CWDM OTDR with Video Scope Capability and LTS
- **FTE-7000A-CL** 1551/1571/1591/1611nm, CWDM OTDR with Video Scope Capability and LTS
- **VIS300** Video Probe

Specifications are subject to change without notice.
Fiber Optic Test Equipment

FTE-8100-CWDM/DWDM Spectrum Analyzer

Fast Scan
The FTE-8100-CWDM Channel Analyzer Displays a full scan of all 18 channels on the ITU grid twice a second.

Onboard Help System
Use the onboard help text for a quick guide to the functions and features available on the FTE8000-CWDM.

Auto Test Button
With its one button Auto Test feature, and a full set of selectable scale limits and thresholds, the FTE-8100-CWDM makes zeroing in on channel measurements easy.

Simple to Use
The FTE8100-CWDM is designed for simple operation and is suited for field or lab use.

Power Tilt
The FTE-8100-CWDM offers a Power Tilt feature for CWDM channel equalization.

Information Display
The channel numbers are selected in wavelength or frequency for flexibility, and the information is displayed in graph or table mode.

Onboard File Storage
There is file storage for up to 1000 scans that may be downloaded directly to the PC using the supplied CertSoft software suite.

Pass/Fail Thresholds
The unit allows users to set Pass/Fail thresholds that are displayed on the main graphical display by a highlighted background. Failed channels fall outside the highlighted area and in the table view failed channels are displayed in red.

Integrated Video Inspection
Ensure accurate test and protect equipment from damage, by inspecting connectors with the integrated video inspection system. Connector images may be stored, allowing users to include them with test documents.

Features
- Pass/Fail Thresholds
- Available in 8 or 18 Channels
- Fast Real Time with <1/2 second Update
- Fib-R-View Auto Pass/Fail/Centering Scope
- Bar Graph
- Auto Test Zooms in on Active Channels
- Rugged Case w/Impact Resistant Boot
- Solid State Optics-No Moving Parts
- Easy Operation with Help Mode
- 4” Color Display
- 10hr Battery Life
- Impact Resistant Boot
- Stores 1000 test
- USB/PC Port

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength Range</td>
<td>18 Channel 1271-1611nm</td>
</tr>
<tr>
<td>6 Channel 1471-1611nm</td>
<td></td>
</tr>
<tr>
<td>Channel Spacing</td>
<td>20nm</td>
</tr>
<tr>
<td>Channel Pass Band</td>
<td>±6.5nm</td>
</tr>
<tr>
<td>Channel Power Range</td>
<td>+5dBm to -50dBm</td>
</tr>
<tr>
<td>Absolute Accuracy</td>
<td>±1 dB</td>
</tr>
<tr>
<td>Max Composite Power</td>
<td>+23dBm</td>
</tr>
<tr>
<td>PDL</td>
<td>±0.2dB</td>
</tr>
<tr>
<td>Adjacent Channel Isolation</td>
<td>30dB</td>
</tr>
<tr>
<td>Measurement Time</td>
<td>&lt; 1/2 Second</td>
</tr>
<tr>
<td>Readout Resolution</td>
<td>0.01dB</td>
</tr>
<tr>
<td>Return Loss</td>
<td>&gt;40dB</td>
</tr>
<tr>
<td>Optical Interface</td>
<td>Universal UPC (FC/SC)</td>
</tr>
<tr>
<td>Graphical Display</td>
<td>Bar Graph</td>
</tr>
<tr>
<td>Display</td>
<td>4 in Color TFT</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8 5/8”L x 4 5/16”W x 2 3/8”H</td>
</tr>
<tr>
<td>(219mm L x 109mm W x 60mm H)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1.6 lbs</td>
</tr>
<tr>
<td>Battery</td>
<td>Rechargeable Li-Ion - 12 hours operating time</td>
</tr>
<tr>
<td>Power</td>
<td>100-240 universal US, GB, EU, AU Mains</td>
</tr>
<tr>
<td>Environmental</td>
<td>Operation -10°C to 50°C</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Universal power supply with mains for US, UK, CE and AU. Interchangeable FC and SC adapters, CertSoft reporting software suite, USB cable, manual on CD and rubber boot</td>
</tr>
</tbody>
</table>

We Support Special Channel Configurations

Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTE8100-CWDM-18</td>
<td>18 CWDM Channel Analyzer with Touch Screen</td>
</tr>
<tr>
<td>FTE8100-CWDM-8</td>
<td>8 Channel CWDM Analyzer with Touch Screen</td>
</tr>
<tr>
<td>VIS-300</td>
<td>Video Probe</td>
</tr>
</tbody>
</table>
Onboard Help System

Select the help icon and the OTDR displays a list of help subjects unique to the current application.

Auto Test

The Auto Test feature does a quick test of the fiber conditions, sets the range and pulse width, then produces a trace of the fiber under test. This is ideal to use if unfamiliar with OTDR testing or the approximate length of the fiber is not known.

Construction Mode

This feature assist with testing a large number of fibers with similar settings. By pressing just one button, the OTDR will test a fiber at two wavelengths, save each test and then display both tests for review.

Trace Analysis

The trace analysis screen gives users the ability to quickly determine if the fiber meets measurement criteria with its Pass/Fail capabilities.

Integrated Loss Test Set

The FTE7500A has an integrated Loss Test Set. When used with compatible equipment from TTI’s 1500 series or other TTI OTDRs, the auto wavelength and auto test capabilities will speed testing and help eliminate user error.

Integrated Visual Fault Locator

The VFL to locate near end breaks, poor splices, and broken connectors in fiber optic cables or use it to identify fibers at the far end of a link.

File Storage and File Transfer

There is onboard storage for up to ~500 traces. Trace files are easily transferred for use with the CertSoft software suite via USB/PC or USB flash drive ports.

Integrated Video Inspection

Ensure accurate test and protect equipment from damage, by inspecting connectors with the integrated video inspection system. Image files may be stored, allowing users to include connector images with test documents.

Trace Analysis and Reporting

Project reporting and documentation is fast and easy with the Pass/Fail feature, onboard event table and the supplied CertSoft reporting software.

Features

- Instant On
- 36 dB Dynamic Range
- Visual Fault Locator
- Event Table with Pass/Fail Feature
- 1 Meter Dead Zone
- Fib-R-View Auto Pass/Fail/Centering Scope
- Interchangeable Fiber Optic Connectors
- One Button Fault Finder
- Automated Construction Mode
- Trace Overlay Capability
- Onboard Memory for ~500 traces
- Auto-Wavelength Loss Test Set
- USB Flash Drive Port and Mini USB/PC Port
- Context Sensitive Help
- Lightweight Rugged Enclosure
- Easy To Read Color Display
- CertSoft Report Generation Software Suite
- Long Battery Life

