

Advanced Fiber Optic Test Equipment

Terahertz Technologies Inc.

1-888-U.S.-OTDRS







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Mission Statement:

Provide world class test and measurement designs in the industries we serve including Fiber Optics and Photonics technologies, and to continue with our passion for producing the highest quality equipment solutions in these industries. This is our commitment to excellence for our customers, employees, stakeholders and the communities we thrive in.

A Note From The President:

Thank you for visiting our web site, and your continued loyalty and support for our company and industries.

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 of the high tech solutions our customers require.

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.

Over the decades we continued developing and refining our technologies with recent introductions in our full line of fiber optic test equipment including state of the art Optical Time Domain Reflectometers, hand held Optical Spectrum Analyzers, CWDM Channel Analyzers, Tunable Laser Sources and advanced autotest/autowave Loss Test Sets.

We also have a full line of optical to electrical converters, fiber optic links and a fiber optic video link system. We offer an optical chopper, laser power and energy meter, a fiber optic laser tachometer, photodiode transimpedance amplifier, and various other custom opto-electronic products that are utilized in the automotive, fiber optics, communications, photonics, power generation and medical equipment industries and for research laboratories, government entities and educational organizations worldwide.

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.

In closing, we'd like to assure you that we are totally committed to our mission of providing leading world class quality solutions for our colleagues and friends. We maintain a passion for investments in our equipment designs, and development of exceptional customer relations through cooperation and training. We share this commitment in developing a superior TTI team through education, training and personal development.

Thank you for the opportunity to be your loyal servants,

Mike and the TTI Team

FTE-7000A Advanced OTDR



Features:

- Instant On, Immediate Scan
- Touch Screen, Keypad or Tablet Control
- CW & Fiber Identifier Light Source
- Bluetooth Android VI Operation
- 36 dB Dynamic Range W/1 meter Dead Zone
- Video Scope With Pass/Fail Grading Zones
- Auto-Wavelength Power Meter
- Bidirectional Trace Analysis with Certsoft
- 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
- CertSoft Report Software with .sor Capability
- Dual Trace with Macro Bend Analysis

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.

Integrated Video Inspection

Ensure accurate test and protect equipment from damage, by inspecting connectors with the integrated video inspection system. 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.

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.



FTE-7000A Specifications

OTDR			
Wavelength	850, 1300, 1310,1490,1550, 1625nm ±20nm		
Dynamic Range	26/27dB MM, 36/34dB SM		
Pulse Width	5 - 20,000 ns		
Units of Measurement	km, kf, mi		
Event Dead Zone	1m		
Attenuation Dead Zone	4m		
Resolution	.125 - 8m		
Distance Uncertainty	±(0.75m + 0.005% x distance + sampling resolution)		
Full Scale Distance Range	1-64km MM,1-240km 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		
Power Supply / Charger	Input 100-240VAC, 50-60Hz, 0.3A, Output 9V, 0.67A		
Battery	12 hr. Li-ion		
Storage Temperature	-20 to 60 C		
Operating Temperature Range	-10 to 40 C		
Dimensions (with rubber boot)	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)		
Weight	1.8 lbs (.82 kg)		
Communications ports	USB/PC Port, Bluetooth		
Connector Styles	FC, ST, SC Interchangeable		
Accessories Provided	Universal Power Adapter w/ interchangeable mains, Interchangeable FC/ST and SC Adapters, Software, Manual on CD and Protective Rubber Boot		

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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-7000A131415	Triple Wavelength 1310/1490/1550nm OTDR with LTS		
FTE-7500A131516	Triple Wavelength 1310/15501625nm OTDR with LTS		
VIS-300	Video Probe		

Add a "C" to the end part the number for CATV version LTS.

Power Meter			
Detector Type	InGaAs		
Connector Type	1.25mm & 2.5mm Univ, FC, ST and SC		
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		
Auto Test Range	0 to -40dB		

Light Source			
	850, 1300, 1310, 1490, 1550, 1625 nm ±20nm		
Available Wavelengths	(Light Source Wavelengths are Limited by		
	the OTDR Configuration)		
Output Power	0 dBm (-3dBm @ 1625nm)		
Logar Cafaty Classification	Class I Safety Per FDA/CDRH and		
Laser Safety Classification	IEC-825-1 Regulation		
Modulation Modes	CW, 270 Hz, 1000 Hz, 2000 Hz		

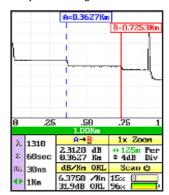
Specifications are subject to change without notice:

Range	1	4	91	16	64	256	П
Pulse W.	10 30		1		300		ı
Avg. (s)	◀ 36		_		120	•	ı
Wave L.	850 1		300	13	310	1550	ı
D. Unit	Km		- 3	kf		Mi	П
PW.Unit	Me	ter	s	N	anos	ec's	ı
Event Sense	Lou	J	Me	diu	n H	igh	Ī
IOR			OR Th	L res	h (9.0	
Loss Thresh	0.25		Lin	ık res	h	2.5	
Da	Date				Time		Ī
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	6 27 <u>28</u> 3		Г	R	etur	n	1

Intuitive Expert Parameter Screen

#	Р	KM	SPLICE	2P0INT	DB/KM	TYPE
1	Р	0.3624	+0.511	0.151	+0.455	Splc
2	Р	0.3797	+0.063	0.016	-NA-	Splc
3	Р	0.7278	+0.596	0.113	+0.337	Splc
4	F	0. 9085	+5.462	0.023	-0.140	-49.4
5	Р	0.9085	Link	1.423	+1.589	32.44
П						
_		278 3 <u>0.6</u>	9. 90 123	1.4	0. 9 123	\E
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Σ	Sp1 +0.	3 <u>8.6</u> 596	0RL:	1.4	1 <u>23</u> 32. 4	14
	Sp) +0. 13 2m 3m	3 <u>8.6</u> 596	0RL:	1.4	1 <u>23</u> 32. 4	14
Σ 	5p1 +0. 13 2m 3m 1K	3 <u>8.6</u> 596	0RL:	1.4	1 <u>23</u> 32. 4	14

Fib-R-Map Schematic Event Analysis



Large - Easy to Read Trace, Icons and Measurements



Pass Fail Video Scope Feature



FTE-7000A-EXT/PON OTDR



Features:

- 39 dB Dynamic Range
- Touch Screen, Keypad or Tablet Control
- Dual SM and PON Models Available
- 12 Hour Battery Life.
- CW & Fiber Identifier Light Source
- Bluetooth Android VI Operation
- Video Scope With Pass/Fail Grading Zones
- 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

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.



