

# CT400

## Optical Component Tester

**Yenista** proposes a compact tester for fast and accurate characterization of passive optical components (Mux/Demux, filters, splitters...) and modules (ROADM, WSS).

The unit covers the spectral range from 1260 to 1650 nm. So, measurements can be made over the full telecom band.



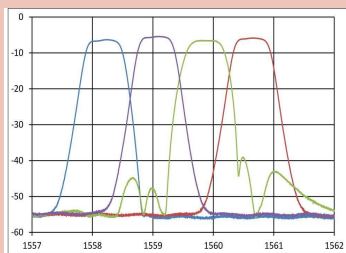
### Sweep & Switch !

The CT400 is a unique instrument that allows you to sweep continuously over several lasers (up to 4) in order to achieve a fast full-range measurement from 1260 to 1650 nm.

The CT400 is a versatile, compact solution for customers who want to perform highly resolved optical loss measurements with an excellent dynamic range. It adapts to most tunable laser sources.

### Real-time Measurement

The CT400 is an unique combination of high speed electronic and optical interferometry. Up to four real time measurements are now possible with  $\pm 5\text{pm}$  wavelength accuracy. This allows the use of CT400 during alignment and manufacturing process, but also for optical sensor analysis.



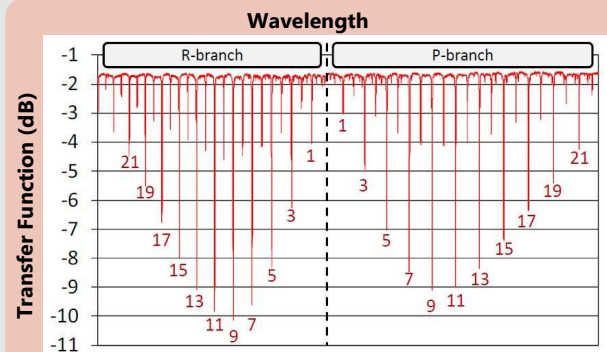
High Dynamic Range

### Accurate IL Measurement

When it comes to measure optical transfer function, the sweeping method is the only fast and reliable solution, with appropriate wavelength accuracy. A sweeping set-up needs to do real time acquisition for power and wavelength measurements. The quality of the tunable lasers sources is a key factor: mode hops, sweeping velocity, power flatness, wavelength accuracy... are various phenomena that need to be controlled in order to make reliable measurements. The CT400 provides all these knowledge, controls and accurate measurement capabilities in a single box that easily interfaces with customer's tunable laser and PC.

### Key Features

- Wavelength Band: Telecom Band
- Wavelength Resolution: 1 pm
- Wavelength Accuracy:  $\pm 5$  pm
- Dynamic Range: 60 dB
- Measurement Time:  $\sim 1$  second
- Combines up to four tunable lasers
- Heterodyne detection of laser lines
- 4 detectors, expandable with trigger



High Wavelength Resolution

<b>General Characteristics</b>	Number of Laser Inputs	2 to 4
	Number of Detectors	2 to 4
<b>Wavelength</b>	Operating Wavelength Range	1260-1650 nm
	Absolute Wavelength Accuracy <sup>*1,*2</sup>	±5 pm
	Relative Wavelength Accuracy	±1 pm
<b>Power</b>	Detection Range	Minimum Input Power on Detectors: -60 dBm Maximum Input Power on Detectors: 0 dBm
	Transfer Function Accuracy <sup>*3</sup>	±0.2 dB
	Dynamic Range <sup>*4</sup>	>60 dB
<b>Sampling Characteristics</b>	Resolution	1 pm - 2 pm - 4 pm - 8 pm - 16 pm - 32 pm - 64 pm - 128 pm
	Points per Scan	Up to 200,000 with 1 detector operation Up to 50,000 with 4 detectors operation
	Measurement Speed	From 10 to 100 nm/s sweep
<b>Optical Connectors</b>	Laser Ports	FC/APC or SC/APC
	Detector Ports	FC/PC or SC/PC
<b>Environment</b>	Operating Temperature Range	+10 °C to +40 °C
	Storage Temperature Range	-40 °C to +60 °C
	Power Supply	100 to 240 V (50 to 60 Hz)
	Dimensions (W x H x D) in mm	335 x 110 x 320
	Weight	4 kg
<b>PC Requirements</b>	Operating System	Windows XP, Windows 7
	Interfaces	USB port and GPIB interface card

\*1. Wavelength > 1270 nm.

\*2. For wide scan: typical 100 nm

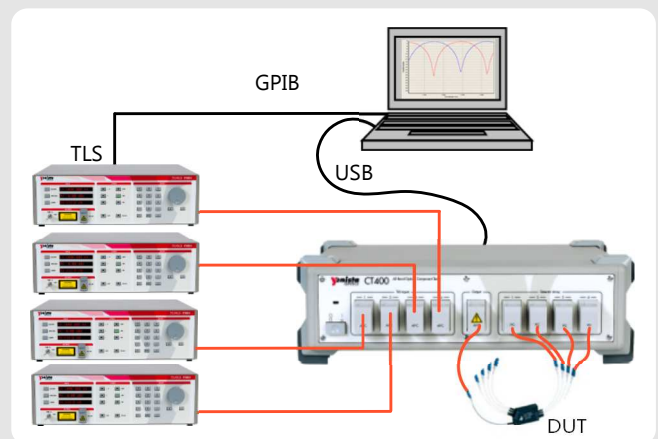
\*3. For incident power on detectors > -30 dBm. Accuracy: +/- 0.5 dB for power between -30 dBm and -60 dBm.

\*4. >55 dB on models with 3 or 4 detectors.

## Measurement Set-up

Tunable Laser Source Requirements		
<b>Remote Control<sup>*5</sup></b>		GPIB & USB
<b>Output Power</b>	2 ch	Any value between 0.5 mW and 10 mW
	>2 ch	Any value between 1 mW and 10 mW
<b>Mode Hops</b>		No more hop mode is highly desirable but the instrument is able to detect and still operates with a few mode hops
<b>Laser Sweep Speed</b>		From 10 nm/s to 100 nm/s

\*5. Remote operation through binary signal on rear side BNC input is provided as an alternative to GPIB.



Information and specifications are subject to change without notice.  
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