Specifications

- Wavelength: 850, 1300, 1310, 1550nm ±20nm
- Dynamic Range: 26/21dB MM, 36/34dB SM,
- Pulse Width: 5 - 20,000 ns
- Units of Measurement: kM, M
- Event Dead Zone: 1m
- Attenuation Dead Zone: 6m
- Resolution: 125 - 32m
- Distance Uncertainty: ±(0.75m + 0.005% x distance + sampling resolution)
- Full Scale Distance Range: 1-64km MM, 1-256km SM
- Typical Real-Time Refresh Rate: 2 Hz
- Group Index of Refraction (GIR): 1.024 - 2.048
- Linearity: ±.05 dB/dB
- Memory Capacity: ~500 Traces
- Memory Type: Internal and Flash Drive
- Power Supply / Charger: Input 100-240VAC, 47-63Hz, 0.57A
- Battery: 8 AA NiMH - 8hr Operation
- Storage Temperature: -20 to 60 C
- Operating Temperature Range: 0 to 40 C
- Auto Test Range: 0 to -40dB
- Power Supply: Mains, Interchangeable
- Connector Styles: FC, ST, SC Interchangeable
- Light Source: Fiber, SC, ST Interchangeable
- Power Supply: Internal Battery, Mains
- Power: 13.6V, 0.57A
- Connector Type: 1.25mm & 2.5mm Univ, FC, ST, SC, Universal
- Modulation Modes: CW, 270 Hz, 1000 Hz, 2000 Hz
- Laser Safety Classification: Class I Safety Per FDA/CDRH and IEC-825-1 Regulation
- Laser Radiation: Class I Laser Product
- Embedded Power Meter: Detector Type: InGaAs
- Detector Range: 12.5nm & 2.5nm Univ, FC, ST and SC
- Measurement Range: +5 to -77dBm
- Input/Output Power: 1mW Max. 
- Output Power: 0 dBm (-3dBm @ 1625nm)
- Available Wavelengths: 850, 1300, 1310, 1550 ±20nm
- Output Power: 0 dBm (-3dBm @ 1625nm)
- Laser Safety Classification: Class I Safety Per FDA/CDRH and IEC-825-1 Regulation
- Modulation Modes: CW, 270 Hz, 1000 Hz, 2000 Hz
- Certification Software: Available, with attached video scope, and pass/fail feature
- Full featured trace analysis with pass/fail feature
The FTE-5200 combines four functions for testing optical networks together in one unit. It brings together a -60dB ORL meter (optional), power meter, laser source and Auto Center/Pass/Fail Video Scope. (probe sold separately). The LTS may be purchased as a standard unidirectional or as a fully bidirectional loss test set.

The FTE-5200 is a full featured ORL Loss Test Set. It has 4" super bright color display with large easy to read characters. It performs optical return loss measurements to -60db at up to three wavelengths and is an automated loss test set with dual or triple wave Light sources. The power meter uses an InGaAs detector which is calibrated at 850, 1300, 1310, 1490, 1550 and 1625nm, with a dynamic range to -77dbm (CATV version is available). These units are available in single, dual or triple or quad wavelength configurations and displays and test up to three wavelengths at one time. In the Autotest mode, the master unit changes wavelengths at a fixed rate and informs the slave unit of the wavelength currently being measured. Use this method to test up to three wavelengths at a time and store the loss measurements for each of the lasers fired during the test. Up to 5000 test may be stored and recalled via the unit’s USB port. Use TTI’s CertSoft PC application software for downloading stored data and generating reports.

The CertSoft software is compatible with all of our fiber optic test equipment. The information from OTDR, TLS, ORL and video scope may be combined to offer a comprehensive report for all of your network testing needs.

The FTE-5200 includes a video scope (probe sold separately). Use the video scope to ensure the integrity and cleanliness of the connectors being tested.

Use the modulation feature to perform fiber identification function. The power meter will identify modulated signals at 270, 1000 and 2000 Hz produced by the integrated light source.

<table>
<thead>
<tr>
<th>Power Meter</th>
<th>General Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Meter</td>
<td>Display</td>
</tr>
<tr>
<td>Detector Type</td>
<td>Light Source</td>
</tr>
<tr>
<td>InGaAs</td>
<td>Optical Return Loss Range</td>
</tr>
<tr>
<td>-60 dB</td>
<td>-60 dB</td>
</tr>
<tr>
<td>Laser Wavelengths Available</td>
<td>ORL Wavelengths</td>
</tr>
<tr>
<td>Transmitted Modulation Modes</td>
<td>Optical Return Loss Accuracy</td>
</tr>
<tr>
<td>CW, 270 Hz, 1000 Hz, 2000 Hz</td>
<td>Resolution</td>
</tr>
<tr>
<td>Connector</td>
<td>Spectral Width (RMS)</td>
</tr>
<tr>
<td>FC/PC or SC/PC</td>
<td>Spectral Width</td>
</tr>
</tbody>
</table>

The FTE-5200 is a full featured ORL Loss Test Set. Use the ORL Mode for accurate Optical Return Loss measurements to -60dB

Move quickly through saved test while at the same time viewing measurements

Add a "C" to the end of the Part number for CATV Versions.

Terahertz Technologies Inc. 30
Fiber Optic Test Equipment
FTE-5200-8513 LTS with 850/1300nm Light Source (No ORL Available)
FTE-5200-1315 LTS with 1310/1550nm Light Source
FTE-5200-QUAD Bidirectional LTS with 850/1300/1310/1550nm Light Source (No ORL Available on 850 and 1300nm)

TTI reserves the right to change specifications without notice.

Ordering Information

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Battery/Operating Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.25&quot; L x 4.125&quot; W x 1.875&quot; H</td>
<td>Li-Ion / 6 hrs typ.</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>Operating Temperature Range</td>
</tr>
<tr>
<td>Micro USB 5V 1.2A</td>
<td>6.25'L x 4.125&quot;W x 1.875&quot;H (159mm L x 105mm W x 48mm H)</td>
</tr>
</tbody>
</table>

TTI reserves the right to change specifications without notice.

www.teratec.us | (888) U.S.-OTDRS | (888) U.S.-OTDRS | www.teratec.us
FTE-5000 Loss Test Set/ORL Meter

**Features**
- Bright Color Touch Screen
- Optical Loss/ORL Tester
- ORL Measurement Range to -60 dB
- Power Meter with -77 dBm Dynamic Range
- Video Inspection System
- Automated Loss Measurements
- Auto Test Up To Three Wavelengths
- Auto Wavelength Switching
- Universal PM and LS Adapters
- Storage for 5,000 Test
- Rechargeable Batteries
- USB Interface
- Free Report Software
- On-Board Help Feature

**Loss Test Set/ORL Meter**
The LTS/ORL Meter is available in a variety of wavelengths, with ORL. It is available in dual, triple and quad wavelength packages.

**Available Wavelengths**
The LTS may be configured with dual MM, dual SM, triple or quad wavelengths and the power meter is calibrated at 850, 1300, 1310, 1490 and 1550nm and 1625nm.

**Onboard help system**
Use the onboard help text for a quick guide to the functions and features available on the FTE-5000.

**Display**
Large 4 inch, easy to read color Touch Screen.

**Simple to Use**
It is designed for simple operation and is suited for field or lab use.

**Bluetooth Operation with Android VI App**
Operate the LTS with any compatible Android device using the free Android Virtual Instrument Application.

**Certssoft Reporting Software**
Download test results to the included CertSoft software for report generation. Results may be paired with OTDR traces and connector images for complete report generation.

**Integrated Video Inspection**
Ensure accurate test and protect equipment from damage by inspecting connectors with the integrated video inspection system with the optional VIS300 video probe. The video scope includes an IEC61300-3-35 pass/fail grading zone system. Image files may be stored, allowing users to include connector images with test documents.

**InGaAs Power Meter**
InGaAs based optical power meter calibrated at six wavelengths with a +5 to -77 dBm measurement range.

**Fiber Identification**
The units also performs fiber identification functions with modulation frequencies of 270, 1000 and 2000 Hz.