FTE-7000A-EXT/PON Specifications

OTDR			
Wavelength	1310, 1550, 1625nm ±20nm		
Dynamic Range	39/39/38dB SM		
Pulse Width	5 - 20,000 ns		
Units of Measurement	km, kf, mi		
Event Dead Zone	1m		
Attenuation Dead Zone	4m		
Resolution	.125 - 8m		
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	~4000 Traces		
Memory Type	Internal		
Power Supply / Charger	Input 100-240VAC, 50-60Hz, 0.3A, Output 15V, 1.2A		
Battery life	12hr. Llthium-lon		
Storage Temperature	-20 to 60 C		
Operating Temperature Range	-10 to 40 C		
Dimensions (with rubber boot)	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)		
Weight	1.8 lbs (.82 kg)		
Communications ports	USB/PC Port, Bluetooth		
Connector Styles	FC, ST, SC Interchangeable		
Accessories Provided	Universal Power Adapter w/ interchangeable mains, Interchangeable FC/ST and SC Adapters, Software, Manual on CD and Protective Rubber Boot		

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	

Light Source			
	1310, 1550, 1625 nm ±20nm		
Available Wavelengths	(Light Source Wavelengths are Limited by the OTDR		
	Configuration)		
Output Power	0 dBm		
Laser Safety Classifi-	Class I Safety Per FDA/CDRH and IEC-825-1		
cation	Regulation		
Modulation Modes	CW, 270 Hz, 1000 Hz, 2000 Hz		

Range	1	4	16	64	256
Pulse W.	10	30	100	300	1k
Avg. (s)	◀ 36		9 60 1		•
Wave L.	850	13	00 1	310	1550
D.Unit	Kır		kf	1 1	Mi
PW.Unit	Me	ters	i N	anos	ec's
Event Sense	Low		1ediu	m H	igh
IOR	1.468		ORL Thresh		0.0
Loss Thresh	0.2		ink Thres	h (2.5
Da	te	-4		Time	
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Intuitive Expert Parameter Screen

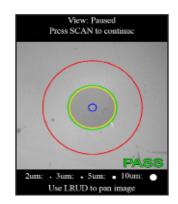
		A=0.3627Km	B-0.7253Kn
\			
0	.25		.75 1
		1.00Km	
2.	1310	<u>A→B</u>	1x Zoon
		2.3120 dB 0.3627 Km	+ 125m Per + 4dB Div
Σ	60sec	67207 VIII	
Σ	60sec 30ns	dB/Kn ORL	Scan 🖰

Large - Easy to Read Trace, Icons and Measurements

Ordering Information		
(Pr	obe Sold Separately	
FTE-7000A-EXT	1310/1550 nm SM Dual Wavelength OTDR	
FIE-7000A-EXT	with Video Scope Capability and LTS	
	1310/1550nm with 1625 Acitve, PON OTDR	
FTE-7000A-PON	with Video Scope Capability	
	(Power Meter not Available)	
VIS300 Video Probe		

=	Р	KM	SPLICE	2POINT	DB/KM	TYPE
1	Р	0.3624	+0.511	0.151	+0.455	Solo
2	Р	0.3797	+0.063	0.016	-NA-	Sple
3	Р	0.7278	+8.596	0.113	+0.337	Sole
4	F	0.9085		0.023		
5	Р	0.9085	Link	1.423	+1.589	32, 44
Ľ	Splice ORL:-49 32.44 +0.596 +5.462 Link					
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	311			\neg	1	
4	118		$\overline{}$		-\	
Y	1					·
IOR	1.4	168			V	WAY.
Fib-R-Man Schematic Event						

Fib-R-Map Schematic Event Analysis



Pass Fail Video Scope Feature



FTE-7000A-CWDM 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.

Autp-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:

- 36 dB Dynamic Range
- 12 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
- Video Scope With Pass/Fail Grading Zones
- 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



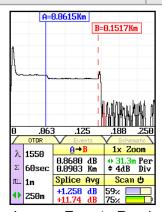
FTE-7000A-CWDM Specifications

OTDR		
Wavelength	1471/1491/1511/1531 or 1551/1571/1591/1611nm +/-3nm	
Dynamic Range	36dB	
Pulse Width	5 - 20,000 ns	
Units of Measurement	km, kf, mi	
Event Dead Zone	1m	
Attenuation Dead Zone	4m	
Resolution	.125 - 32m	
Diatanaa Unaartainty	±(0.75m + 0.005% x distance +	
Distance Uncertainty	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	~4000 Traces	
Memory Type	Internal	
Power Supply / Charger	Input 100-240VAC, 50-60Hz, 0.3A, Output 15V, 1.2A	
Battery life	12 hr. Llthium-lon	
Storage Temperature	-20 to 60 C	
Operating Temperature Range	-10 to 40 C	
Dimensions (with rubber boot)	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)	
Weight	1.8 lbs (.82 kg)	
Communications ports	USB/PC Port, Bluetooth	
Connector Styles	FC, ST, SC Interchangeable	
Accessories Provided	Universal Power Adapter w/ interchangeable mains, Interchangeable FC/ST and SC Adapters, Software, Manual on CD	

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	850,1300,1310,1471,1491,1511,1531,1551,1571, 1591,1611,1625nm	
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	

Light Source		
Available Wavelengths	(Light Source Wavelengths are Limited by the OTDR Configuration)	
Output Power	0 dBm	
Laser Safety Classifi-	Class I Safety Per FDA/CDRH and IEC-825-1	
cation	Regulation	
Modulation Modes	CW, 270 Hz, 1000 Hz, 2000 Hz	

Ordering Information		
(Probe Sold Separately)		
FTE-7000A-S	1471/1491/1511/1531nm, 36dB CWDM OTDR	
	with Video Scope Capability and LTS	
FTE-7000A-CL	1551/1571/1591/1611nm, 36dB CWDM OTDR	
TTL-7000A-CL	with Video Scope Capability and LTS	
VIS300	Video Probe	

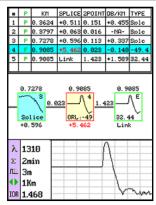


Large - Easy to Read Trace/Events, Icons and Measurements

Range	1	4		16		64		256	1
Pulse W.	10	36	3	100 3		36	10	1k	1
Avg. (s)	■	36	60 1		12	20	•	1	
Wave L.	850	1	300 131		310	1	1550	1	
D. Unit	Kn			kf	F	Т	18	Mi	1
PW.Unit	Me	ter	'S		Na	anc	05(ec's	1
Event Sense	Lou	J	Me	edi	iuı	n	Н	igh]
IOR	1.4 6 8		ORL Thresh		h	6	0.0		
Loss Thresh	0.25 0.75			nk		h	41	2.5	
Da	Date					Tin	ne		
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23 24 25 2 30 1 2	6 27 28 29 3 4 5 6				Re	etı	ır	n	

and Protective Rubber Boot

Intuitive Expert
Parameter Screen



Fib-R-Map Schematic Event Analysis



FTE-7500A-CWDM-12 OTDR



Up to 12 Wevelengths in a Single Unit

WDM OTDR OTDRs may be order with 8, 10 or even 12 CWDM wavelengths. Standard units include 1471-1611nm for 8 wavelenghts and 1431-1611nm for 10 wavelengths or configure a 12 wavelength unit using the 1471-1611nm 8 wavelength unit and ad 4 additional wavelengths of your choice.

12 Wavelenght Auto Test

Test a fiber at 1, 2 or up to 12 wavelengths with the touch of just one button.

Fault Finder Mode

One button scans the fiber under test, selects best parameters at the selected wavelength and displays event analysis

Broadband Power Meter

Onboard power meter calibrated at up to 12 CWDM wavelengths.

