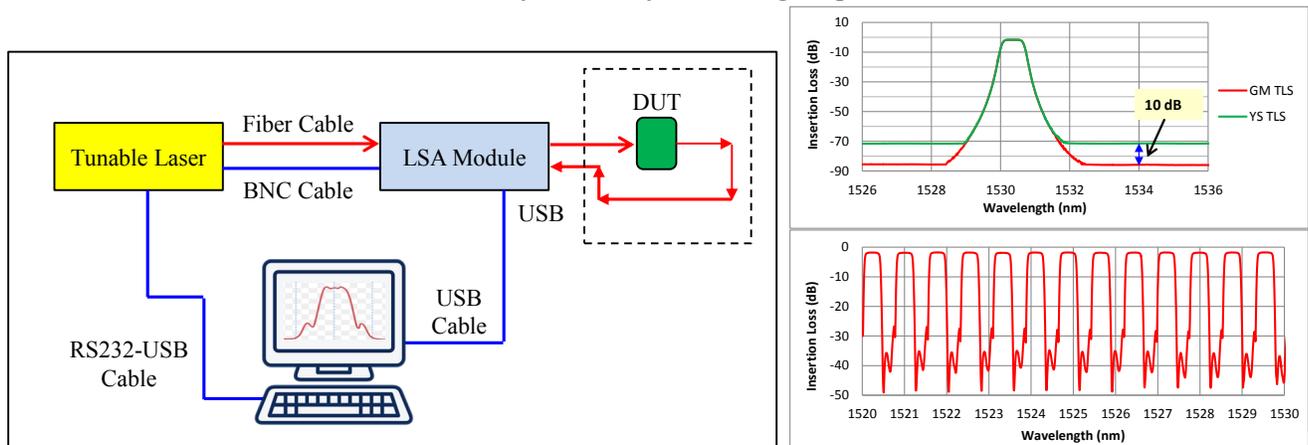


## Laser Scan Analyzer



LSA-100 and LSA-200 Laser Scan Analyzer modules are designed to allow the users to build their own automatic data collection/analysis systems by using their existing tunable lasers or TLS-1000 tunable light sources. This lightweight measurement system can simultaneously test multiple devices at high speed with superior spectral resolution and high dynamic range. The LSA modules are aimed for fully utilizing the testing capacity of the tunable laser source and has significantly enhanced the production throughputs in manufacturing floor.

LSA module is a laser spectrum scan system, with built-in wavelength and power reference. As exemplified in figure below, the light output of tunable laser source is inputted to a LSA module, which is connected to a device under test (DUT). The optical output from the DUT is directed to LSA's light detection unit. As the laser source scans the wavelength, the light-detection unit samples the light level passing through the DUT. Output spectrum data are referenced with built-in wavelength meter and power calibration. Within sub-second, the full spectrum of the DUT is acquired. Based on the referenced spectrum data, one can derive the critical parameters of the DUT, such as bandwidth at different levels, insertion loss, central wavelength and isolation, etc. To fulfill many varieties of customer's applications, LSA module provides Dynamic Link Library (DLL) that allows users to build their own control software while dynamically accessing acquisition data.



# Laser Scan Analyzer

## Key Features

- High-speed data acquisition unit
- Built-in wavelength reference
- Real-time power reference
- 70 dB dynamic range detection
- Dynamic Link Library (DLL)

## Key Applications

- Passive fiber-optic component characterization
- Optical parameter measurement
- Production line automation
- Optical filter inspection
- Test and measurement instruments

## Product Specifications and Key Parameters

| Parameter                   | Unit | Specification                    | Note  |
|-----------------------------|------|----------------------------------|---|
| Operating Wavelength Range  | nm   | Single band<br>or<br>1250 ~ 1650 | Determined by sweeping wavelength range of tunable laser. It can work in any wavelength band. |
| Wavelength Resolution       | pm   | 1 ~ 8                            | Depend on scan wavelength range   |
| Wavelength Accuracy         | pm   | ±4                               |   |
| Wavelength Repeatability    | pm   | < 4                              |   |
| Measurement Resolution      | dB   | 0.01                             |   |
| Measurement Noise           | dB   | < 0.005                          | Typical   |
| Measurement Uncertainty     | dB   | < ±0.03                          |   |
| Noise Floor                 | dBm  | < -70                            | Electronics   |
| Detection Dynamic Range     | dB   | 70                               | 1×1 module  |
| Scan Speed                  | nm/s | 50 ~ 400                         | Depend on the sweeping speed of TLS   |
| Electrical Interface        | -    | USB                              |   |
| Operating Temperature Range | °C   | 15 ~ 30                          |   |

### Notes:

- 1) Type A: LSA module with one test port and wavelength reference unit.
- 2) Type B: LSA module with two test ports (Need Type A to provide wavelength reference).
- 3) LSA module can be used with existing commercial tunable lasers.
- 4) Performance and capacity can be optimized with the use of TLS-1000 tunable light sources.