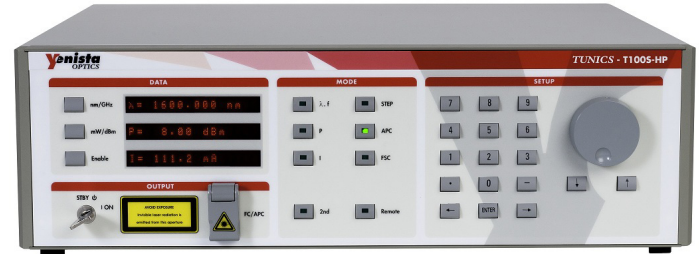


# TUNICS T100S-HP

## High Power Tunable Laser

TUNICS' proven tunable laser design provides long-term reliability with uncompromised specifications. This latest version provides high output power across its full tuning range with ultra-low SSE noise. This is an easy to use and affordable instrument for all optics laboratories and will ensure your measurements are no longer limited by laser performance.

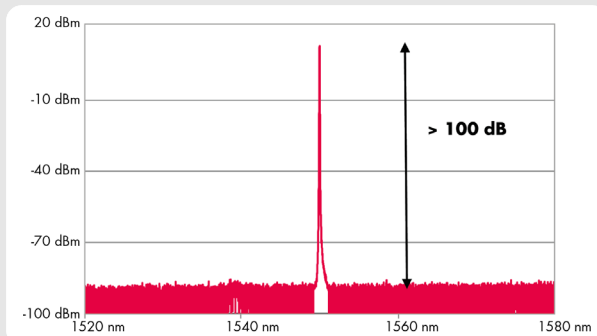


### Key Features

#### +13 dBm Output Power

The TUNICS T100S-HP provides the highest fiber-coupled output power of any comparable tunable laser on the market today. Essential models emit over 10 mW (+10 dBm) over their entire tuning range. Peak power is 20 mW (+13 dBm) for all models.

#### Ultra-low Optical Noise



High Power and High Dynamic Range

Yenista's unique T100 cavity eliminates the broadband spontaneous emission (SSE) that is normally present in an external cavity laser's output. This gives a dramatic improvement in a measurement's dynamic range and enables component characterization without compromise.

#### Built-in Wavelength Reference

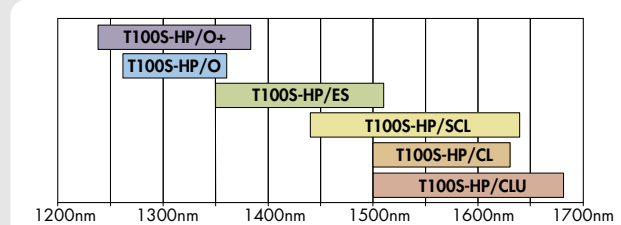
An internal wavelength reference ensures the high wavelength accuracy, better than  $\pm 20$  pm, is maintained in the long-term.

#### Step-by-Step or Fast Wavelength Scans

The laser can be tuned accurately to any wavelength or alternatively can be swept, at any speed from 1 to 100 nm/s over a range of wavelengths.

### Wide Tuning Range

Six models are available. Essential models cover the standard telecom O and C & L wavelength bands. Extended Range models have very large wavelength ranges, up to 200 nm, extending from 1240 to 1680 nm.



Overview of Available Models

### Active Mode-Hop-Free Scan

Yenista's patented active mode-hop control ensures every scan is completely mode-hop-free. Reliable wavelength sweeps are attained with long-term reliability.

### Applications

#### Telecom System & Component Testing

The ultra-low SSE is a big advantage and enables repeatable high dynamic range measurements. Production environments benefit from the proven reliability and fast mode-hop-free scan.

#### Interferometry & Metrology

For both stable and scanning interferometric systems.

#### Sensors & Spectroscopy

0.1 pm fine scanning and wavelength modulation are additional features available for these applications.

#### Scientific Research & Development

Extensive input and output ports provide added flexibility and satisfy a wide range of test requirements.