CW Light Source

The FTE7500A-CWDM may be used as a CW light source. Select any of the configured wavelengths as a CW light source for commissioning or for Loss test with the onboard Power Meter.

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.

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.

Features:

- 35 dB Dynamic Range
- Express Help System
- CW & Fiber Identifier Light Source
- Video Scope With Pass/Fail Grading Zones
- Integrated Power Meter
- Bidirectional Trace Analysis with Certsoft
- Full Auto, Construction and Expert Modes
- Live Fiber Detection
- Onboard Memory of ~4000 traces
- CertSoft Report Software with .sor Capability
- Dual Trace Capability



FTE-7000A-CWDM Specifications

0	TDR
Wavelength	CWDM Wavelenghts as Configured +/-3nm
Dynamic Range	35dB
Pulse Width	5 - 20,000 ns
Units of Measurement	km, 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
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 External USB
Power Supply / Charger	Input 100-240VAC, 50-60Hz, 0.3A, Output 13.6V, 1.2A
Battery life	8 Hour
Storage Temperature	-20 to 60 C
Operating Temperature Range	-10 to 40 C
Dimensions (with rubber boot)	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)
Weight	1.8 lbs (.82 kg)
Communications ports	USB/PC Port
Connector Styles	FC, ST, SC Interchangeable
Accessories Provided	Universal Power Adapter w/ interchangeable mains, Interchangeable FC/ST and SC Adapters for optical port and FC, ST, SC, 1.25mm and 2.5mm universal adapters for power meter port, Software, Manual on CD and Protective Rubber Boot

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, 1271-1611CWDM Wavelengths 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	

Light Source		
Available Wavelengths (Light Source Wavelengths are Limited by the O Configuration)		
Output Power	0 dBm	
Laser Safety Classifi-	Class I Safety Per FDA/CDRH and IEC-825-1	
cation	Regulation	
Modulation Modes	CW, 270 Hz, 1000 Hz, 2000 Hz	

Ordering Information		
FTE-7500A-CWDM-12	1471-1611nm +4 Additional Wavelengths of Choice, CWDM OTDR W/VFL, LTS, Video	
	Scope Capability (Probe Sold Separately)	
	1431-1611nm 10 Wavelength CWDM OTDR W/	
FTE-7500A-CWDM-10	VFL, LTS, Video Scope Capability (Probe Sold	
	Separately)	
	1271-1411nm, 8 Wavelength CWDM OTDR W/	
FTE-7500A-CWDM-OE	VFL, LTS, Video Scope Capability (Probe Sold	
	Separately)	
	1471-1611nm 8 Wavelength CWDM OTDR W/	
FTE-7500A-CWDM-SCL	VFL, LTS, Video Scope Capability (Probe Sold	
	Separately)	
FTE-SCASE-LG	Soft Case for FTE7500, FTE600 and FTE8000 Series	
VIS-300	Video Probe For FTE7000 and FTE7500 Series	



FTE-7000A-DWDM OTDR



89 Channel Tunable OTDR

Conduct optical time domain reflectometery test at the desired wavelength for DWDM channels 17-61 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 Connector Analysis

On-board video scope with one touch auto-center, and one touch auto pass/fail analysis of fiber optic connectors.

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.

File Storage and File Transfer

There is onboard storage for up to 4000 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:

- Tunable OTDR with 89 C Band Wavelengths
- Tunable CW/Pulsed Laser Source
- 50 and 100 GHz spacing
- Touch Screen, Keypad or Tablet Control
- Fib-R-Map Comprehensive Event Analyzer
- Fib-R-View Auto Pass/Fail/Centering Scope
- 89 Channels (17-61) on the ITU Grid
- 12 Hour Li-ion Batter Pack w/2 Hr. Charge
- Bidirectional Trace Analysis with Certsoft
- Full Auto, Construction and Expert Modes
- Onboard Memory of ~4000 traces
- CertSoft Report Software with .sor Capability



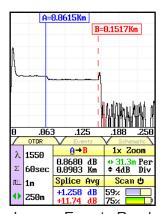
FTE-7000A-DWDM Specifications

OTDR Specifications			
Standard Wavelengths	1528.77-1563.86nm @ 0.4 and 0.8nm Spacing		
Dynamic Range	35 dB		
Pulse Width	5 - 20,000 ns		
Units of Measurement	km, kf, mi		
Event Dead zone	1m		
Attenuation Dead Zone	4m		
Data Points	up to 120,000		
Resolution	.125 - 32m		
Distance Uncertainty	±(0.75m + 0.005% x distance + sampling resolution)		
Full Scale Distance Range	1-240km SM		
Typical Real-time Refresh Rate	2 Hz		
Group Index of Refraction (GIR)	1.024 - 2.048		
Linearity	± .05 dB/dB		
Memory Capacity (Internal)	4000		

Ordering Information		
FTE-7000A-DWDM	C Band DWDM Tunable OTDR/Laser	
FTE-7000A-DWDW	Source 1528-77nm - 1563-86nm	
FTE-DWDM-K	FTE7000A-DWDM OTDR/Laser Source and FTE8100-C Mini OSA	
VIS300	Video Probe for FTE7500 and FTE7000 Series	

TLS Specifications				
Frequency Range	FTE-6000 C 192 - 196 THz (1529- 1563nm)			
Accuracy	1.5 GHz			
Line Width	1 MHz			
Side Mode Suppression Ration	45 dB			
Output Power Range	0 dBm to +5 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			

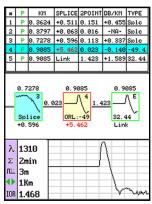
General Specifications				
Graphical Display	4 in Color Touch Screen			
Power Supply / Charger	Input 100-240V 50-60Hz, 0.6A / Output 15V, 1.2A			
Battery / Operating Time	Rechargeable Li-Ion / 10 hour			
Storage Temperature	-20 to 60 C			
Operating Temperature Range	-10 to 40 C			
Dimensions (w/out rubber boot)	7.75" L x 4.5" W x 2.25" H (197mm L x 114mm W x 57mm H)			
Weight	1.7 lbs			
Communications / Ports	Bluetooth / USB-PC			
Connector Styles	FC, SC Interchangeable			
Accessories Provided	Universal Power Adapter w/US, UK, Continental Europe, and Australian Plugs, Interchangeable FC and SC Adapters, Windows/Telcordia SR4731 Software, Rubber Boot and Manual on CD, 2 stylus			



Large - Easy to Read Trace/Events, Icons and Measurements

Range	1	4	81	16	6	4	256	1
Pulse W.	10	3	0	100	_	-	1k	l
Avg. (s)	4	31	0	60	12	20	•	1
Wave L.	850	1	30	0 1	310	1	1550	1
D.Unit	Kn	1		kf		Mi		1
PW.Unit	Me	te	rs	N	anc	050	ec's	l
Event Sense	Low		Medium		m	Н	igh	1
IOR	1.468			ORL Thresh		6	0.0	
Loss Thresh	0.25 0.00			nk ires	h	41	2.5	
Date					Tin	ne		
June 2013 Su Mo Tu We Th Fr Sa 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22		1 8 15	11:47					
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 1 2 3 4 5 6				R	etı	ır	n	

Intuitive Expert
Parameter Screen



Fib-R-Map Schematic Event Analysis



FTE-1700 Economy OTDR



Features:

- Most Affordable OTDR on the Market
- Bluetooth Operation W/free Android App
- IEC61300-3-35 Pass/Fail Grading
- 32 dB Dynamic Range
- Short Dead Zone
- Integrated Autowave Power Meter
- Stable Light Source
- Ultra Fast Trace Acquisition
- One Button Testing
- Short Dead Zone
- Event Table with Pass/Fail Feature
- Trace Comparison with Trace Overlay
- Simple Graphical User Interface
- Training with Onboard Help Screens
- Telcordia Compatible Software Included
- Light Weight Rugged Enclosure
- SM, MM and Quad Units Available
- Onboard Memory for 500 traces
- Bright Easy To Read Color Display

Small and Rugged

The FTE-1700 is small and light weight. It weighs less than 2 lbs., fits comfortably in your hand and built in a rugged enclosure surrounded by a protective rubber boot.

