

Configuration Guide



Agilent Passive Component Test Solutions

The Passive Component Test System (PCT) is a scalable solution comprised of Agilent's state-of-the-art lightwave test platforms and a robust software environment.

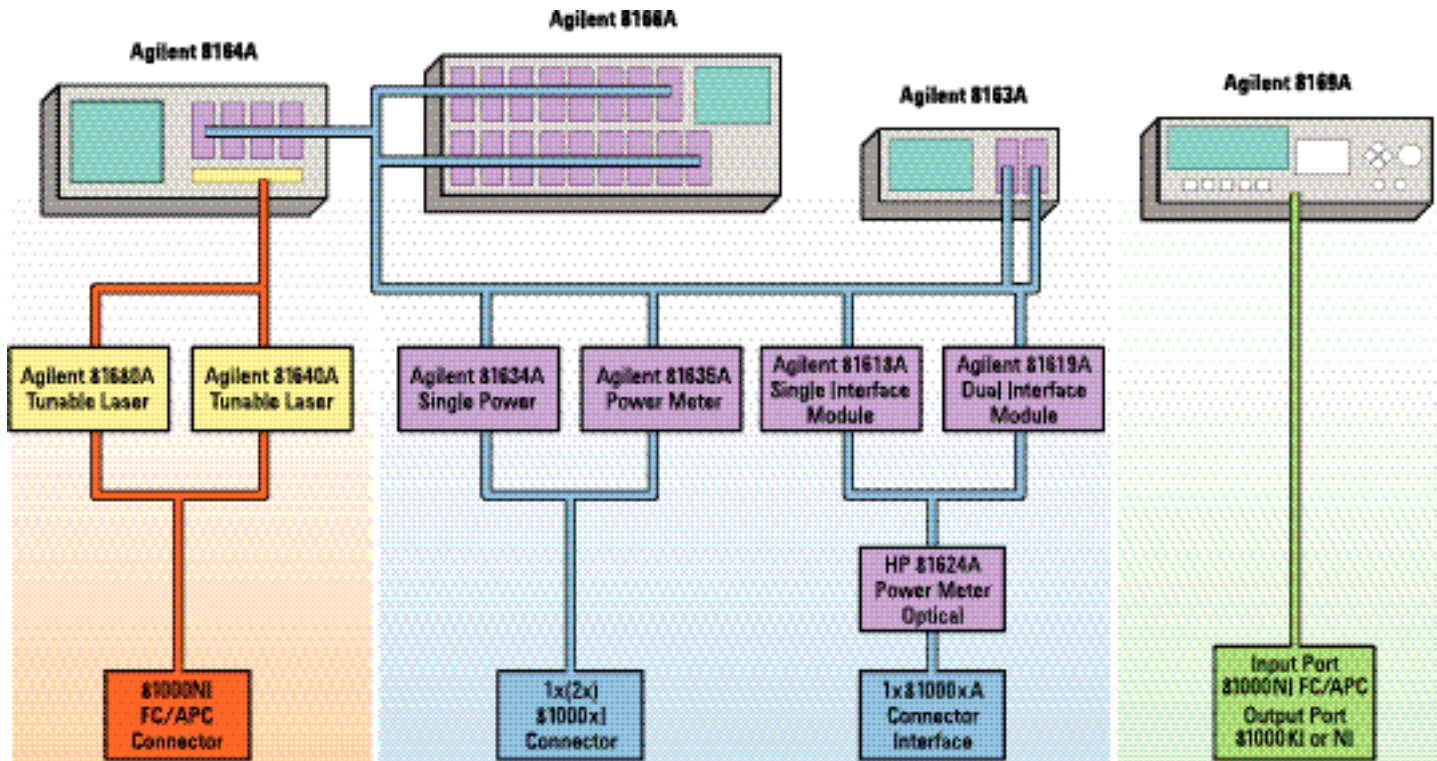
Test capabilities include:

- Insertion loss
- Polarization dependent loss (PDL)
- Center wavelength
- Bandwidth
- Ripple
- Flatness
- Crosstalk

Manufacturers who are producing passive components can significantly shorten time-to-market and time-to-volume while reducing the cost of test with this system.



PCT Configurator



Laser Recommendation

- Use 81640A laser for C and L band wavelength range
- Use 81680A for C band only with higher wavelength accuracy and higher output
- Connector interface FC/APC to 8169A

Power Sensor Recommendation

- Use 81634A power sensor module for high sensor accuracy and PDL sensitivity
- 81635A for high channel count applications
- Connector interface is customer dependent

Optical Head Recommendation

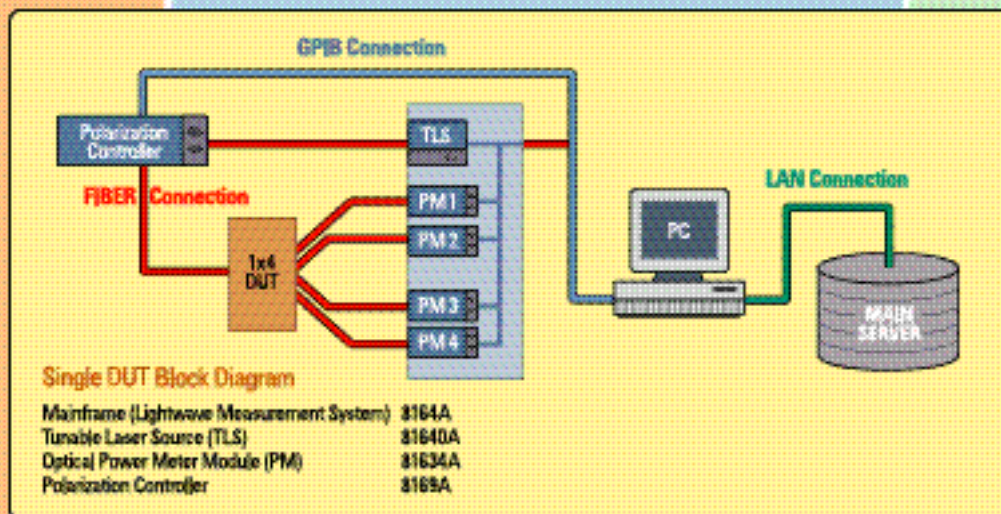
- Use 81618A with a single channel application
- Use 81624A optical head for bare fiber adaptation or direct light capture (TFF)
- Connector interface is customer dependent

