KEYSIGHT TECHNOLOGIES (AGILENT HP)

86142B

The Keysight (Agilent) 86142B is a benchtop optical spectrum analyzer designed for high-accuracy WDM component and system characterization. It provides 10 pm wavelength accuracy and covers the S, C, and L wavelength bands, with low polarization dependency and high dynamic range.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2)

Resolution and Filters

Resolution Bandwidths	Multiple selectable optical RBWs

Measurement and Analysis Functions

Channel/ITU Grid Support	ITU-T grid support for WDM channel analysis
Channel Power Measurement	Supported
Peak Search	Automatic peak search and multi-peak find
Markers	Multiple markers with delta and marker table
Limit Lines	Limit lines with pass/fail testing
Trace Math	Reference trace, normalization, max hold, min hold, trace averaging
Reference Trace Management	Store/recall reference for normalization/limit testing

Sweep and Span

Sweep Modes	Continuous/repeat and single sweep modes
Auto Sweep Time	Automatic sweep-time selection available
Start/Stop/Center/Span	Direct wavelength start/stop, center, and span entry

Display and User Interface

Number of Traces Displayed	Multiple simultaneous traces (e.g., live, max hold, average, reference)
Graticule/Display Features	Graphical spectrum display with on-screen readouts and softkeys
Hardcopy/Screen Capture	Front-panel hardcopy/screen capture to external media or printer
Application Shortcuts	Front-panel keys/softkeys to launch measurement apps

Connectivity and Remote Control

Remote Programming	SCPI command set over GPIB

Data Storage and File Management

Instrument States	Save/recall of instrument states and trace data
Removable Media Support	Removable media storage supported (e.g., floppy)
Trace/Data File Formats	Instrument-native trace/state formats; export of measurement results

Service and Support

Self-Test Diagnostics	Power-on self-test and diagnostics
Built-In Help	Context-sensitive on-instrument help

Optical Interfaces

Optical Input Ports	Front-panel optical input
Input Fiber Type	Optimized for single-mode fiber
Interchangeable Connector Adapters	Supported (e.g., FC/PC, SC/PC, ST/PC)

APPLICATIONS

WDM component and system test where wavelength/power accuracy, dynamic range, and low polarization dependency are critical.