

Optical Component Test

# Agilent Lightwave Mainframes



## Flexibility & Scalability

- Faster reaction times in alignment and adjustment applications
- Significantly shorter measurement and data transfer times
- Faster measurement data transfer in remote applications
- Reduced test times and cost of test
- Elimination of associated costs and time-consuming setup



Agilent Technologies



## Optical Component Test

### Agilent 8163B Lightwave Multimeter

### Agilent 8164B Lightwave Measurement System

### Agilent 8166B Lightwave Multichannel System

#### Flexible

A free combination of the Agilent modules allows to easily generate different measurement setups.

The system can be controlled either directly for benchtop, or with an external PC for remote applications. Internal applications (Loss over Wavelength, Return Loss, Logging, Stability) can be used directly.

#### Fast

The Agilent Lightwave mainframes are optimized for test speed and therefore minimize test cost.

#### Scalable

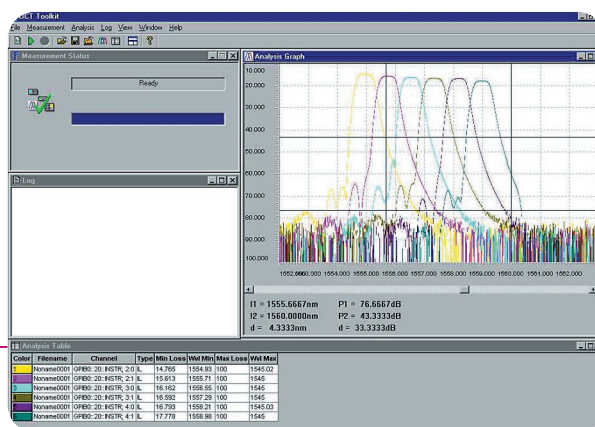
High and low channel applications can be addressed by the easy extendability of the mainframes. "The right form factor" for each setup!

#### Ergonomic

Color, high-contrast, brightness, low reflection display and a wide viewing angle is key for benchtop applications.

#### Efficient

On top of the plug&play drivers the Agilent Photonic Foundation Library provides a variety of application functions that increase the measurement performance and reduce test implementation cost.



Agilent Photonic Foundation Library



The Agilent Optical Component Test Platform for flexible and scalable test solutions with small footprint



## Optical Component Test

**The Agilent Flexible Test Platforms help Reduce Engineering Effort with a Modular Concept.**

Agilent 8163B, 8164B and 8166B mainframes address different measurement needs for passive and active lightwave components with high port flexibility. The Agilent 8163B mainframe features dedicated benchtop applications with direct user interactions.

The Agilent 8164B is optimized for testing devices such as multiplexers and demultiplexers, fiber bragg gratings, or thin film filters. A test set up with the Agilent 8166B is ideal for high port device and optical amplifier test. Internal applications (Loss over Wavelength, Return Loss, Logging, Stability) can be used directly.



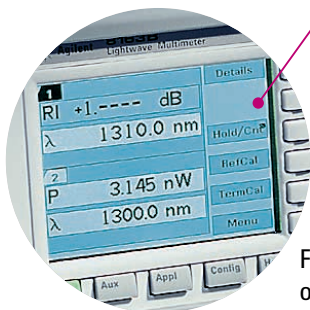
Agilent 8164B Lightwave Measurement System



Agilent 8163B Lightwave Multimeter



Agilent 8166B Lightwave Multichannel System



Fast and easy-to-read measurement values on the high-resolution color display



Tunable Laser Modules  
(only for 8164B)



