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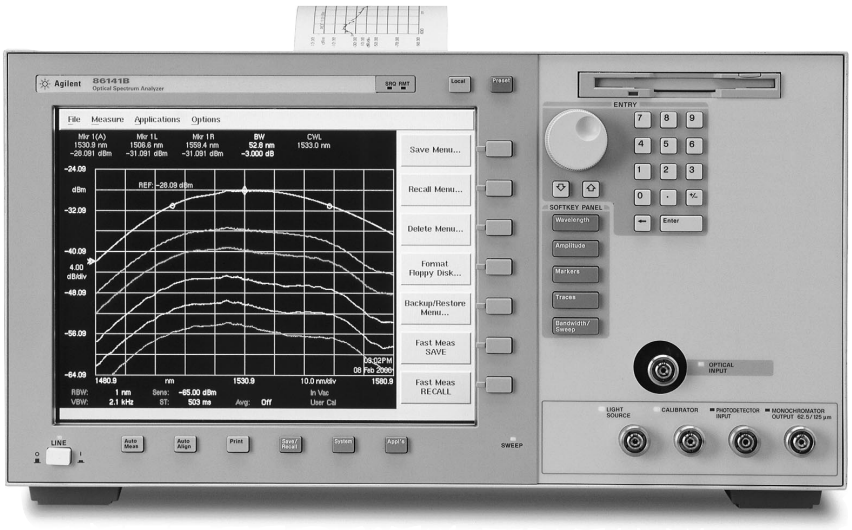
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Find the *Keysight / Agilent 86142B* at our website: ***Click HERE***

Agilent Optical Spectrum Analyzer Source Test Application

Product Overview



Quick optical source characterization on the Agilent OSA

- Characterization of various types of optical sources
- One-button testing for DFB's, Fabry-Perot and LED's
- Measurement automation

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Agilent's optical spectrum analyzers offer automated optical source and laser characterization

Laser and LED sources are key components for enabling transmission of information in fiber-optic systems. To ensure proper operation of sources in fiber-optic systems, key parameters need to be measured.

R&D and manufacturing engineers will appreciate the quick and accurate characterization of optical sources provided by the source test application. This application provides the highest level of measurement automation possible, minimizing user interaction. Simplified test setup and fast measurement speed improves throughput in manufacturing. Additionally, statistical trace calculations allows the user to measure mean wavelength (center of mass), FWHM (full width half max), and sigma on any active trace.

Ease of setup

Characterization of optical sources using the source test application is fast and easy. The application is selected through the applications menu (figure 1). The setup screen (figure 2) allows the user to select the span, and sensitivity which minimizes the amount of noise, and peak excursion that determines which side modes are included in the measurements. The Pk density/noise marker reference measures the power spectral density of the LED at the peak wavelength. All of this is available while still having access to all OSA front-panel functionality.

The source test application can also be fully controlled via GPIB, making it ideally suited for fast paced manufacturing environments.