## Specifications

		Essential Models		Extended Range Models			
		T100S-HP/O	T100S-HP/CL	T100S-HP/O+	T100S-HP/ES	T100S-HP/SCL	T100S-HP/CLU
Wavelength Range		1260-1360	1500-1630	1240-1380	1350-1510	1440-1640	1500-1680
Output Power	Over Full Wavelength Range	≥ +10 dBm		≥ +8 dBm			
	Peak	≥ +13 dBm					
Signal to Source Spontaneous Emission Ratio*1		≥ 90 dB (100 dB typical)					
Side Mode Suppression Ratio*2		≥ 45 dB					
Stability*3	Wavelength	±5 pm/h (±3 pm/h ; ±5 pm/24h typical)					
	Output Power	±0.01 dB / h (±0.025 dB/24h typical)					
Relative Intensity Noise*2*4		-145 dB/Hz typical					
Spectral Width (FWHM)		> 100 MHz (coherence control on)					
		400 kHz typical (coherence control off)					
Absolute Wavelength Accuracy*5		±20 pm					
Wavelength Setting Repeatability		5 pm typical					
Wavelength Setting Resolution		1 pm (0.1 pm in fine tuning mode)					
Fine Tuning Mode Range		±25 pm (±2 GHz)					
Tuning Speed in Step Mode		Approximately 1s for 100 nm step					
Mode-Hop-Free Range*6		Full wavelength range					
Continuous Sweep Speed		Adjustable from 1 to 100 nm/s					
Power Flatness During Sweep		±0.25 dB typical					
Power Repeatability Sweep to Sweep*7		±0.05 dB typical					
Low Frequency Modulation		DC to 8 MHz					
High Frequency Modulation		30 kHz to 200 MHz					
Output Fiber Type		SMF or PMF (option)					
Output Connector		FC / APC					
Communication Interfaces		RS-232C and GPIB (IEEE-488.1*8)					
Temperature / Humidity Range		+15 °C to +30 °C (+60 °F to +85 °F) / <80% (non-condensing)					
Power Supply		100 to 240 V a.c. / 50 to 60 Hz / 60 W					
Laser Safety Classification		Class 1M					
Dimensions (W x D x H)		448 x 370 x 133 mm					
Weight		12.5 kg					

All specifications are given after 60 minutes warm-up and apply for wavelengths not equal to any water absorption.

\*1: Measured over a 0.1 nm bandwidth ±1 nm from the signal.

\*2: For output power ≥ 0 dBm.

\*3: Over one hour at constant temperature.

\*4: Measured at 100 MHz.

\*5: O and CL at 10 dBm / Others at 8 dBm, ±40 pm all at 0 dBm.

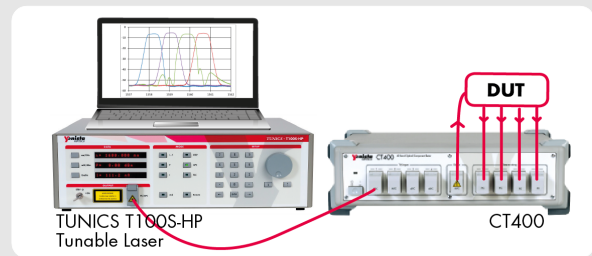
\*6: Validated at 0 and +10 dBm for essential and 0 and +8 dBm for extended range models.

\*7: Over 100 wavelength scans at constant temperature.

\*8: Tested & validated with National Instruments GPIB Board.

## Complete Test Solution

TUNICS lasers are designed to integrate with Yenista's CT400 Component Tester to provide a complete swept-wavelength test solution. The CT400 can combine up to four lasers to cover any wavelength range from 1260 to 1650 nm. 5 pm wavelength accuracy is achieved with 100 nm/s scans and 60 dB dynamic range.



**Yenista**  
OPTICS

### Contacts

**Americas** sales-am@yenista.com +1 609 423 0890

**Asia Pacific** sales-apac@yenista.com +65 6631 8520

**China** sales-china@yenista.com +86 21 6225 3573

**EMEA** sales-emea@yenista.com +33 2 9648 3716

Information and specifications are subject to change without notice  
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