**Specifications**
- Display: 4 in color touch screen
- Storage Locations: Up to 5000
- Battery/Operating Time: 4 AA Rechargeable NiMH / 6 hrs
- Operating Temperature: -10 to 45 C
- Dimensions (w/o rubber boot): 8 5/8” L x 5 1/4” W x 2 3/8” H
- Weight: 0.52 Kg
- Accessories Provided: FC, ST, SC adaptors for Light Source
- Calibration Wavelengths: 850, 1300, 1310, 1490, 1550, 1625 nm
- Units of Measurement: dBm, dB
- Resolution: ±0.01 dB
- Power Measurement Uncertainty: ±0.05 dB
- Modulation Modes Detected: CW, 270 Hz, 1000 Hz, 2000 Hz

**Power Meter**
- Power Meter Detector Type: InGaAs
- Power Meter Dynamic Range: +5 to -77 dB (CATV +25 to -57 dB)
- Auto Test Range: 0 to -36 dB
- Connector Type: 1.25mm & 2.5mm Univ, FC, ST and SC
- Calibrated Wavelengths: 850, 1300, 1310, 1490, 1550, 1625 nm
- Units of Measurement: dBm, dB
- Resolution: 0.01dB
- Power Measurement Uncertainty: ±0.05 dB
- Modulation Modes Detected: CW, 270 Hz, 1000 Hz, 2000 Hz

**Ordering Information**
FTE-5000-8513 LTS with 850/1300nm Light Source and Video Scope (Probe Sold Separately)
FTE-5000-1315 LTS with 1310/1550nm Light Source and Video Scope (Probe Sold Separately)
FTE-5000-QUAD LTS with 850/1300/1310/1550nm Light Source (No Video Scope)
VIS-300 Video Inspection Probe

Add a “C” to the end of the Part number for CATV Versions. Example: FTE-5000-8513C
FTE-5100 Fiber Optic Video Scope

Features
- Interchangeable Adapters
- Digital Zoom
- USB Port for Connection to PC
- 8 Hour Battery Life
- IEC61300-3-35 Auto Pass/Fail Grading System
- 150X and 300X Representation
- Position Image for Best Viewing
- Stores Connector Images
- Use with TTI CertSoft Software Suite
- Protective Rubber Boot with Stand
- Shipped with Universal AC Adapter
- Wide Range of Adapters Available
- One Hand Operation
- 4” TFT Display
- VIS-300 Probe is Compatible with the FTE1700 and FTE7000A

The FTE5100 has a Pass/Fail grading system with images that can be stored and recalled. Stored images may be associated with OTDR trace files to produce complete professional reports that include the OTDR trace, along with connector image and LTS results. The FTE5100 is indispensable for testing connectors end face prior to connecting to expensive optical test equipment. This helps ensure accurate measurements and also helps protect equipment from damage caused by contaminated connectors. It is essential to have clean connectors to ensure networks operate at properly. The VIS-300 probe may be purchased separately and used with other FTE series equipment. The VIS-300 has a full range of tips available.

Kit Contents
The FTE-5100 Kit includes Probe, LCD Scope Unit, AC wall adapter, 2.5mm patch cord tip, USB Cable, Manual on CD and PC Software

FTE-4000 Variable Optical Attenuator

Features
- Up to 80 dB Attenuation
- Built in Output Power Monitor
- Typical Insertion Loss <2dB
- Adjustable Step Sizes
- USB PC Interface with Remote Operation
- Absolute/Relative Attenuation Settings
- Calibrated at 1310/1550
- Rugged Case with Protective Rubber Boot
- Lowest Cost Hand Held VOA
- 4” Color Display

Specifications
- Attenuation Range
  FTE-4000-4 2 to 40dB
  FTE-4000-8 4 to 80dB
- Wavelengths
  1310 and 1550 nm
- Resolution
  0.1 dB
- Uncertainty
  +/- 0.5 dB
- Repeatability
  +/- 0.1 dB
- Insertion Loss
  <2 dB (<4dB FTE-4000-8)
- Return Loss
  50 dB
- Max Input Power
  27 dBm
- Graphical Display
  4 in Color TFT
- Dimensions
  8 5/8” L x 4 5/16” W x 2.3/8” H
  (219mm L x 109mm W x 60mm H)
- Weight
  1.8 lbs
- Battery
  Rechargeable NiMH - 6 hours operating time
- Power
  100-240 universal
  US, GB, EU, AU Mains
- Environmental
  Operation -10°C to + 40°C
- Accessories Included
  Universal power supply, FC and SC adaptors, USB Cable and Manual

The FTE-4000 is available with 40 dB or 80 dB attenuation levels.

Onboard Help System
As with all of our advanced test equipment, the VOA has an onboard help feature.

Applications
The FTE-4000 can assist in the testing of system budget compliance, balancing transmitter power and adjusting receiver attenuation settings.

Built-In Output Power Monitor
The built-in output power monitor assists in setting appropriate attenuations levels.

Sweep Mode
Sweep mode can produce attenuation levels across a selected range.

Rugged
The FTE-4000 is manufactured in our rugged splash proof housing with a highly protective boot.
VFL-280 Visual Fault Locator

Features
- Universal 2.5 mm Adapter
- Modulated Mode
- Standard AA Batteries
- >100 Hour Battery Life
- MM and SM Applications
- Compact Size

TTI VFL-280 Visual Fault Locator
This easy-to-use piece of equipment determines the precise location of breaks or severe micro-bends in a fiber or cable under test by visually checking fiber for leaks of visible light.

Find Poor Splices
Use the VFL to find leaky splices or connectors within a patch panel or breaks within the dead zone of an OTDR.

Small Size
Just a little wider and taller than a credit card, weighing just over 4 ounces.

Battery powered
Over 100 hours of operation on 2 AA alkaline batteries.

Universal Adapter
Shipped with a universal 2.5mm adapter.

Fiber Identification
Use the VFL to identify fibers in multi-fiber cables suitable for both singlemode and multimode fibers.

Power Save feature
The VFL-280 has an over rideable power saver feature that powers down the unit after 30 minutes.

Specifications
- Output Power 1mW max
- Wavelength 650 nm +/- 5nm
- Pulse Rate 6 Hz
- Emission Indicator LED
- Standard F/O Connector Universal 2.5 mm
- Duty Cycle 50%
- Battery 2 (AA) Alkaline
- Battery Life >100 hrs.
- Size 4.0” L x 2.5” W x 1.1” D
- Weight 4.2 oz.
- Operating Temperature -10 to 50 C
- Storage Temperature 30 to 60 C
- Auto Shut-Off 30 Min.

Specifications are Subject to Change Without Notice

View our NEW website www.teratec.us for our full range of products

Browse our list of global distributors

View product and instructional videos
The C-995 is a microprocessor-based control system that utilizes direct-digital-synthesis to deliver precise optical chopping rates from 4 Hz to 5000 Hz. Equipped with a large five-digit LED readout, the C-995 controller enables digital entry of the desired chopping rates from the front panel. Additionally, the C-995 is equipped with a bi-directional Rs-232 port that permits the user to set the desired chopping rate to a resolution of .001 Hz and to read the status of the instrument.

The C-995, designed with a phase-locked-loop control system, allows the chopping rate to also be synchronized to a user-supplied external clock ranging from 4 Hz to 5 KHz. The controller is then used to measure and display the frequency of the external clock.

The C-995 chopping head is attached to the controller by means of a 10 foot coiled cord. The precision etched blade is fully enclosed for protection from inadvertent damage. (An optional exposed blade version is also available.)

There are two apertures and two sections (30 slots and 3 slots) for the high and low frequency ranges, respectively. The aperture diameter is 15 mm with a slot width of 4.5 mm (30 slot section) or 30 mm (3 slot section). The small 4.75 inch square outline and two inch maximum depth permits easy integration into compact optical setups. Dual #8-32 mounting holes permit the apertures to be placed at a height as low as 0.75 inches above an optical bench, or with the included 1/2 inch rod and stand, as high as 13 inches above the mounting surface.

The ease of use and convenience of this instrument are matched only by the high performance to price ratio that is typical of products from Terahertz Technologies Inc. The C-995 is backed by our standard two year warranty and our guarantee of customer satisfaction.