Construction Mode

This feature assists 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.

Bluetooth Operation

Want a larger display, want to geotag your files, or email your traces, use the Bluetooth feature and operate the OTDR with a compatible Android device.

Auto Test

The AutoTest feature of the OTDR 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.

Trace Analysis

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

Integrated Video Scope

Use the video scope with our optional VIS-300 video probe to check cleanliness and condition of fiber connectors prior to connection with equipment or fiber under test.

File Storage

Onboard file storage for up to 500 traces and files may be downloaded to a computer through the USB/PC port.

Trace Analysis and Reporting

Project reporting and documentation is fast and easy with a Pass/ Fail feature, onboard event table and the supplied report generating software with multi-trace capability.

Integrated Loss Test Set

The FTE7000 has an integrated Loss Test Set. When used with compatible equipment from TTI's 1500 series or other TTI OTDRs with loss test sets, the auto wavelength and auto test capabilities will speed testing and help eliminate user error.



FTE-1700 Specifications

OTDR				
Wavelength	850, 1300, 1310,1550, ±20nm			
Dynamic Range	26/27dB MM, 32/30dB SM (7000E - 30dB)			
Pulse Width	20 - 10,000 ns			
Units of Measurement	km, kf, mi			
Event Dead zone	2m			
Attenuation Dead Zone	5m			
Resolution	.25 - 64m			
Distance Uncertainty	±(0.75m + 0.005% x distance + sam- pling resolution)			
Full Scale Distance Range	1-64km MM,1-240km SM			
Typical Real-time Refresh Rate	4 Hz			
Group Index of Refraction (GIR)	1.024 - 2.048			
Linearity	± .05 dB/dB			
Memory Capacity	1000 Traces			
Memory Type	Internal			
Power Supply / Charger	Input 100-240VAC, 50-60Hz, 0.3A, Output 9V, 0.67A			
Battery	4hr			
Storage Temperature	-20 to 60 C			
Operating Temperature Range	-10 to 50 C			
Dimensions (with rubber boot)	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)			
Weight	1.6 lbs.			
Communications ports	USB/PC			
Connector Styles	FC, ST, SC Interchangeable			
Accessories Provided	Universal Power Adapter w/US, UK, CE, and AU Plugs, Interchangeable FC/ST and SC Adapters, Certsoft Software Suite, Protective Rubber Boot, USB Cable, Manual on CD			

TTI reserves the right to char	ige specifications	without notice.
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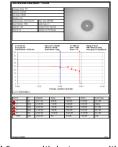
Ordering Information			
FTE-1700-8513 Dual MM 850/1300nm OTDR with Video Scope probe, LTS and VFL			
FTE-1700-1310	SM 1310nm OTDR with Video Scope and probe, LTS and VFL		
FTE-1700-1315	Dual SM 1310/1550nm OTDR with Video Scope and probe, LTS and VFL		
FTE-1700-QUAD	MM/SM 850/1300/1310/1550nm OTDR with Video Scope and probe and LTS		
FTE-1700E-1310	30 dB Economy SM OTDR 1310nm (No Video Probe, LTS or VFL)		
VIS-300	TTI Video Inspection Probe		

VFL		
Emitter Type	Laser	
Wavelength	650nm ±5nm	
Laser Safety Class	Class IIFDA21 CFR1040.10 &1040.11 IEC 825-1: 1993	
Connector Type	2.5mm Universal	
Output Power	1mW Max.	

Po	Power Meter			
Detector Type	InGaAs			
Connector Type	1.25mm & 2.5mm Univ, FC, ST and SC			
Measurement Range	+5 to -77dB (CATV +25 to -57dB)			
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			
Power input Range	+5 to -77dBm			
Autotest Range	0 to -40dB			

CW Light Source				
Wavelengths 850, 1300, 1310, 1550, 1625 nm ±20ni				
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				

 $\ensuremath{\mathsf{TTI}}$ reserves the right to change specifications without notice.



View multiple traces with the certification software and associate loss test results and connector images with traces for test reporting

	✓ KM	SPLICE	2POINT	DB/KM	TYPE
1	X 0.1848	+1.344	-0.075	-0.451	-70.7
2	X 0.3676	+1.266	+0.024	+0.137	-65.3
3	X 0.5508	+1.252	+0.373	+2.131	Splc
4	X 0.9108	+4.056	+0.014	+0.039	-46.1
5	X 0.9440	+2.646	-0.965	-0.057	Splc
Ш					
Ш					
Ε	√ 0.9108	-NA-	+4.152	+4.654	Link
IOR	1.468		1		
λ	=155@m		h .		
					WFL WFL
AVG			Ш		
ŗΨ	-2n		4)		X
RNC	*1 <n< td=""><td></td><td>J.,</td><td></td><td></td></n<>		J.,		
Sen	ise Md Splice	<0.20 CI	RL <60	Link <5	Return

Use the interactive event table with event map to evaluate traces

026	Default. 026	039	Default.039	
927	Default. 027	040	Default. 040	Т
028	Default. 028	641	Default. 041	
029	Default. 029		[Free:958]	
636	Default. 030			
831	Default. 031			
032	Default. 032			
033	Default. 033			Т
034	Default. 034			Т
035	Default. 035			
036	Default. 036			
637	Default. 037			
638	Default. 038			
IOR	-1.468	Ŧ		ę
lλ	=1310nm			Ē
aug	=Long	- 3		ă
RM.	*2n	٦.		٥
EXI 2	=1Km			į
Retu	ırı Copy Renamı	. [Delete Mark Di	117

File management screen with file data and representation of highlighted trace



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 (FC/ST and SC)
- 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.

Certsoft 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.



