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Data Sheet

August 13, 2026

SANTEC

Santec TSL80 Tunable Laser

Key Features - First-generation Santec external-cavity tunable LD (TSL-80) - Long-wavelength / 1.55 μm communications-band operation (published use) - Narrow linewidth; coherence length greater than 300 m (published) - Approximately 0.1 mW constant output in published waveguide work - Succeeded by TSL-210, TSL-510, TSL-570, TSL-580 - Manual wavelength/power era instrument; later models add GPIB/USB sweep

Technical Specifications
Model: TSL-80 Manufacturer: Santec Instrument Type: External Cavity Tunable Semiconductor Laser Series: TSL tunable lasers (generation 1) Alias: TSL-80; TSL80; Santec TSL-80
Generation: first generation broadband tunable wavelength LD light source Historical Claim: world's first long-wavelength-band wideband tunable semiconductor laser instrument (Santec history) Operating Wavelength Published: 1.



MODEL

Santec TSL80

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

TSL80

LISTING

<https://aumictechlabs.com/products/tsl80-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Santec TSL-80 is a tunable semiconductor laser source designed for optical component and system testing. It delivers output power exceeding 10 mW across selectable wavelength ranges with high accuracy and stability in both wavelength and power output. The instrument provides precise characterization of optical fibers, transceivers, and photonic devices in laboratory and production environments.

Technical Specifications
Product Type: Tunable Semiconductor Laser
Source Output Power: >10 mW Wavelength Range: 1300 nm / 1550 nm (TSL-80 155 model)

Wavelength Accuracy: High accuracy and stability Power Stability: High accuracy and stability
Laser Classification: Class 1M per IEC 60825-1 Remote Interface: GPIB (General Purpose Interface Bus)
Key Features Compact form factor optimized for space-constrained laboratory and production settings Output power exceeding 10 mW across operating wavelengths High wavelength and power accuracy with stability suited to demanding characterization work GPIB remote interface for automated test integration Straightforward operation facilitating efficient workflow
Typical Applications Optical fiber characterization Optical transceiver testing Photonic device characterization
Compatibility & Integration The GPIB interface enables integration with standard test and measurement systems supporting this communication protocol, allowing remote control and incorporation into automated measurement setups.

Features & description

From manufacturer datasheet

Features

- First-generation Santec external-cavity tunable LD (TSL-80)
- Long-wavelength / 1.55 μm communications-band operation (published use)
- Narrow linewidth; coherence length greater than 300 m (published)
- Approximately 0.1 mW constant output in published waveguide work
- Succeeded by TSL-210, TSL-510, TSL-570, TSL-580
- Manual wavelength/power era instrument; later models add GPIB/USB sweep

Polarization In Published Setup: collimated, linearly polarized, half-wave plate to fiber axis

Typical Use Band: optical communications long-wavelength window Successor Benchtop: TSL-210 (80 to 100 nm windows in 1260 to 1650 nm) Later Swept Source: TSL-510 (up to 130 nm, 100 nm/s) Current Generation Examples: TSL-570, TSL-580 Lineage Note: Santec launched 6th generation TSL-550 and 7th generation TSL-770 after TSL-80 Published Application: high-precision planar waveguide Fabry-Perot loss measurement Cavity Length In That Setup: typically 50 to 100 cm fiber cavity Spectral Character: narrow linewidth / long coherence versus later coherence-control TSL models Control Era: front-panel / laboratory source; not the later SCPI TSL-510 command set Fiber Coupling: free-space collimated output in the published optical setup Product Status: legacy / discontinued first generation Safety Class Later TSL: subsequent TSL instruments are classified as laser products; treat TSL-80 as a laser source Support: superseded; use later TSL datasheets for modern accuracy tables Notes Public numeric tables for TSL-80 are sparse. Verified rows are Santec history (first-generation ECL) plus published 1.55 μm , ~0.1 mW, coherence length greater than 300 m. Do not copy TSL-210/510 accuracies onto TSL-80. Confirm actual wavelength window and power on the instrument.

TSL80 Characteristics / Specifications

PARAMETER	VALUE
Model	TSL-80
Manufacturer	Santec
Instrument Type	External Cavity Tunable Semiconductor Laser
Series	TSL tunable lasers (generation 1)
Alias	TSL-80; TSL80; Santec TSL-80
Generation	first generation broadband tunable wavelength LD light source
Historical Claim	world's first long-wavelength-band wideband tunable semiconductor laser instrument (Santec history)
Operating Wavelength Published	1.55 μm
Output Power Published	approximately 0.1 mW constant in Feuchter waveguide-loss setup
Coherence Length Published	greater than 300 m
Laser Architecture	external cavity semiconductor laser
Polarization In Published Setup	collimated, linearly polarized, half-wave plate to fiber axis
Typical Use Band	optical communications long-wavelength window
Successor Benchtop	TSL-210 (80 to 100 nm windows in 1260 to 1650 nm)
Later Swept Source	TSL-510 (up to 130 nm, 100 nm/s)
Current Generation Examples	TSL-570, TSL-580
Lineage Note	Santec launched 6th generation TSL-550 and 7th generation TSL-770 after TSL-80
Published Application	high-precision planar waveguide Fabry-Perot loss measurement
Cavity Length In That Setup	typically 50 to 100 cm fiber cavity
Spectral Character	narrow linewidth / long coherence versus later coherence-control TSL models
Control Era	front-panel / laboratory source; not the later SCPI TSL-510 command set
Fiber Coupling	free-space collimated output in the published optical setup
Product Status	legacy / discontinued first generation

PARAMETER	VALUE
Safety Class Later TSL	subsequent TSL instruments are classified as laser products; treat TSL-80 as laser source
Support	superseded; use later TSL datasheets for modern accuracy tables Notes Public numeric tables for TSL-80 are sparse. Verified rows are Santec history (first-generation ECL) plus published 1.55 μm , ~0.1 mW, coherence length greater than 300 m. Do not copy TSL-210/510 accuracies onto TSL-80. Confirm actual wavelength window and power on the instrument.
Linewidth	(coherence length greater than 300 m) and approximately 0.1 mW constant output. Later benchtop generations are TSL-210, TSL-510, TSL-550/570/580.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.