### Features
- Wide Frequency Range  4 Hz to 5000 Hz
- Rock Solid Crystal Controlled Frequency
- Large 5 Digit LED Display
- Frequency resolution of 0.001 Hz
- External Clock Synchronization
- Covers 4 Hz to 5 KHz with only one blade
- Computer Interface for easy control
- Enclosed Chopper Blade

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chopping Frequency Range</td>
<td>4 Hz to 500 Hz (Inner slots), 40 Hz - 5 KHz (outer slots)</td>
</tr>
<tr>
<td>Aperture Size</td>
<td>0.6 inch diameter (15 mm), and 0.6 inch by 0.2 inch (15 x 4.5 mm)</td>
</tr>
<tr>
<td>Frequency Control</td>
<td>Phase-Locked-Loop, Direct Digital Synthesis</td>
</tr>
<tr>
<td>Frequency Uncertainty</td>
<td>±0.0025 % of setting</td>
</tr>
<tr>
<td>Phase Jitter</td>
<td>0.1 % peak to peak, 3 slot section, 1.0 % peak to peak, 30 slot section</td>
</tr>
<tr>
<td>Settling Time to Phase Lock</td>
<td>&lt; 3 seconds</td>
</tr>
<tr>
<td>External Clock Input Requirements</td>
<td>TTL, CMOS Compatible Square Wave, 4 Hz to 5000 Hz</td>
</tr>
<tr>
<td>Sync Signal Output</td>
<td>TTL, CMOS Compatible Square Wave</td>
</tr>
<tr>
<td>Display</td>
<td>Five Digit, high intensity green, 0.5&quot; high</td>
</tr>
<tr>
<td>Temp. Coefficient of Chopping Frequency</td>
<td>&lt; 10 ppm/C</td>
</tr>
<tr>
<td>Frequency Resolution (W/Rs-232 Control)</td>
<td>.001 Hz</td>
</tr>
<tr>
<td>Frequency Resolution (W/Front Panel Control)</td>
<td>.01 Hz</td>
</tr>
<tr>
<td>Counter Resolution using External Clock</td>
<td>0.1 Hz, 1 Hz</td>
</tr>
<tr>
<td>Rs-232 Interface</td>
<td>9600 Baud, N-8-1, 3 wire</td>
</tr>
<tr>
<td>Chopper Head Mounting</td>
<td>Standard 8-32 tapped holes, mounting rod and stand is provided</td>
</tr>
<tr>
<td>Chopper Blade Diameter</td>
<td>4.1 inch diameter</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 - 40 C</td>
</tr>
<tr>
<td>Dimensions (Head)</td>
<td>4.5&quot; H x 4.5&quot; W x 2&quot; D, 114 mm x 114 mm x 51 mm</td>
</tr>
<tr>
<td>Dimensions (Controller)</td>
<td>2.7&quot; H x 7&quot; W x 9.1&quot; D, 69 mm, 178 mm, 231 mm</td>
</tr>
<tr>
<td>Interconnecting cable supplied</td>
<td>Coiled Cord 10 feet max length</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>95-260 VAC, 50-60 Hz, 15 VA Max</td>
</tr>
<tr>
<td>CE Certification</td>
<td>Yes</td>
</tr>
<tr>
<td>Weight</td>
<td>3 lbs, 1.36 Kg</td>
</tr>
<tr>
<td>Standard Warranty</td>
<td>Two years, Components and Workmanship, 30 Day Satisfaction Guarantee</td>
</tr>
<tr>
<td>Application Software Provided</td>
<td>Downloadable from TTI website</td>
</tr>
</tbody>
</table>

TTI reserves the right to change specifications without notice.
The PDA-750 is a low noise, high gain, transimpedance amplifier designed to provide a direct digital readout of the current generated from a photodiode photomultiplier, or other similar current source. With full scale input ranges of ±20 nA to ±20 mA and a noise level of less than 1 pA, the PDA-750 offers superb dynamic range. Digital entry of an Amps/Watt setting via the front panel controls permits the instrument to display current measurements in units of Watts. The A/W setting ranges from 1.000 to 0.100. A variable bias supply is built into the instrument and may be switched into series with the device under test. It can supply digitally selectable voltages ranging from -14.00 to +14.00 volts. The Offset control permits the nulling of background signals as large as ±200% of the range currently in use. Rechargeable batteries isolate the unit from the mains and eliminate the effects of ground loops and/or power line noise that may be present during sensitive measurements. They will power the instrument for approximately 10 hours between charges. The unit may be operated normally while the batteries are charging.

The large 4 1/2 digit Liquid Crystal Display provides a maximum resolution of 1 part in ±20,000, thus enabling the detection of very small changes in the signal under test. An analog output port provides a ±2 Volt, full-scale signal that is directly proportional to the display reading of ±20,000 counts. The PDA-750 is equipped with a bi-directional Rs-232 serial port that enables the user to remotely control the instrument and read data and the instrument’s status.

Applications for the PDA-750 include: serving as a precision readout device for Unity Quantum Efficient detectors such as the QED-150 manufactured by UDT Instruments, characterization of detector dark current, a readout interface for spectrometers, spectral calibration of detectors, a high gain precision transimpedance amplifier and as a sensitive, high precision optical power meter. The ease of use and convenience of this instrument is typical of TTI products. This instrument is covered by our standard two year limited warranty and guarantee of satisfaction. The PDA750 may be purchased with a 10DP Silicon Photodiode.

### Specifications

- **Full Scale Ranges**: ±20 nA to ±20 mA in decade steps, 1 pA maximum resolution
- **Maximum Input Current Without Damage**: ±25 mA
- **Measurement Uncertainty**: ±0.05 % of Reading ±2 Least Significant Digits
- **A/W Setting**: 0.100 to 1.000 A/W in increments of .005 A/W
- **Input Impedance (DC to 2 KHz)**: Zero Ohms Virtual Ground, Single Ended
- **Input Capacitance**: 25 pF
- **Output Impedance**: 100 Ohms
- **Bias Voltage**: Selectable from -14 V to +14 V in 6.5 mv increments
- **Analog Output Port**: ±2 V corresponds to ±20 000 counts of range in use
- **Noise and Drift**: < ±1 pA/5 seconds on most sensitive range
- **Background Cancelation**: ±200 % of the range in use
- **Analog Output Port Frequency Response**: DC to 2 KHz, most sensitive range, DC to 40 KHz, least sensitive range
- **Rs-232 Interface**: 9600 Baud, N-8-1, 3 wire, Bi-directional, Cable Provided
- **Display**: 4 1/2 Digit LCD, 0.4” high
- **Power Requirements**: Rechargeable Ni-mH batteries provide approximately 10 hours of use
- **External Power Supply/Charger**: 85 - 250 VAC, 50-60 Hz, < 9 VA
- **Mains Adaptors**: Adaptors provided for US, Continental Europe, Great Britain and Australia
- **Operating Temperature Range**: 0 - 40 C
- **Dimensions**: 5.5” W x 2.5” H x 8.5” L (140 x 63 x 215 mm)
- **Weight**: 2 lbs., 0.9 kg (excluding external power supply)
- **Interconnecting cable supplied**: Rs-232, 14 feet max length
- **CE Certification**: Yes
- **Standard Warranty**: Two years, Components and Workmanship, 30 Day Satisfaction Guarantee
- **Application Software Provided**: Downloadable from TTI website, www.teratec.us

### Features

- Eight Decade Dynamic Range
- Less Than 1 pA Noise
- Maximum Resolution 1 part in +/- 20 000
- Rechargeable Ni-mH Batteries for Low Noise
- Digital Input of A/W value yields readout in Watts
- Computer Interface for easy control
- Background Cancelation of +/- 200%
- Digitally set bias source from -14.00V to +14.00V

### PIN 10DP Photovoltaic Detector

- **Active Area**: Area (mm²), 100, Dimensions (mm) 11.28
- **Peak Responsivity Wavelength typ. (Åp)**: 970nm
- **Responsivity at λp**: Min. 0.55 A/W and typ. 0.60 A/W
- **Capacitance (pF) @ 0V**: 9800 Max.
- **Shunt Resistance (Ω at -10mV)**: Min. 0.05 A/W and Typ. 0.2 A/W
- **NEP @ 0V and 970nm**: 6.8 x 10^-15 typ.
- **Rise Time @ 0V and 633nm with 50Ω**: 1000 ns typ.
- **Temp range**: Operating -40C to +100C, Storage -55C to +125C

### Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDA-750</td>
<td>Photodiode Transimpedance Amplifier</td>
</tr>
<tr>
<td>PDA-750-10DP</td>
<td>Photodiode Amplifier with 10DP Si Photodiode with Stand and Holder</td>
</tr>
<tr>
<td>10-DP</td>
<td>10DP Si Photodiode with Stand and Holder</td>
</tr>
</tbody>
</table>
The TIA-525, 527 and 952 series offer a free space option. Patch cords and adapters can be supplied to mate with various fiber optic connectors. The TIA-525 and 527 have dual adapters can be supplied to mate with various fiber optic connectors.