General Specifications	
Display	4 in color touch screen
Storage Locations	Up to 5000
Battery/Operating Time	4 AA Rechargeable NiMH / 6 hrs
Power Requirements	Wall mount, universal 100-240V 47-63 Hz 9 VDC Center Positive with, US, UK, Con- tinental Europe, and Australian Plugs
Operating Temperature Range	-10 to 45 C
Dimensions (w/o rubber boot)	7.62" L x 3.88" W x 1.56" H(194mm L x 99mm W x 40mm H)
Weight	0.52 Kg
Accessories Provided	FC, ST, SC adaptors for both Power Meter and Light Source, rubber boot, battery, Power supply/Charger, manual , USB Cable, PC application software

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, mW, μW
Resolution	0.01dB
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
Modulation Modes Detected	CW, 270 Hz, 1000 Hz, 2000 Hz

Light Source	
Laser Output Power	0 dBm, 1mw
Output Stability	± .05 dB / 24 hrs @ constant temp,, ± .02 dB/C temperature coefficient
Laser Wavelengths Provided	850,1300, 1310, 1490, 1550 and 1625nm (± 20 nm)
Transmitted Modulation Modes	CW, 270 Hz, 1000 Hz, 2000 Hz
Laser Safety Classification	Class I safety per FDA/CDRH and IEC- 825-1 regulation
Spectral Width	<3nm typ.

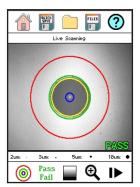
Optical Return Loss Meter	
Optical Return Loss Dynamic Range	0-60 dB
ORL Wavelengths	1310/1550nm
Optical Return Loss Accuracy	± .05 dB @ a -55db reflection
Resolution	0.01 dB
Spectral Width (RMS)	<5nm
Connector	FC/APC

TTI reserves the right to change specifications without notice.

TTI reserves the right to change specifications without notice.



Large Easy to Read Color Touch Loss Test Set



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



The FTE-5000 is available with a -60dB ORL Meter

	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-5000-345 LTS with 1310/1490/1550nm 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-7500A-CWDM OTDR



Features:

- Instant On
- Fast Real Time
- 35 dB Dynamic Range
- Flexible Wavelength Configuration
- Event Table with Pass/Fail Feature
- Short Dead Zone
- Interchangeable Fiber Optic Connectors
- Video Inspection Capability
- Broadband Power Meter
- Trace Overlay Capability
- Onboard Memory for ~500 traces
- Visual Fault Locator
- USB Flash Drive Port and Mini USB/PC Port
- Context Sensitive Help
- Light Weight Rugged Enclosure
- Easy To Read Color Display
- CertSoft Software Suite
- Long Battery Life

Flexible Wavelengths Configuration

Standard units are offered in the most common CWDM combinations in 8, 10 and 12 wavelength sets. Custom wavelength configurations are available.

Auto Test

The AutoTest feature of the OTDR 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.

Trace Analysis

The Trace analysis system gives the user the ability to quickly determine if the fiber meets measurement criteria with its Pass/Fail capabilities.

Integrated Power Meter

Wavelength selectable broadband power meter.

Integrated Visual Fault Locator

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

Onboard and External File Storage

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

Integrated Video Inspection

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

Trace Analysis and Reporting

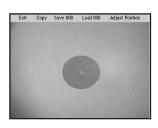
Project reporting and documentation is fast and easy with a Pass/Fail feature, onboard event table and the supplied CertSoft reporting software with multi-trace capability.



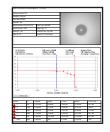
FTE-7500A-CWDM OTDR Specifications

OTDR	
Wavelength	1471/1491/1511/1531nm ±3nm or 1551/1571/1591/1611nm ±3nm
Dynamic Range	36 dB
Pulse Width	5 - 20,000 ns
Units of Measurement	km, kf, mi
Event Dead zone	1m
Attenuation Dead Zone	4m
Resolution	.125 - 8m
Distance Uncertainty	±(0.75m + 0.005% x distance + sampling resolution)
Full Scale Distance Range	1-240km 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, 0.4A, Output 13.6V, 0.57A
Battery	8 AA NiMH - 8hr Operation
Storage Temperature	-20 to 60 C
Operating Temperature Range	-10 to 40 C
Dimensions (w/out rubber boot)	7.75" L x 4.5" W x 2.25" H (197mm L x 114mm W x 57mm H)
Weight	2 lbs
Communications ports	USB/PC & USB Flash Drive
Connector Styles	FC, SC Interchangeable
Accessories Provided	Universal Power Adapter w/US, UK, Continental Europe, and Australian Plugs, Interchangeable FC/ST and SC Adapters, Manual on CD, CertSoft Software Suite, Protective Rubber Boot

Specifications are subject to change without notice:



With the optional Video probe, you can use the inspection scope to ensure proper cleanliness of connectors prior to inserting them into the OTDR.



View multiple traces with the certifications software and associate connector images with traces for test reporting

Power Meter	
Detector Type	InGaAs
Connector Type	1.25mm & 2.5mm Univ, FC, ST and SC
Measurement Range	+5 to -77dB (CATV - +25 to -57dB)
Calibrated Wavelengths	850/1300/1310/131471/1491/1511/153 1/1551/1571/1591/1611nm
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
Power input Range	+5 to -77dBm

CW Light Source	
Wavelengths	1471/1494/1511/1531nm ±3nm or 1551/1571/1591/1611nm ±3nm
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

VFL	
Emitter Type	Laser
Wavelength	650nm ±5nm
Laser Safety Class	Class IIFDA21 CFR1040.10 &1040.11 IEC 825-1: 1993
Connector Type	2.5mm Universal
Output Power	1mW Max.

Ordering Information	
FTE-7500C-KLMN	1471/1491/1511/1531 CWDM OTDR
FTE-7500C-OPQR	1551/1571/159/1611 CWDM OTDR
CI-1100	Video Probe
FTE-SCASE-LG	Soft Case for FTE-6000, 7500 and 8000
	Series

Specifications are subject to change without notice:

Custom Wavelength
Configurations Available



FTE-7500A OTDR



Features:

- Instant On
- Fast Real time
- Up to 39dB Dynamic Range
- Event Table with Pass/Fail Feature
- 1 Meter Dead Zone
- SM, MM, Triple and Quad Units Available
- Integrated Video Inspection System
- Interchangeable Fiber Optic Connectors
- One Button Fault Finder
- Automated Construction Mode
- Trace Overlay Capability
- Onboard Memory for ~500 traces
- Auto-Wavelength Loss Test Set
- Visual Fault Locator
- 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

Onboard Help System

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

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. 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

Use 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 \sim 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.



FTE-7500A Specifications

OTDR	
Wavelength	850, 1300, 1310, 1490,1550, 1625nm ±20nm
Dynamic Range	26/27dB MM, 36/34dB SM, 36/34/34 TRI (EXT 39dB)
Pulse Width	5 - 20,000 ns
Units of Measurement	km, kf, mi
Event Dead Zone	1m
Attenuation Dead Zone	4m
Resolution	.125 - 8m
Distance Uncertainty	±(0.75m + 0.005% x distance + sam- pling resolution)
Full Scale Distance Range	1-64km MM , 1-240km 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, 0.4A, Output 13.6V, 0.57A
Battery	8 AA NiMH - 8hr Operation
Storage Temperature	-20 to 60 C
Operating Temperature Range	-10 to 40 C
Dimensions (w/out rubber boot)	7.75" L x 4.5" W x 2.25" H (197mm L x 114mm W x 57mm H)
Weight	2 lbs
Communications Ports	USB/PC & USB Flash Drive Ports
Connector Styles	FC, ST, SC Interchangeable
Accessories Provided	Universal Power Adapter w/inter- changeable Mains, Interchangeable FC/ST and SC Adapters, Software, Manual on CD and Protective Rubber Boot

Specifications are subject to change without notice.

