Agilent Technologies

USER'S GUIDE SUPPLEMENT

Optical Spectrum Analyzer
Agilent 86141B Option H17

Part Number:
86141-90002
Printed: October 2000

Use this supplement with manual
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INTRODUCTION

This manual supplement describes the differences in the Agilent 86141B Option H17 compared to the standard Agilent 86141B.

DESCRIPTION

The Agilent 86141B Option H17 is a standard Agilent 86141B Optical Spectrum Analyzer that has been modified to provide improved preselector capability for single mode (9/125 um) applications. This modification greatly increases the instruments susceptibility to vibration and temperature for preselector operations when using the 9 um output.

The modification consists of replacing the internal multi-mode (62.5/125 um) optical transfer switch with both a single mode (9/125 um) optical cable and multi mode (50 um) optical cable. Both monochromator outputs are routed directly to the front panel; the photo diode input fiber (50 um) is also routed directly to the front panel.

This special requires that an external 50 um jumper be installed on the front panel from the 50 um monochromator output to the 50 um photodetector input for normal OSA operation.

The photo diode input must be looped back to either of the mono outputs or be blocked during manual zero and auto-zero operations.

This special requires that an auto align be performed when switching between mono outputs. When using the 50 um mono output, a standard auto align is sufficient. When using the 9 um mono output, a “single mode align” (Under the Filter mode menu) should be used.

MANUAL CHANGES TO DOCUMENT THE AGILENT 86141B OPTION H17

CHAPTER 7, Specifications and Regulatory Information (when using 50 um mono out)

Applicable Specifications and Characteristics (when using 50 um mono output)

Automatic internal optical transfer switch operation is not operable with this option.

An external 50 um optical fiber loop back must be used for normal OSA operation.

Any errors introduced by the use of a non-perfect cable will add direct to the OSA measurement uncertainty and degrade all specifications.

CHAPTER 7, Specifications and Regulatory Information (when using 9 um mono out)

Page 7-6. Specification, Resolution Bandwidth

Delete: All references to Corrected bandwidth accuracy for noise markers (1250 nm – 1600 nm)

Page 7-7. Specifications, Amplitude

Delete: All references to Amplitude specifications.

Add: Polarization Dependence Agilent 86141B Option H17*

± 0.5 dB from 1510 to 1570 nm (Characteristic)

Page 7-7. Specifications, Sensitivity

Delete: All references to Sensitivity specifications.

Add: Sensitivity for Agilent 86141B H17*

-80 dBm form 1510 to 1570 nm only

Page 7-12. Specifications, Monochromator Insertion Loss

Delete: All references to Monochromator Insertion Loss specifications.

Delete: All references to Characteristic Monochromator Loss.

Add: Insertion Loss of Monochromator with 9 um output fiber.*

≤13.0 dB

(Insertion loss is specified with an unpolarized source after auto align at the test wavelength. The insertion loss is verified every 10 nm form 1510 to 1570 nm.)

Page 7-12: Monochromator Insertion Loss

Change: (into 50 um fiber)

Page 7-12: Photodetector Input

Add: 50 um fiber or smaller required.

Page 7-11: Specifications, Environmental

Change: Operational Temperature to **20 deg C to 30 deg C**

*Performance Considerations:

No significant temperature change.

No movement of the fiber or vibration of the instrument.

HMS-10 connectors on monochromator input and output.

SERVICE, Replaceable Parts

Change: Optical Assembly

From Agilent p/n 86140-60081

To Agilent p/n 86141-60086