### Optical to Electrical Converters

#### Features
- 400 nm to 1700 nm wavelengths
- Battery or External AC Operation
- Bandwidth to 20 GHz
- Compact Size

#### Typical InGaAs Detector Response
- Wavelength in nm

![Typical InGaAs Detector Response](image)

#### Typical Si Detector Response
- Wavelength in nm

![Typical Si Detector Response](image)

### O/E Converter Selection Chart

<table>
<thead>
<tr>
<th>Model/BW</th>
<th>Detector</th>
<th>Wavelength</th>
<th>Power</th>
<th>AC/DC Coupling</th>
<th>Conversion Gain @ Peak Wavelength</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIA-525-ST (125 MHz)</td>
<td>Silicon</td>
<td>400 - 1000 nm</td>
<td>9 V Lithium Battery*/</td>
<td>Selectable</td>
<td>10,000 V/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
<tr>
<td>TIA-525-FC or -ST (125 MHz)</td>
<td>InGaAs</td>
<td>850 - 1700 nm</td>
<td>9 V Lithium Battery*/</td>
<td>Selectable</td>
<td>10,000 V/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
<tr>
<td>TIA-527-FC (125 MHz)</td>
<td>Matched InGaAs</td>
<td>850 - 1700 nm</td>
<td>9 V Lithium Battery*/</td>
<td>Selectable</td>
<td>10,000 V/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
<tr>
<td>TIA-952-FC (750 MHz)</td>
<td>InGaAs</td>
<td>850 - 1700 nm</td>
<td>Universal Power Supply</td>
<td>AC</td>
<td>2500 V/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
<tr>
<td>TIA-1200-FC (12 GHz Typ.)</td>
<td>InGaAs</td>
<td>900 - 1700 nm</td>
<td>Universal Power Supply</td>
<td>DC</td>
<td>.8 A/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
<tr>
<td>TIA-2000-FC (20 GHz Typ.)</td>
<td>InGaAs</td>
<td>900 - 1700 nm</td>
<td>Universal Power Supply</td>
<td>DC</td>
<td>.8 A/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
<tr>
<td>TIA-3000 (10 GHz)</td>
<td>InGaAs</td>
<td>900 - 1700 nm</td>
<td>Universal Power Supply</td>
<td>AC</td>
<td>500 V/W</td>
<td>1.2W, 2.5L,1.5H inches 30.5W, 63L, 33H mm</td>
</tr>
</tbody>
</table>

* Specifications subject to change without notice.

30 hrs. avg. (no load) 9 V Lithium, use of std. 9 Volt battery will provide approx. 1/3 life of Lithium battery.

---

**Notes:**
- Specifications subject to change without notice.
- V = 500 V/W
**LTX-551x Analog/Digital Fiber Optic Links**

**Features**
- One analog plus up to four digital channels
- DC to 25 MHz analog bandwidth
- Input ranges of ±1 V and ±5 V
- Analog signal digitized to 12 or 14 bit precision
- DC to 48 Mb/s data rate (each channel)

The LTX-5510 and the LTX-5515 Signal Transports enables the precise conveyance of one analog channel plus up to four digital channels of information over fiber optic links ranging from meters to more than 10 kilometers.

Incoming analog data is digitized to 12 or 14 bit precision at up to 100 mega-samples per second and transmitted over optical fiber at one to two gigabits per second depending on the model. The receiver acquires this digital data and accurately reconstructs the analog signal at the far end of the fiber optic link.

The analog signal bandwidth is from DC to 25 MHz (-3 dB). Two input voltage ranges are provided, ±1 Volt and ±5 Volts. The input impedance of the transmitter analog channel may be set to 50 ohms or 1 megohm (75 ohms is optional).

Multiplexed along with the analog data, are up to four independent TTL/CMOS/LVTTL digital signals that may be toggled at rates of up to 48 Mb/s.

The LTX-5510 and LTX-5515 models are available in multi-mode or single-mode versions depending on the transmission distance required. The LTX-55XX-850 transmits at 850nm over multi-mode fiber optic links of up to 500 meters in length, while the LTX-55XX-1310 transmits at 1310nm over single-mode fiber to span distances exceeding 10 km.

Applications include data acquisition for plasma physics experiments, signal transmission and control of equipment at high voltage potentials, transmission of high quality video, and precise noise-free signal transmission in hostile EMI environments.

**Specifications**

<table>
<thead>
<tr>
<th>LTX-5510</th>
<th>LTX-5515</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analog Signal Bandwidth</strong></td>
<td>DC to 12.5 MHz (-3 dB)</td>
</tr>
<tr>
<td><strong>Input Voltage Ranges</strong></td>
<td>±1 V or ±5 V (selectable)</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>12 or 14 bit</td>
</tr>
<tr>
<td><strong>Transfer Accuracy</strong></td>
<td>±0.1% Full Scale, ±20 mV offset</td>
</tr>
<tr>
<td><strong>Signal Latency</strong></td>
<td>Approximately 300 nS</td>
</tr>
<tr>
<td><strong>A/D Sampling Rate</strong></td>
<td>50 Megasamples/S</td>
</tr>
<tr>
<td><strong>Input Impedance</strong></td>
<td>50 Ohms or 1 Megohm</td>
</tr>
<tr>
<td><strong>Output Drive Capability</strong></td>
<td>±5 V open circuit, ±2 V into 50 ohm load</td>
</tr>
<tr>
<td><strong>Input Impedance</strong></td>
<td>50 Ohms</td>
</tr>
<tr>
<td><strong>Digital Inputs</strong></td>
<td>TTL, LVTT, CMOS compatible</td>
</tr>
<tr>
<td><strong>Digital Outputs</strong></td>
<td>LVTT (0 - 3.3V)</td>
</tr>
<tr>
<td><strong>Digital switching Rates</strong></td>
<td>0 - 12 MHz</td>
</tr>
<tr>
<td><strong>Digital Signal Edge Uncertainty</strong></td>
<td>0 - 20 nS</td>
</tr>
<tr>
<td><strong>Laser Wavelength</strong></td>
<td>850 nm ±/− 20 nm or 1310 nm ±/− 20 nm</td>
</tr>
<tr>
<td><strong>Optical Transmission Rate</strong></td>
<td>10 Gb/S</td>
</tr>
<tr>
<td><strong>Loss Budget</strong></td>
<td>&gt; 15 dB</td>
</tr>
<tr>
<td><strong>Power Supply Included</strong></td>
<td>95 - 260 VAC, 50 - 60 Hz, 16 VA Max - Universal, Universal, Continental Europe and Australian plugs included</td>
</tr>
<tr>
<td><strong>Fiber Optic Connectors</strong></td>
<td>ST standard, FC optional</td>
</tr>
<tr>
<td><strong>LED Annunciators Provided</strong></td>
<td>Input Overload (TX), Optical Signal (RX)</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>9 - 24V DC, 500mA</td>
</tr>
<tr>
<td><strong>Typical Distances MM</strong></td>
<td>500 M - 50/125µm and 300 M - 62.5/125µm</td>
</tr>
<tr>
<td><strong>Typical Distances SM</strong></td>
<td>10 km with 9/125 micron fiber</td>
</tr>
<tr>
<td><strong>Weight (each)</strong></td>
<td>16.2 oz. (0.46 Kg)</td>
</tr>
<tr>
<td><strong>Standard Warranty</strong></td>
<td>Two Years, Components and Workmanship, 30 day Satisfaction Guarantee</td>
</tr>
<tr>
<td><strong>Accessories Supplied</strong></td>
<td>5 pin DIN connector for digital inputs/outputs, xmr and receiver</td>
</tr>
</tbody>
</table>