Ordering Information	
FTE-7500A-8513	MM 850/1300nm OTDR with Video Scope, LTS and VFL (Scope Probe Sold Separately)
FTE-7500A-1315	SM 1310/1550nm OTDR with Video Scope, LTS and VFL (Scope Probe Sold Separately)
FTE-7500A-QUAD	Quad Wavelength 850/1300/ 1310/1550nm OTDR with Video Scope, LTS and VFL (Scope Probe Sold Separately)
FTE-7500A-TRI	SM 1310/1550/1625 OTDR With Video Scope, LTS and VFL (Scope Probe Sold Separately)
CI-1100	Video Probe
FTE-SCASE-LG	Soft Case for FTE-6000, 7500 and 8000 Series

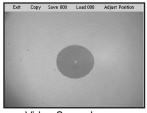
Add a "C" to the end part the number for CATV version LTS.

Visual Fault Locator		
Emitter Type	Laser	
Wavelength	650nm ±5nm	
Laser Safety Class	Class IIFDA21 CFR1040.10 &1040.11 IEC 825-1: 1993	
Connector Type	2.5mm Universal	
Output Power	1mW Max.	

Power Meter		
Detector Type	InGaAs	
Connector Type	1.25mm & 2.5mm Univ, FC, ST and SC	
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	
Auto Test Range	0 to -40dB	

Light Source		
Available Wavelengths	850, 1300, 1310, 1490, 1550, 1625 nm ±20nm (Light Source Wavelengths are Limited by the OTDR Configuration)	
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	

Specifications are subject to change without notice:



Video Scope Image



Certification Software with attached video scope image

File Management System can copy to USB drive or to PC with Supplied Software



Full featured trace analysis with pass/ fail feature.

File	Edit View	Mark			Help
F	ilename	WL	Rng	P⊎	Date
Admi	n_HPE~1	1310	64km	1us	09/21 09:13
Admi	n_HPE~2	1550	64km	1us	09/21 09:13
Admi	n_HPE~3	1310	64km	1us	09/21 09:14
Admi	n_HPE~4	1550	64km	1us	09/21 09:14
Admi	n_HPE~5	1310	64km	1us	09/21 09:15
Admi	n_HPE~6	1550	64km	1us	09/21 09:16
Admi	n_HPE~7	1310	64km	1us	09/21 09:16
Admi	n_HPE~8	1550	64km	1us	09/21 09:17
Admi	n_HPE~9	1310	64km	1us	09/21 09:17
Orimia	n_HPE~10	1550	64km	1us	09/21 09:18



FTE-7800 Multi-Task OTDR



Features:

OTDR Features

- 35dB Dynamic Range
- Short 1 meter Dead Zone
- 1471-1531nm or 1551-1611nm CWDM λ's
- Onboard Memory of ~500 traces
- Event Table with Pass/Fail Feature

Channel Analyzer Features

- 8 Channels, 1471-1611nm
- ~1/4 Second Update
- Bar Graph and Table Displays
- Impact Resistant Boot
- Stores 1000 CWDM Analyzer Scans

General Features

- Instant On
- Visible Fault Locator
- Long Battery Life
- USB/PC and USB Flash Ports
- Broadband Power Meter and CW Source
- CertSoft software suite Included

Multi-Task Operations:

CWDM Quad Wavelength OTDR
8 Channel CWDM Channel Analyzer
Broadband Power Meter
CW Light Source
Video Inspection Scope
Visual Fault Locator

OTDR

Full feature 4 wavelength CWDM OTDR with graphical and event analysis displays

8 Channel CWDM Channel Analyzer

Simultaneously test the top 8 wavelengths (1471-1611) on the CWDM ITU Grid

Integrated Power Meter and CW Light Source

The FTE7800 has an integrated Loss Test Set. The broad band power meter is calibrated at all the CWDM wavelength along with 850/1300 and 1625nm.

Integrated Video Inspection

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

Integrated Visual Fault Locator

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

Auto Test

The AutoTest feature of the OTDR 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 OTDR 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.

File Storage and File Transfer

There is file storage for up to 1000 OTDR traces. Trace files are easily transferred for use with CertSoft reporting software suite via the USB/PC port or USB the flash drive port.



FTE-7800 Multi-Task OTDR Specifications

OTDR		
Wavelength	471/1491/1511/1531nm ±3nm or 1551/1571/1591/1611nm ±3nm	
Dynamic Range	35dB	
Pulse Width	5 - 20,000 ns	
Units of Measurement	km, kf, mi	
Event Dead zone	1m	
Attenuation Dead Zone	5m	
Resolution	.125 - 8m	
Distance Uncertainty	±(0.75m + 0.005% x distance + sam- pling resolution)	
Full Scale Distance Range	1-64km MM , 1-240km 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, 0.4A, Output 13.6V, 0.57A	
Battery	8hr	
Storage Temperature	-20 to 60 C	
Operating Temperature Range	-10 to 50 C	
Dimensions (w/out rubber boot)	7.75" L x 4.5" W x 2.25" H (197mm L x 114mm W x 57mm H)	
Weight	2 lbs	
Communications Ports	USB/PC & USB Flash Drive Ports	
Connector Styles	FC, ST, SC Interchangeable	

CWDM Analyzer		
Wavelength 1471 - 1611nm		
Channel Spacing	20nm	
Channel Pass Band	± 6.5nm	
Channel Power Range	-5dBm to -50dBm	
Absolute Accuracy	± 1dB	
Max. Composite Power	+23dBm	
PDL	±0.2dB	
Adjacent Channel Isolation	30dB	
Measurement Time	<1/2 Second	
Readout Resolution	0.01dB	
Return Loss	>40dB	
Optical Interface	Universal UPS (FC/SC Supplied)	
Graphical Display	Bar Graph and Table View	
Memory Capacity	1000 Scans	

Specifications are subject to change without notice:

Power Meter		
Detector Type	InGaAs	
Connector Type	1.25mm & 2.5mm Univ, FC, ST and SC	
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	
Auto Test Range	0 to -40dB	

Specifications are subject to change without notice:

Specifications are subject to change without notice:

VFL		
Emitter Type	Laser	
Wavelength	650nm ±5nm	
Laser Safety Class	Class IIFDA21 CFR1040.10 &1040.11 IEC 825-1: 1993	
Connector Type	2.5mm Universal	
Output Power	1mW Max.	

Specifications are subject to change without notice:

CW Light Source		
Wavelengths	1310 and 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	

Specifications are subject to change without notice:



FTE-8100 Optical Spectrum Analyzer



Features:

- 88 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 and Drift Stats
- 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

88 Channel DWDM Analyzer

The FTE-8100 Handheld OSA tests up to 88 channels at 50 or 100 GHz channel spacing in the C band of the ITU Grid

<u>Unique 8+1 CWDM Channel Configuration</u>

FTE-8100 may also be configured to test the top eight channels (1471-1611nm) of the CWDM grid along with 1310nm for return path assurance.

Integrated Video Inspection System

Take advantage of the IEC61300-3-35 method "B" video inspection system by using the optional VIS-300 video probe and inspecting connectors to ensure cleanliness for proper readings and to prevent costly damage to optical interface.