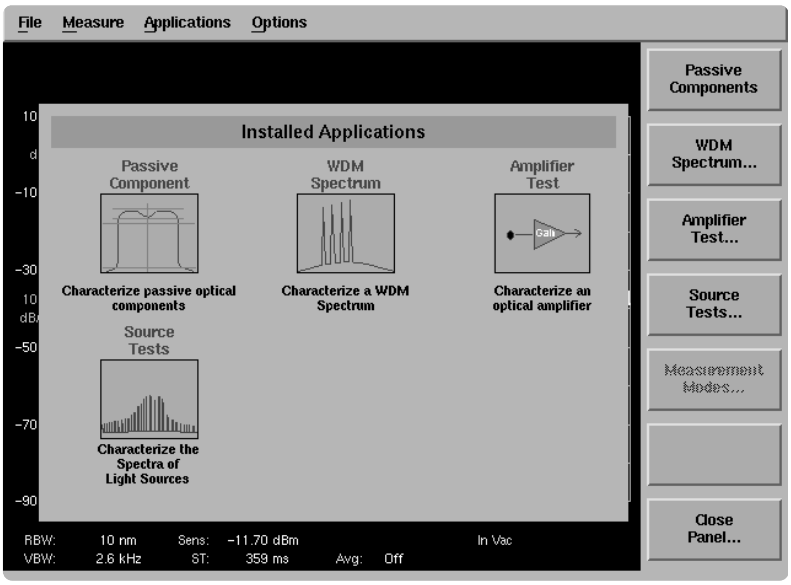


Figure 1. Applications Menu

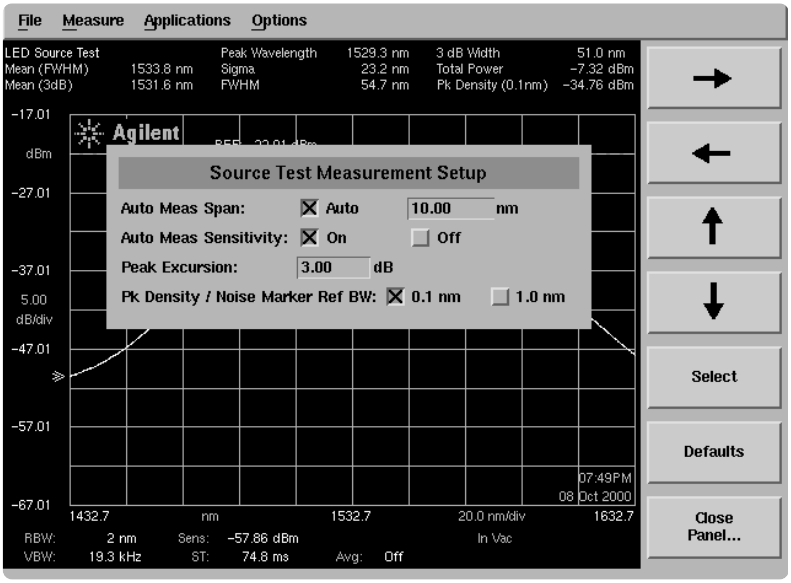


Figure 2. Source Test Measurement Setup

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Displaying and Documenting Results

Once the measurement has been completed the results are quickly displayed. Results may be printed both in tabular and graphical form.

For the DFB lasers the application provides the following parameters: mode offset, stop band, center offset, peak wavelength, peak amplitude, bandwidth and SMSR (side mode suppression ratio).

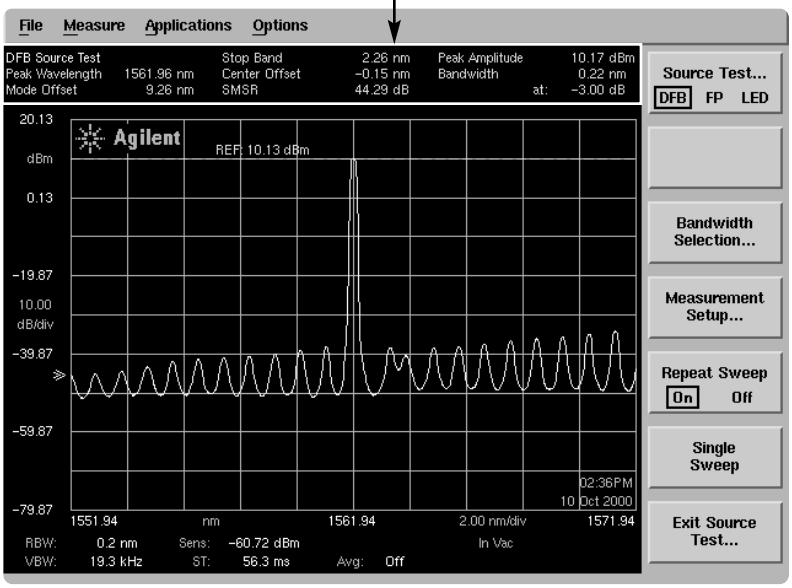


Figure 3. DFB Source Test Display

For the Fabry-Perot laser measurement parameters are: mean wavelength, peak wavelength, mode spacing (in both nm and GHz), FWHM, peak amplitude, total power, and sigma.