To Order:

<table>
<thead>
<tr>
<th>LTX-551X-X-X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Transmission Rate:</td>
</tr>
<tr>
<td>0 = 1 gigabit</td>
</tr>
<tr>
<td>5 = 2 gigabit</td>
</tr>
<tr>
<td>Laser Wavelength:</td>
</tr>
<tr>
<td>850 = 850nm MultiMode</td>
</tr>
<tr>
<td>1310 = 1310nm Singlemode</td>
</tr>
</tbody>
</table>

LTI reserves the right to change specifications without notice.
LTX-552x Digital Fiber Optic Links

Features
- Channel capacity up to 50 Mb/S
- Accepts LVTTL and/or CMOS/TTL inputs
- Transmits 16 independent TTL signals over a single fiber
- Outputs are LVTTL (0 - 3.3 V)
- 850 nm version for multimode links up to 500 M
- 1310 nm version for SM links up to 10 KM
- Paired with LTX-551x to configure remote high speed
  12 or 14-bit A/D and D/A converter modules

Specifications

<table>
<thead>
<tr>
<th></th>
<th>LTX-5520</th>
<th>LTX-5525</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Independent Channels</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Signal Latency (with one meter of fiber)</td>
<td>Approximately 300 nS</td>
<td></td>
</tr>
<tr>
<td>Input Impedance</td>
<td>50 Ohms or 1 Megohm</td>
<td></td>
</tr>
<tr>
<td>Output Drive Capability</td>
<td>+/- 5 V open circuit, +/- 2 V into 50 ohm load</td>
<td></td>
</tr>
<tr>
<td>Output Impedance</td>
<td>50 Ohms</td>
<td></td>
</tr>
<tr>
<td>Digital Inputs</td>
<td>TTL, LVTTL , CMOS compatible</td>
<td></td>
</tr>
<tr>
<td>Digital Outputs</td>
<td>LVTTL ( 0 - 3 V)</td>
<td></td>
</tr>
<tr>
<td>Digital switching Rates</td>
<td>0 - 12.5 MHz (up to 24 Mb/s)</td>
<td>0 - 24 MHz (up to 48 Mb/s)</td>
</tr>
<tr>
<td>Digital Signal Edge Uncertainty</td>
<td>0 - 20 nS</td>
<td>0 - 10 nS</td>
</tr>
<tr>
<td>Laser Wavelength</td>
<td>850 nm +/- 20 nm or 1310 nm +/- 20 nm</td>
<td></td>
</tr>
<tr>
<td>Optical Transmission Rate</td>
<td>1.0 Gb/S</td>
<td>2.0 Gb/S</td>
</tr>
<tr>
<td>Loss Budget</td>
<td>15 dB max</td>
<td></td>
</tr>
<tr>
<td>Optical Return Loss</td>
<td>&gt; 15 dB</td>
<td></td>
</tr>
<tr>
<td>Laser Safety Classification</td>
<td>Class I safety per FDA/CDRH and IEC-825-1 regulations</td>
<td></td>
</tr>
<tr>
<td>Typical Trans. Distances MM</td>
<td>500 M - 50/125µ and 300 M - 62.5/125µ</td>
<td>250 M - 50/125µ and 150 M - 62.5/125µ</td>
</tr>
<tr>
<td>Typical Trans. Distances SM</td>
<td>10 KM with 9/125 micron fiber</td>
<td></td>
</tr>
<tr>
<td>Fiber Optic Connectors</td>
<td>ST standard, FC optional</td>
<td></td>
</tr>
<tr>
<td>Signal Connectors</td>
<td>DB25 on input and output</td>
<td></td>
</tr>
<tr>
<td>LED Annunciators Provided</td>
<td>Input Overload (TX), Optical Signal (RX)</td>
<td></td>
</tr>
<tr>
<td>Power Requirements</td>
<td>9 - 24V DC, 500mA</td>
<td></td>
</tr>
<tr>
<td>Power Supply Included</td>
<td>95 - 260 VAC, 50 - 60 Hz, 16 VA Max - Output 9VDC/67A with Universal, US, UK, Continental Europe and Australian plugs included</td>
<td></td>
</tr>
<tr>
<td>LED Annunciators Provided</td>
<td>Input Overload (transmitter), Optical Signal - ON (receiver)</td>
<td></td>
</tr>
<tr>
<td>Tx and Rx Dimensions</td>
<td>6.89L x 4.1W x 1.6H in. (175L x 105 W x 40 H mm)</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 - 40 C</td>
<td></td>
</tr>
<tr>
<td>Weight (each)</td>
<td>16.2 oz. (0.46 Kg)</td>
<td></td>
</tr>
<tr>
<td>Standard Warranty</td>
<td>Two Years, Components and Workmanship, 30 day Satisfaction Guarantee</td>
<td></td>
</tr>
<tr>
<td>Accessories Supplied</td>
<td>db25 connectors for digital inputs /outputs</td>
<td></td>
</tr>
</tbody>
</table>

The LTX-552x conveys sixteen independent channels of digital information over a fiber optic link ranging from meters to more than 10 kilometers.

Each of the 16 incoming TTL channels is sampled at up to 5 x 107 times per second, multiplexed and transmitted serially over an optical fiber at up to 2 gigabit per second. The receiver acquires this digital data and de-multiplexes it to 16 separate output ports. Each of these channels may be toggled at rates ranging from 0 to 48 Mb/S.

Two models are available. The LTX5520 transmits serially at 1 gigabit and the LTX5525 transmits to 2 gigabit over either SM or MM fibers. The distance between units determines the fiber required to complete the link. 850 nm units operate on multimode fiber up to 500 meters in length, while 1310 nm units operate with single-mode fiber to span distances exceeding 10 kilometers.

The LTX-5510 precision analog fiber optic link was the first in our series of “Signal Transporters”. It digitizes an analog signal at a 50 Ms/S rate with 12-bit precision and reconstructs the signal at the LTX-5510 receiver by means of a fast D/A converter. If the user employs the LTX-5520 receiver with the LTX-5510 transmitter, the result is a remote fiber-coupled 12-bit data acquisition system.

Similarly one can employ the LTX-5520 transmitter with the LTX-5510 receiver to generate fast high resolution analog signals at a remote location.

Applications include data acquisition for plasma physics experiments, signal transmission and control of equipment at high voltage potentials, operation through equipment at high voltage potentials, operation through Faraday shields, and precise noise-free signal transmission in hostile EMI environments.

To Order:

LTX-552x-X-X

Optical Transmission Rate:
- 0 = 1 gigabit
- 5 = 2 gigabit

Laser Wavelength:
- 850 = 850nm MultiMode
- 1310 = 1310nm SingleMode

Optical Connector
- Blank = ST
- FC = FC

TTL reserves the right to change specifications without notice.
LTX-7215 Bidirectional Analog/Digital Fiber Optic Link

Transmit and receive precise analog data from DC to 25 MHz over a single optical fiber!