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.

Onboard Help System

Use the onboard help text for a quick guide to the functions and features available on the FTF8100.

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.

Storable Test Configurations

File and recall testing configurations for later use.

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.

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.

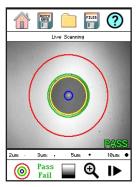


FTE-8100 Specification

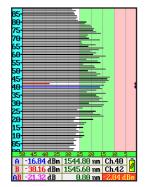
Specifications		
Wavelength Range	C-Band 1530 -1561nm (196.0 THz - 192.0THz) CWDM 1310, 1471-1611nm	
Channel Spacing	50GHz, 100GHz (CWDM 20nm)	
Wavelength Accuracy	±0.1nm	
Channel Power Range	+10dBm to -50dBm	
Absolute Accuracy	±1 dB	
Max Composite Power	+28 dBm	
PDL	±0.15dB	
Optical Rejection Ratio	40dBc (@50GHz)	
Measurement Time	< 1/2 Second	
Readout Resolution	0.01dB	
Return Loss	>40dB	
General		
Optical Interface	Universal UPC (FC/SC)	
Graphical Display	Bar Graph and Table View	
Display	4 in Touch Color TFT	
Dimensions with Protective Boot	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)	
Weight	1.8 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 50°C	
Accessories Included	Universal power supply with mains for US, UK, CE and AU. Interchangeable FC and SC adapters, CertSoft software suite and manual on CD, USB cable and rubber boot	

Ordering Information	
FTE-8100C C-Band Optical Spectrum Analyzer	
FTE-8100CWDM 9 Channel CWDM Channel Analyzer	
VIS-300 TTI Video Probe	

Specifications are subject to change without notice:



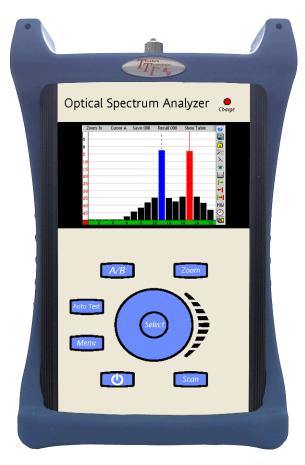
Video Inspection System with IEC61300-3-35 pass/fail grading zone system



Main DWDM Scan Screen with 88 Channel Displayed



FTE-8000-CWDM Channel Analyzer



Fast Scan

The FTE-8000-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-8000-CWDM makes zeroing in on channel measurements easy.

Simple to Use

The FTE8000-CWDM is designed for simple operation and is suited for field or lab use.

Power Tilt

The FTE-8000CWDM offers a Power Tilt feature for CWDM channel equalization.

Information Display

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

Onboard and External File Storage

There is file storage for up to 1000 scans that may be downloaded to a flash drive or 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:

- Available in 18 or 9 Channel Models
- Pass/Fail Thresholds and Drift Stats
- Fast <1/2 second Update
- Onboard Video Scope
- Bar Graph and Table Displays
- Auto Test Zooms in on Active Channels
- Interchangeable Fiber Optic Connectors
- Rugged Case w/Impact Resistant Boot
- Solid State Optics-No Moving Parts
- Easy Operation with Help Mode
- 4" Color Display
- 8hr Battery Life
- Stores 1000 test
- USB/PC and USB Flash ports



FTE-8000-CWDM Specifications

	Specifications	
Wavelength Range	1271-1611nm	
Channel Spacing	20nm	
Channel Pass Band	±6.5nm	
Channel Power Range	+5dBm to -50dBm	
Absolute Accuracy	±1 dB	
Max Composite Power	+23dBm	
PDL	±0.2dB	
Adjacent Channel Isolation	30dB	
Measurement Time	< 1/2 Second	
Readout Resolution	0.01dB	
Return Loss	>40dB	
Optical Interface	Universal UPC (FC/SC)	
Graphical Display	Bar Graph and Table View	
Display	4 in Color TFT	
Dimensions W/O Boot	7.75 x 4.5 x 2.25 inches	
Weight	2 lbs	
Battery	Rechargeable NiMH - 8 hours operating time	
Power	Input 100-240VAC, 47-63Hz, 0.4A, Output 13.6V, 0.57A	
Environmental	Operation -10°C to 50°C	
Accessories Included	Universal power supply with mains for US, UK, CE and AU. Interchangeable FC and SC adapters, CertSoft Reporting software, USB cable, manual on CD and rubber boot	

Specifications are subject to change without notice:

We also offer the FTE8000-C or - L DWDM handheld optical spectrum Analyzer for DWDM network testing applications

Ordering Information		
FTE-8000CWDM 18 Channel CWDM Analyzer		
FTE-SCASE-LG	Soft Case for FTE-6000, 7500 and 8000 Series	
CI-1100	Video Probe	

Table View



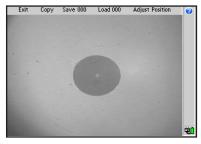
In the table view, the FTE-8000-CWDM displays failed channels in red and when a channel is highlighted, statistical information is displayed including the minimum, maximum and average power levels.

Graphical View



The FTE-8000-CWDM graph display can be configured to optimize the test view. The user can zoom in on specific channels, mark the display area in which channels meet power criteria and even limit the number of overall channels viewed.

Video Scope



The FTE-8000-CWDM will accommodate the CI-1100 video probe allowing the user to visually check connectors for cleanliness and damage prior to testing. This helps eliminate costly repairs to the fiber optic connects on the FTE-8000 -CWDM and results in more accurate tests.



FTE-6000 Tunable Laser Source



Features:

- Selectable Step Size Down to 50 GHz
- Selectable Start & Stop Channels
- Displays in Wavelength or Frequency
- Selectable Dwell Time
- Available in C or L Band
- Rugged Case with Impact Resistant Boot
- USB PC Interface with Remote Operation
- Battery Operated or International Line Voltage
- Simple Operation with onboard Help Mode
- Lowest Cost Hand Held Tunable Laser Source
- Interchangeable Fiber Optic Connectors
- Up to 88 Channels on the ITU Grid
- Fast Turn-On
- 4" Color Display
- 4 hr. Battery Life

Hand Held Tunable Laser Source

The TLS is available in C and L Bands with up to 88 channels on the ITU Grid at channel Spacing down to 50 GHz.

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 display.

Simple to Use

It is designed for simple operation and is suited for field or lab use. The user has he ability to set your step size, power level, dwell time and whether the sweep is to move up or down the scale.

Start-UP

The FTE-6000 offers a fast start up with minimal warm up and provides stable wavelength and power outputs.

<u>Virtual Instrument</u>

The supplied CertSoft software suit virtual instrument feature may be used to operate the unit via PC.