Line Markers may be used in conjunction with any source test to include the desired portions of the trace. Figure 4 shows line markers used to include specific modes for a Fabry-Perot laser.

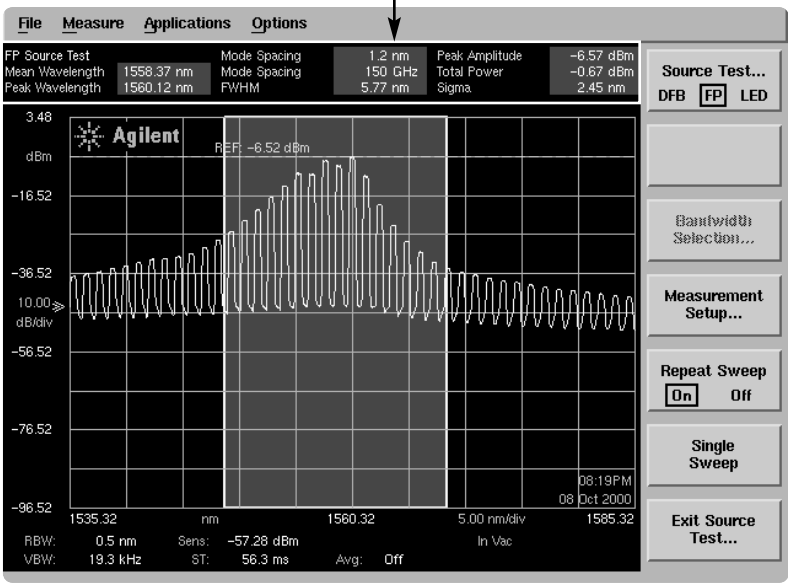


Figure 4. Fabry-Perot Using Line Markers

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The source test application is a standard feature on all 8614xB OSAs.

A simple firmware upgrade adds the source test application to existing 8614x OSAs, at no additional cost. Please contact your local Agilent representative for further information.

For performance specifications, please refer to the 8614xB optical spectrum analyzer family technical specifications (Agilent Literature # 5980-0177E).

For an LED source, the measurement parameters are: peak wavelength, sigma, FWHM, 3 dB width, total power, and peak density.

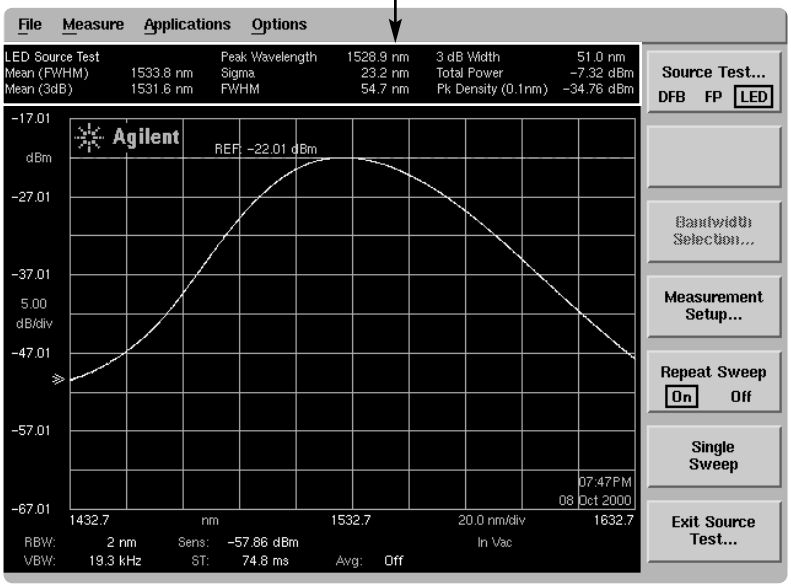


Figure 5. LED Display

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Printed in USA December 15, 2000
5988-1030EN



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