The LTX-7215 Bidirectional Fiber Optic Link multiplexes one analog signal along with up to 4 independent TTL/CMOS/LVTTL digital channels to over 10 kilometers with a single fiber. The incoming analog data is digitized to 12 bit precision at 100 mega samples per second and the digital channels operate at data rates of 0 to 50Mb/s. This is then transmitted at 2 Gb/s for distances up to 10 kilometers.

The digital signal is then received and the analog signal is accurately reproduced at the far end of the fiber optic link. The analog signal bandwidth may be from DC to 25 MHz (-3dB). The LTX-7215 has input voltage ranges of ±1 Volt or ±5 Volts. The input impedance of the analog channel may be set to 50 ohms or 1 megohm (75 ohms is optional). The LTX7215 series has a battery option that will allow for up to 3 hours of operation for experiments at extremely high potentials.

Applications include data acquisition for plasma physics experiments, signal transmission and control of equipment at high voltage potentials, transmission of high quality video, and precise noise-free signal transmission in hostile EMI environments.

Features
- Single Fiber Transceivers
- DC-25MHz Analog
- Four Independent Digital Channels
- 0 to 50 Mb/s Per Digital Channel
- +/-5V or +/-1V Full Scale I/O
- Digital LVTTL, CMOS/TTL Input
- Analog I/O - 12 bit Precision
- AC/DC Operation

Analog Channel Specifications
- Number of Analog Channels: 1
- Analog Signal Bandwidth: DC to 25MHz (-3 dB)
- Resolution: 12 Bits
- Input Voltage Ranges: +/- 1 V or +/- 5 V
- Transfer Accuracy: +/- 10 mv offset, +/- 0.1% Full Scale (100kHz sine wave 0 V peak-peak)
- Output Impedance: 50 Ohms
- Output Drive Capability: +/- 5 V open circuit, +/- 2 V into 50 ohm load
- Input Impedance: 50 Ohms or 1 Megohm || 20 pf, (selectable)
- A/D Sampling Rate: 100 Mega samples/s

Digital Channel Specifications
- Number of Digital Channels: 4
- Digital Inputs: TTL, LVTTL, CMOS compatible
- Digital Outputs: LVTTL (-3.3V)
- Signal Latency (with one meter of fiber): Approximately 300 ns
- Digital Channel Switching Rate: 0 - 50 Mb/s
- Digital Signal Edge Uncertainty: 0 - 10 ns

General Specifications
- Laser Wavelength: 1310 nm +/- 20 nm
- Optical Transmission Rate: 2.0 Gb/s
- Loss Budget: 7 dB
- Laser Safety Classification: Class I safety per FDA/CDRH and IEC-825-1 regulations
- Typical Transmission Distances: 10 km with 9/125µm (SM) fiber
- Fiber Optic Connectors: ST standard, FC available upon request
- Analog Connector: BNC
- Digital Connectors: (Cable and Breakout Board Supplied)
- LED Annunciators Provided: Input Overload, Optical Signal and Power
- Power Supplies: Wall Mount, Universal, US, UK, Continental Europe and Australian plugs included
- Power Requirements: 95 - 260 VAC, 50 - 60 Hz, 16 VA Max.
- Batteries/hrs of Operation: 6 AA NiMH / 3 hrs
- Operating Temperature Range: 0 - 40 C
- Transmitter Dimensions (mm): 214 L x 114 W x 59 H
- Weight (each): 0.578 Kg
- Standard Warranty: Two Years, Components and Workmanship, 30 day Satisfaction Guarantee

Ordering Information
- LTX-7215-1310: Singlemode, 2.0 Gb/s Analog/Digital Signal Transporter
- LTX-7215-1310-BAT: Singlemode, 2.0 Gb/s Analog/Digital Signal Transporter with Battery Pack

We welcome the challenge of CUSTOM APPLICATIONS!

CALL, FAX, OR EMAIL with your requirements.
The LTX-7225 Bidirectional Fiber Optic Link multiplexes up to 16 independent channels of digital TTL/CMOS/ LVTTL information to over 10 kilometers with a Singlemode fiber. The LTX-722X samples each of the channels at 100 million times a second. The signals are then multiplexed and transmitted serially over a single optical fiber at 2 gigabits per second. The far end of the fiber link demultiplexes the signal back into independent outputs. Each of these channels maybe be toggled at rates up to 50 Mb/S.

Using the LTX-721X in conjunction with a LTX-722X unit, results in a remote fiber-coupled 12-bit data acquisition system, digitizing the signal at up to 50 Mb/s and reconstructs the signal by means of a fast D/A converter. The units may also be employed in the reverse direction if desired.

Applications include data acquisition for plasma physics experiments, signal transmission and control of equipment at high voltage potentials, operations through Faraday shields, and precise noise-free signal transmission in hostile EMI environments.

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Digital Channels</td>
<td>16</td>
</tr>
<tr>
<td>Digital Inputs</td>
<td>TTL, LVTTL, CMOS compatible</td>
</tr>
<tr>
<td>Digital Outputs</td>
<td>LVTTL (0 - 3.3 V)</td>
</tr>
<tr>
<td>Signal Latency (with one meter of fiber)</td>
<td>Approximately 300 ns</td>
</tr>
<tr>
<td>Digital Channel switching Rate</td>
<td>0 - 50 Mb/S</td>
</tr>
<tr>
<td>Digital Signal Edge Uncertainty</td>
<td>0 - 10 ns</td>
</tr>
<tr>
<td>Laser Wavelength</td>
<td>1310 nm +/- 20 nm</td>
</tr>
<tr>
<td>Optical Transmission Rate</td>
<td>2.0 Gb/S</td>
</tr>
<tr>
<td>Loss Budget</td>
<td>7 dB</td>
</tr>
<tr>
<td>Laser Safety Classification</td>
<td>Class I safety per FDA/CDRH and IEC-825-1 regulations</td>
</tr>
<tr>
<td>Typical Transmission Distances</td>
<td>10 KM with 9/125 micron fiber</td>
</tr>
<tr>
<td>Fiber Optic Connectors</td>
<td>ST standard, FC available upon request</td>
</tr>
<tr>
<td>Analog Connector</td>
<td>BNC</td>
</tr>
<tr>
<td>Digital Connector</td>
<td>HDMI (Cable and Breakout Board Supplied)</td>
</tr>
<tr>
<td>LED Annunciators Provided</td>
<td>Input Overload, Optical Signal and Power</td>
</tr>
<tr>
<td>Power Supplies</td>
<td>Wall Mount, Universal, US, UK, Continental Europe and Australian plugs included</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>95 - 260 VAC, 50 - 60 Hz, 16 VA Max.</td>
</tr>
<tr>
<td>Batteries/hrs of Operation</td>
<td>6 AA NiMH / 3 hrs</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 - 40 C</td>
</tr>
<tr>
<td>Dimensions ( mm )</td>
<td>214 L x 114 W x 59 H</td>
</tr>
<tr>
<td>Weight (each)</td>
<td>0.578 Kg</td>
</tr>
<tr>
<td>Standard Warranty</td>
<td>Two Years, Components and Workmanship, 30 day Satisfaction Guarantee</td>
</tr>
</tbody>
</table>

### Ordering Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTX-7225-1310</td>
<td>Singlemode, 2.0 Gb/s 16 Channel Digital Signal Transporter</td>
</tr>
<tr>
<td>LTX-7225-1310-BAT</td>
<td>Singlemode, 2.0 Gb/s 16 Channel Digital Signal Transporter with Battery Pack</td>
</tr>
</tbody>
</table>
The LT-880 Laser Tachometer is a hand-held, battery operated device that senses the passage of reflective/non-reflective markings on a rotating or linearly translated piece of machinery in order to determine the target's rotational rate or its linear velocity. The sensing head is remote from the electronics package and is fiber coupled. This permits measurement of objects in hostile environments or in hard-to-get-to locations. The sensed change in reflectivity from black to white generates a transition at its output.