Rugged

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

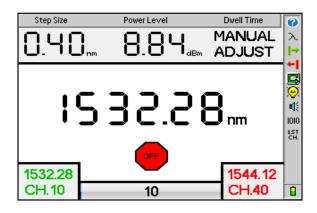


FTE-6000 Specifications

Frequency Range	FTE-6000 C 192 - 196 THz (1529-1563nm) FTE-6000 L 187 - 191 THz (1569-1607nm)
Accuracy	1.5 GHz
Line Width	1 MHz
Side Mode Suppression Ration	45 dB
Output Power Range	+8 dBm to +14 dBm C Band +5 dBm to +11 dBm C Band
Power Setting Resolution	0.01 dB
Power Variation over Wavelength Range	+0.4 Max. +0.2 Typ.
Minimum Channel Spacing	50 GHz (0.4nm)
Fiber Type	9/125 μm
Relative Intensity Noise	-100 dB/Hz 10MHz - 1 GHz -140 dB/Hz 1 GHz
Graphical Display	4 in Color TFT
Dimensions	7.75 x 4.5 x 2.25 inches
Weight	2 lbs
Battery	Rechargeable NiMH - 4 hours operating time
Power	Input 100-240VAC, 47-63Hz, 0.4A, Output 13.6V, 0.57A
Environmental	Operation -10°C to + 40°C
Accessories Included	Universal power supply with mains for US, UK, CE and AU. Interchangeable FC and SC adaptors, CertSoft VI Software, USB Cable, Manual on CD and Rubber Boot

Specifications are subject to change without notice:

The FTE-6000 Tunable Light Source, can conducted sweeps of the ITU grid. Optimize the test procedures by setting the beginning and ending wavelengths, step size, power level, dwell time and direction of the sweep.



Ordering Information		
FTE-6000C	C-Band Tunable Laser Source	
FTE-6000L	L-Band Tunable Laser Source	
CI-1100	Video Scope Inspection Probe	
FTE-SCASE-LG	Soft Case for FTE-6000, 7500 and 8000 Series	



FTE-5100 Fiber Optic Video Scope



Specifications		
Display	4 in Color TFT	
Magnification	150X and 300X approx.	
Power	Input 100-240VAC, 50-60Hz, 0.3A, Output 9V, 0.67A	
Battery Type	Rechargeable NiMH 8 Hours Operating time	
Operating Temp	-10°C to +40°C	
Dimensions w/Boot	8.62" L x 4.25" W x 2.375" H	
	0 15 11 0 11 11 01 14511 14511	

Specification are Subject to Change Without Notice

Features:

- Interchangeable Adapters
- Digital Zoom
- USB Port for Connection to PC
- 8 Hour Battery Life
- IEC61300-3-35 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 also 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.

Ordering Information		
FTE-5100 Video Inspection System		
VIS-300	Video Probe	

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



TTI Hand Held Variable Optical Attenuator

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

The 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.

SPECIFICATIONS			
Attenuation Range	FTE-4000-4 2 to 40dB FTE-4000-8 4 to 80dB		
Wavelengths	1310 and 1550 nm		
Resolution	.01 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 w/Boot	8.62" L x 4.25" W x 2.375" H (219mm L x 108mm W x 60mm H)		
Weight	1.6 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, Windows TM Compatible Software, USB Cable and Manual		

Specification are Subject to Change Without Notice

Features:

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



1500 Series Loss Test Set



Features:

- Automated loss measurements
- Auto wavelength switching
- Up to three Wavelengths in one source
- Interchangeable Power Meter adapters
- Interchangeable Light Source adapters
- Power Meter with 80+ dB Dynamic Range
- Single port laser source
- Storage for 2000 Multi Wave Tests
- Rechargeable Li polymer 9V battery
- USB interface
- Free CertSoft Reporting Software Suite



Flexible Configuration

The 1500 is available as a Loss Test Set or as a stand alone Power Meter and Light Source in dual and triple wave configurations

InGaAs Power Meter

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

Auto Test

In the Autotest mode, the master unit (light source) changes wavelengths at a fixed rate and informs the slave unit (power meter) of the wavelength being transmitted.

Auto Wavelength Recognition

The power meter recognizes the wavelength being tested to help eliminate costly errors.

Available Wavelengths

The stabilized laser light source may have up to three wavelengths and the power meter is calibrated at 850, 1300, 1310, 1490 and 1550nm and 1625nm.

Small Size and Rugged

The 1500 Series is built into a very small package that is rugged and lightweight.

Fiber Identification

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

Power Options

Power by a rechargeable lithium polymer battery or in a pinch, any common 9V alkaline battery.

Test Storage

Store up to 2000 three wavelength tests and downloads the information to your PC via USB with the supplied CertSoft software suite

Available as Loss Test Sets or as Power Meter and Light Source Kits



1500 Series Specifications

	Power Meter	
Power Meter Detector Type	InGaAs	
Measurement Range	+5 dBm to - 77 dBm (CATV +25 dBm to -57dBm)	
Calibrated Wavelengths	850, 1300, 1310, 1490, 1550, 1625 nm	
Units of Measurement	dBm, dB,	
Resolution	0.01dB	
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	
Auto Test Range	0 to -40 dB	
Storage Locations	2000	
Light Source		
Laser Output Power	≥-1.000 dBm	
Output Stability	± .05 dB / 24 hrs. @ constant temp,, ± .02 dB/C temperature coefficient	
Laser Wavelengths	850, 1300, 1310, 1490, 1550 nm (± 20 nm)	
Modulation Modes	CW, 270 Hz, 1000 Hz, 2000 Hz	
Laser Safety Classification	Class I safety per FDA/CDRH and IEC-825-1 regulation	
	General	
Display	LCD, power reading, 0.4" high digits, .01 dB resolution Power meter, laser wavelength display 0.16" high digits	
Battery/Operating Time	Rechargeable Li Polymer/approximately fifteen hours following a full charge (power meter only approx. twenty hours)	
Power Supply / Charger	Universal, US, UK, Continental Europe, and Australian Plugs Included	
Power Requirements	95-260 VAC, 50-60 Hz, 3 VA Max	
Operating Temp. Range	-10 to 40 C	
Storage Temp. Range	Equipment -10 to 60C - Battery-10 to 40 C	
Dimensions (with boot)	5.9" L x 3.9" W x 1.37" H (150mm L x 100mm W x 35mm H)	
Weight	0.52 Kg	
Accessories Provided	FC, ST, SC, 1.25 univ. and 2.5mm univ. PM adaptors, FC,SC and ST LS adapters, rubber boot, battery, power supply/charger, manual and software on CD, USB cable	

 $\ensuremath{\mathsf{TTI}}$ reserves the right to change specifications without notice

Ordering Information			
PM-1500	Auto Wave Power Meter 5 dBm to - 77 dBm	PM-1500C	CATV Auto Wave Power Meter +25 dBm to -57dBm
	Loss Test Set		Light Source
LTS-1500-813	Loss Test Set with 850/1300nm Light Source	LS-1500-813	850/1300nm Multi-Mode Light Source
LTS-1500-35	Loss Test Set with 1310/1550nm Light Source	LS-1500-35	1310/1550nm Singlemode Light Source
LTS-1500-345	Loss Test Set with 1310/1490/1550nm LS	LS-1500-345	1310/1490/1550nm Singlemode LS

For Loss Test Set, add a "C" for CATV Power Meter. Ex: LTS-1500C-35



VFL-280 Visual Fault Locator



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.	

Specification are Subject to Change Without Notice

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 is an easy to use piece of equipment that allows 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 ridable power saver feature that powers down the unit after 30 minutes.

















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