8100x1 Options

- FI: FC/PC
- KI: SC/APC
- NI: FC/APC
- PI: E-2000

8100xA Options

- BA: Bare Fiber
- FA: FC/PC/APC
- KA: SC/PC/APC
- PA: E-2000



System Requirements

1. Instruments/Rack

Agilent 8169A Polarization Controller with Firmware Revision 2.0

Agilent 8164A Lightwave Measurement System with Firmware Revision 2.0 or higher with:

- 1.6m Rack with Mounted Swing Arm
- Agilent 81640A or 81680A Tunable Laser
- Agilent 816xxA Power Sensor Modules or Optical Heads (minimum one required)
- For each optical connector one of the Agilent 81000xx connector interface is required. (See Agilent's Lightwave Test and Measurement Catalogue 2000 p/n 5968-8000E.)

2. For Devices with Additional Outputs

Depending on channel count, additional Agilent 816x mainframes equipped with power sensor modules (single or dual channel) can be added.

3. Personal Computer

Recommended: Agilent PC (PT1653T) that comes with the PCT System

- Pentium III, 667 MHz
 - 10 GB Hard Drive, 128 MB RAM
 - Windows NT 4.0
 - 15" Flat Panel Screen
 - CD Read/Write Drives
 - 10/100 Ethernet Card
- Minimum Specifications for PC Must Include:
- Windows NT 4.0 or Windows 2000
 - 500 MHz or Faster
 - 10 GB Hard Disc Drive, 128 MB RAM (a larger drive may be required depending on other applications to be run on the test system computer)
 - CD-ROM
 - 3.5" Disc Drive
 - Monitor, Keyboard, Mouse
 - Microsoft Excel™ or similar spreadsheet program that can handle tab-delimited files
 - Test Environment Software (as listed above)
 - Agilent GPIB Interface (82341C or 82350A)
 - VXI Plug and Play Driver Version 2.51 for the Agilent 816xA Lightwave Measurement System
 - LAN interface and software as required for compatibility with existing Local Area Networks.

4. Printer

A color printer is recommended but not required to perform the measurement as the analysis could be done on another PC. A printer is not included with the Agilent PCT system.

5. Software

The test system includes Agilent PCT standard software (dll and example user interface). The PCT system works within standard programming environments including TestExexSL,™ TestStand,™ Lab Windows,™ VisualBasic,™ or Visual C++.™

6. Options

Customized software including user interface and post-processing analysis can be provided. Contact your solutions consultant for additional information (see Solutions Consultant table on page 4 of this guide.)

Light Source/Lasers

- 81640A operates from 1510 to 1640nm with peak output of -5dBm (low SSE)
- 81680A operates from 1460 to 1580nm with peak output of -4dBm (low SSE)

Detectors

- For low channel count, the 81624A optical head or the 81634A power meter are recommended. For high channel count, the dual channel 81635A will reduce space and mainframes required. Additional mainframes include the 2-slot 8163A and 17-slot 8166A.

Temperature Modules

- Digital Acquisition/Switch Unit (34970A DAC) is designed to measure temperature levels. Each 34970A DAC unit accepts up to three 34902A modules.
- The Agilent 34902A 16-channel Multiplexer Module is a high-speed multiplexer for the 34970A DAC that switches 16 two-wire channels at up to 250 channels per second.
- The Agilent 34308A Thermistor Kit is recommended for high-accuracy, high-sensitivity temperature measurements and for calibration of 34970A modules. The kit contains:
 - Package of 5, 10kOhm thermistors
 - Epoxy-encapsulated bead construction
 - 0 to 75° C operating range – 0.1° C interchangeability

Your Agilent Solution Consultant

Regions Covered	Agilent Contact	Agilent Location	Office Telephone	Contact E-mail Address (@agilent.com)
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Solutions Consultant Mgr.	Glenn Hewson	New Hampshire	(781) 744-6722	Glenn_hewson@

Warranty

- One year warranty on Agilent systems; return to Agilent for repair
- Multi-year Agilent instrument warranties are recognized
- Agilent-specified third party equipment is included
- 8 x 5 4-hour Agilent Response Center support
- Unit exchange service (3-day delivery) during repair of Agilent and third party equipment (based on instrument availability)
- 3-day response for on-site AE/CE assistance (based on customer location)
- Next day on-site HP System PC support (where available)
- 1-day installation support
- 2-days start-up assistance

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Product specifications and descriptions in this document subject to change without notice.

Additional Information

For additional Agilent Technologies information, contact your local Agilent Technologies sales office or visit Agilent on the web at:
www.agilent.com/find/assist

You can also contact one of the following centers and ask for a test and measurement sales representative.

United States:
(tel) 1 800 452 4844

Canada:
(tel) 1 877 894 4414
(fax) (905) 282-6495

Europe:
(tel) (31 20) 547 2323
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Japan:
(tel) (81) 426 56 7832
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