This TTL/CMOS compatible signal may be utilized by a spectrum analyzer, computer or electronic counter in order to provide information concerning vibration, angular or linear velocity of the machinery under test. The high speed of the unit, 40,000 PPS, coupled with its small spot size can provide high resolution measurements unattainable with conventional incandescent source tachometers.

Use the right angled adapter if it is not possible to aim the standard optical head at the target. The transmissive head is a beam breaking device that allows a <1/4 inch slotted target to pass through the heads transmitter and receiver.

A six digit LCD display indicates the rate of passage of the white/dark areas of the encoder and registers the results in units of revolutions per minute, (RPM), revolutions per second, (RPS), or pulses per second (PPS). The reading is updated twice per second. The user may input the number of pulses per revolution generated by the encoder for use in the subsequent calculations. They may range from 1 pulse per revolution to 255 pulses per revolution.

### Features
- Remote Sensing of RPM and Angular Vibration
- No Special Reflective Tape Required
- Large 5 Digit LED Display
- Sensing rates to 40 000 PPS
- Ni-mH Powered with Fast Charger
- Measures RPM, RPS, PPS
- Entry of number of encoder sectors

### Specifications

<table>
<thead>
<tr>
<th>Units of Measurement</th>
<th>Revolutions per Second, Revolutions per Minute, Pulses per Second</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Update Rate</td>
<td>Twice per Second</td>
</tr>
<tr>
<td>Readout Uncertainty</td>
<td>± .02 % of Reading, ± 1 LSD</td>
</tr>
<tr>
<td>Maximum Measurement Rate</td>
<td>40 000 PPS</td>
</tr>
<tr>
<td>Range from Sensor to Target</td>
<td>12 to 125 mm (using white copier paper)</td>
</tr>
<tr>
<td>Laser Wavelength</td>
<td>650 nm ± 10 nm</td>
</tr>
<tr>
<td>Laser Output Power</td>
<td>&lt; 2 milliwatts</td>
</tr>
<tr>
<td>Laser Spot Size</td>
<td>&lt; 1.9 mm @ 13 mm range</td>
</tr>
<tr>
<td>Laser Beam Divergence</td>
<td>&lt; 13 milliradians</td>
</tr>
<tr>
<td>Display</td>
<td>Six Digit LCD, 0.375 height, Six LED annunciators</td>
</tr>
<tr>
<td>Frequency Output Port</td>
<td>TTL pulse for each reflective sector sensed, (0 to 5 volts)</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>100 Ohms</td>
</tr>
<tr>
<td>Standard Fiber Optic Cable Length</td>
<td>5 meters</td>
</tr>
<tr>
<td>Standard Fiber Types</td>
<td>Receiver - 400 um core, Transmitter - 62.5 um core</td>
</tr>
<tr>
<td>Standard Connector Type</td>
<td>ST Type</td>
</tr>
<tr>
<td>Batteries Supplied</td>
<td>Four AA NiMH, 2700 mAH</td>
</tr>
<tr>
<td>Charger Power Requirements</td>
<td>95 - 260 VAC, 50-60 Hz Universal, &lt; 10 VA</td>
</tr>
<tr>
<td>Mains Connectors Supplied</td>
<td>North American, Great Britain, Continental Europe, Australian</td>
</tr>
<tr>
<td>Charging Time</td>
<td>Approximately two hours</td>
</tr>
<tr>
<td>Dimensions (Controller)</td>
<td>200 mm L x 98 mm W x 38 mm D</td>
</tr>
<tr>
<td>Dimensions (Sensor)</td>
<td>40 mm L x 13 mm Diameter, 1/2 by 20 Thread, Jam Nuts Included</td>
</tr>
<tr>
<td>Operating Temperature, Electronics, Sensor Head</td>
<td>0 - 50 C, - 40 - 120 C</td>
</tr>
<tr>
<td>Weight</td>
<td>0.46 Kg</td>
</tr>
<tr>
<td>Accessories Provided</td>
<td>Carrying Case, Batteries, Power Supply/Charger, Operating Manual</td>
</tr>
<tr>
<td>Standard Warranty</td>
<td>Two years, Components and Workmanship, 30 Day Satisfation Guarantee</td>
</tr>
</tbody>
</table>

### Ordering Information
- LT-880 Fiber Optic Laser Tachometer (Includes 5 Meter Cable with Reflective Sensor Head)
- LT-880-10 Fiber Optic Laser Tachometer (Includes 10 Meter Cable with Reflective Sensor Head)
- LT-880-T Fiber Optic Laser Tachometer (Includes 5 Meter Cable with Transmissive Sensor Head)
- LT880OH-RF 5 Meter Cable with Reflective Sensor Head for use with LT 880
- LT880OH-T 5 Meter Cable with Transmissive Sensor Head for use with LT 880
- RAA-LT880 Right Angle Adapter for use with LT-880 Reflective Optical Head

TTI reserves the right to change specifications without notice.
Amazing Power in a Micro Package

TTI supports a full line of multi-wave test equipment for DWDM and CWDM networks. Our products include advanced OTDRs as well as the new Micro-OSAs. Our products meet the requirements for the small, rugged, and powerful test equipment today’s field technicians require.

- Multi-wave (multi-channel) DWDM network testing in conveniently small, powerful packages
- Video Inspection systems on board to ensure proper connector conditions prior to testing
- DWDM OTDR features a fully functional Tunable Laser Source operation
- Micro-OSAs include a 6GHz line graph feature

Proudly made in the USA

Advanced Fiber Optic Test and Measurement Equipment in the Palm of Your Hand

TTI is the leader in providing high performance fiber optic test equipment for DWDM and CWDM networks. Our products include advanced OTDRs, new Micro-OSAs, Fiber Optic Links, and Optical Power Meters. TTI is dedicated to providing the best solution for your testing needs.

- OTDRs
  - FTE-7100-CWDM-ID OTDR
  - FTE-7200-CWDM OTDR
  - FTE-7100 MicroOTDR
  - FTE-7000A DWDM OTDR
  - FTE-7000A MM/SM/Quad OTDR
  - FTE-7000A-PON OTDR
  - FTE-7000A-CWDM OTDR
  - FTE-7500A-CWDM-ID OTDR

- CWDM Analyzers
  - FTE-7100-CWDM-ID OTDR
  - FTE-7200-CWDM Channel Analyzer
  - FTE-7000A-CWDM OTDR
  - FTE-8100-CWDM/DWDM Spectrum Analyzer
  - FTE-7500A-CWDM-ID OTDR

- DWDM Analyzers
  - FTE-8200-DWDM Micro OSA
  - FTE-7000A-DWDM OTDR
  - FTE-8100-CWDM/DWDM Spectrum Analyzer
  - FTE-7500A-CWDM-12 OTDR

- CWDM Analyzers
  - FTE-7100-CWDM-ID OTDR
  - FTE-7200-CWDM Channel Analyzer
  - FTE-7000A-CWDM OTDR
  - FTE-8100-CWDM/DWDM Spectrum Analyzer
  - FTE-7500A-CWDM-ID OTDR

- Fiber Optic Links
  - LTX-551x Analog/Digital Fiber Optic Links
  - LTX-552x Digital Fiber Optic Links
  - LTX-7215 Bidirectional Analog/Digital Fiber Optic Link
  - LTX-7225 Bidirectional Fiber Optic Link

- O to E Converters Comparison Chart

- Photonic Test and Measurement
  - C-995 Optical Chopper
  - PDA-75O Photodiode Transimpedance Amplifier
  - LT-880 Laser Tachometer

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Terahertz Technologies Inc. manufactures fiber optic test equipment, photonic lab equipment, and analog/digital fiber optic links in the Mohawk Valley of Central New York.

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