Compact Tunable Laser Modules



Distributed Feedback (DFB) Laser Modules



Fabry Perot Laser Modules



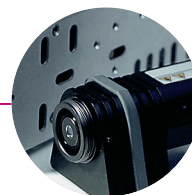
Attenuator Modules



Return Loss Modules



Power Sensor Modules



Optical Heads



## Test Innovations That Improve Your Bottom Line

| Optical Component Test                                          | Passive Component Test |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             | Optical Amplifier Test |                  |     | Bit Error Ratio Test |           |             |
|-----------------------------------------------------------------|------------------------|----------|-----------------|----------------|-------------|-----------------------|--------------------------------------|---------------------------|---------------------|-----------------------------|------------------------|-------------------------|-------------|------------------------|------------------|-----|----------------------|-----------|-------------|
|                                                                 | Mux/DeMux/V-Mux        | TFF Test | FBG Filter Test | Connector Test | Switch Test | TFF Align-/Adjustment | Fiber to AWG Alignment/AWG Chip Test | Coupler/Splitter/Combiner | Isolator/Circulator | Variable Optical Attenuator | Gain Flattening Filter | Dispersion Compensators | Interleaver | EDFA                   | Raman Amplifiers | SOA | Rx/Tx                | Line Card | System Test |
| Tunable Laser<br>81600B, 81480B, 81640B, 81680B                 | •                      | •        | •               |                | •           | •                     | •                                    | •                         | •                   | •                           | •                      | •                       | •           |                        |                  |     |                      |           |             |
| Tunable Laser<br>81672B, 81482B, 81642B, 81682B,                |                        |          |                 |                | •           |                       |                                      | •                         | •                   | •                           | •                      | •                       | •           | •                      | •                | •   |                      |           | •           |
| Compact Tunable Laser<br>81649A, 81689A/B                       |                        |          |                 |                |             |                       |                                      | •                         | •                   |                             |                        |                         |             | •                      | •                | •   | •                    |           | •           |
| Distributed Feedback (DFB) Laser<br>81662A, 81663A              |                        |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             | •                      | •                | •   |                      |           | •           |
| Fabry-Perot Laser                                               |                        |          |                 | •              | •           | •                     | •                                    | •                         | •                   |                             |                        |                         |             |                        |                  |     |                      |           |             |
| Power Meter<br>8163xB                                           | •                      | •        | •               | •              | •           | •                     | •                                    |                           |                     | •                           | •                      | •                       | •           | •                      | •                |     | •                    | •         | •           |
| Optical Heads                                                   |                        |          |                 |                |             | •                     |                                      | •                         | •                   | •                           | •                      | •                       | •           |                        |                  |     | •                    | •         | •           |
| Return Loss Modules<br>81610A, 81611A, 81612A<br>81613A, 81614A |                        |          | •               | •              | •           | •                     | •                                    | •                         | •                   | •                           | •                      | •                       | •           | •                      |                  |     |                      |           |             |
| Attenuator<br>81560A/61A,66A, 67A<br>81570A/71A/73A/76A/77A     |                        |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             | •                      | •                | •   | •                    | •         | •           |
| Switches 8159x                                                  | •                      | •        | •               | •              | •           | •                     | •                                    | •                         | •                   | •                           | •                      | •                       | •           | •                      | •                | •   | •                    | •         | •           |
| Polarization Controller 8169A                                   | •                      | •        | •               |                | •           |                       | •                                    | •                         | •                   | •                           | •                      | •                       | •           | •                      |                  |     |                      |           |             |
| Polarization Controller 11896A                                  |                        |          |                 |                |             | •                     |                                      |                           | •                   | •                           | •                      | •                       | •           | •                      | •                |     |                      |           |             |
| Digital Communications Analyzer (DCA)                           |                        |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             |                        |                  |     |                      | •         |             |
| Bit Error Ratio Tester (BERT)                                   |                        |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             |                        |                  |     |                      |           | •           |
| SONET/SDH Tester                                                |                        |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             |                        |                  |     |                      | •         | •           |
| Optical Spectrum Analyzer (OSA)                                 |                        |          |                 |                |             |                       |                                      |                           |                     |                             |                        |                         |             |                        |                  | •   | •                    | •         |             |
| Mainframes 8163A/B                                              |                        |          |                 | •              |             | •                     |                                      | •                         | •                   | •                           |                        |                         |             |                        |                  | •   |                      | •         | •           |
| 8164A/B                                                         | •                      | •        | •               |                | •           |                       | •                                    | •                         | •                   | •                           | •                      |                         |             | •                      | •                | •   | •                    | •         | •           |
| 8166A/B                                                         | •                      |          |                 |                | •           |                       | •                                    |                           | •                   | •                           |                        |                         |             | •                      | •                |     | •                    | •         | •           |
| All Parameter Test                                              | •                      | •        | •               |                |             |                       |                                      |                           | •                   | •                           | •                      | •                       | •           |                        |                  |     |                      |           |             |
| Photonic Foundation Library                                     | •                      | •        | •               |                | •           | •                     | •                                    | •                         | •                   | •                           | •                      |                         | •           |                        |                  |     |                      |           |             |

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For further information, please visit [www.agilent.com/comms/comp-test](http://www.agilent.com/comms/comp-test)

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