

## DTX Compact OTDR Specifications

Key Specifications	
<b>Dimensions</b> (Mainframe with Compact OTDR installed)	21.6 cm x 11.2 cm x 9.1 cm (8.5 in x 4.4 in x 3.6 in) nominal
<b>Weight</b> (Mainframe with DTX Compact OTDR installed)	1.36 kg (3 lbs)
<b>Display size</b>	9.4 cm (3.7 in) diagonal, 240 dots wide by 320 dots high, passive color, transmissive LCD with backlight.
<b>Case</b>	High-impact plastic with shock absorbing over mold (mainframe)
<b>Languages supported</b>	English, French, German, Spanish, Portuguese, Italian, Japanese, and Simplified Chinese
<b>Operating temperature</b>	0° C to 45° C (32° F to 113° F)
<b>Non-operating temperature</b> (storage)	-20° C to 60° C (-4° F to 140° F)
<b>Relative humidity</b> (% RH operating without condensation)	0° C to 35° C (32° F to 95° F): 0% to 90% 35° C to 45° C (95° F to 113° F): 0% to 70%
<b>Trace file format</b>	LinkWare or Bellcore GR-196 V1.1
<b>Typical trace storage capability</b>	>200 internal, thousands on removable MMC/SD card
<b>Altitude</b> (OTDR module)	Operating 3000 m; storage 12000 m
<b>EMC</b>	EN 61326-1
<b>OTDR laser safety</b>	Class I CDRH, complies to EN 60825-2
<b>Battery pack</b>	Removable/rechargeable 7.4 V, 4000 mAh Li Lithium-ion
<b>Battery pack life</b>	>8 hours
<b>Charge time*</b> (with tester off)	4 hours (below 40° C)
<b>Vibration</b>	Random, 2 g, 5-500 Hz
<b>Shock</b>	1 meter drop test with and without module attached to mainframe
<b>Safety class</b>	Class I C , Class 1 CDRH complies to EN60825-2
<b>Safety</b>	CSA C22.2 No. 1010.1: 1992, EN 61010-1 1st. edition + amendments 1, 2
<b>Calibration</b>	Service center calibration period is one year



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VFL specifications (23° C)	
<b>Output power</b> (into SM fiber)	316 $\mu$ W (-5 dBm) $\leq$ peak power $\leq$ 1.0 mW (0 dbm)
<b>Operating wavelength</b>	650 nm nominal
<b>Spectral width</b> (RMS)	$\pm 3$ nm
<b>Output modes</b>	Continuous wave and pulse mode (2-3 Hz blink frequency)
<b>Connector adapter</b>	2.5 mm universal
<b>VFL laser safety</b>	Class II CDRH

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Extended specifications	Multimode	Singlemode
OTDR port connector	Cleanable ferrule, UPC polish, with removable SC adapter	Cleanable ferrule, UPC polish, with removable SC adapter
Fiber under test	50/125 $\mu$ m or 62.5/125 $\mu$ m multimode	9/125 $\mu$ m singlemode
Emitter type	Laser	Laser
Wavelengths	850 $\pm$ 20 nm and 1300 $\pm$ 30 nm	1310 $\pm$ 30 nm and 1550 $\pm$ 30 nm
Dynamic range* <sup>1,9</sup>	850 nm: 24 dB with 200ns, 1300 nm: 26 dB with 1 $\mu$ s	1310 nm: 26 dB with 10 $\mu$ s, 1550 nm: 24 dB w/ 10 $\mu$ s
Event deadzone* <sup>2</sup>	850 nm: 3.7m typical, 1300 nm: 3.5 m typical	1310 nm: 3.5 m typical, 1550 nm: 3.5 m typical
Attenuation deadzone* <sup>3</sup>	850 nm: 10 meters, 1300 nm: 13 meters	1310 nm: 10 meters, 1550 nm: 12 meters
Pulse widths (nominal)	850 nm: 20ns, 40 ns, 100 ns, 300 ns. 1300 nm: 20ns, 40 ns, 100 ns, 300 ns, 1 $\mu$ s	1310/1550: 40 ns, 100 ns, 300 ns, 1 $\mu$ s, 3 $\mu$ s, 10 $\mu$ s
Max distance range* <sup>4,5,6</sup>	850 nm: 6 km, 1300 nm: 20 km	1310 nm: 20 km, 1550 nm: 20 km
Linearity* <sup>7</sup>	$\pm$ 0.05 dB/dB	$\pm$ 0.05 dB/dB
Loss threshold	0.01 dB to 1.5d B (settable in .01 dB increments)	0.01 dB to 1.5 dB (settable in .01 dB increments)
Sample resolution	3 cm to 4 m	3 cm to 4 m
Distance accuracy	$\pm$ 1 m $\pm$ 0.005% of distance $\pm$ 50% of resolution $\pm$ IOR error $\pm$ event location error	$\pm$ 1 m $\pm$ 0.005% of distance $\pm$ 50% of resolution $\pm$ IOR error $\pm$ event location error
Testing speed per wavelength	Auto OTDR: <15 seconds typical Manual OTDR: 15 sec – 3 minutes	Auto OTDR: <15 seconds typical Manual OTDR: 15 sec – 3 minutes
Reflectance accuracy* <sup>8</sup>	$\pm$ 4 dB	$\pm$ 4 dB

\*All specifications are valid at 23° C and subject to change without notice.

1. Displayed dynamic range; SNR=1, 3 minutes averaging.
2. Measured at 1.5 dB below non saturating peak for typical UPC connector (reflectance < -40dB multimode and < 50 dB singlemode); using 20ns width (not including dispersion).
3. Measured at +/- 0.5 dB beyond backscatter for typical UPC connector (reflectance < -40dB multimode and < 50 dB singlemode); using 20ns width (not including dispersion).
4. 3 dB above the noise floor.
5. Typical fiber attenuation with no significant event losses.
6. Typical backscatter coefficients.
7. Applies to the expected backscatter region (over the range of 0.1dB to 20db below saturation).
8. Does not include error due to backscatter coefficient not applicable for hidden events or saturating reflection peaks.



DTX with OTDR module attached and launch fiber

**NETWORK SUPERVISION**

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