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HEWLETT® PACKARD

TECHNICAL DATA SHEET

SUPPLEMENT

High Speed Lightwave Converter
HP 83440B-H10

Part Number:
83440-90005
Printed: July 1998

Use this supplement with manual
part number: 5091-5536E
Printed: October 1992

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INTRODUCTION

This Technical Data Sheet describes the differences in the HP 83440B Option H10 compared to the standard HP 83440B.

DESCRIPTION

The HP model 83440B Option H10 special is a modified version of the standard 83440B with 4 major changes in its design: The unit has a special PC assembly that allows monitoring of the photodiode bias current.

1. A special body is used which has 3 feedthru capacitors mounted on the outside of the case. These feedthru capacitors allow:
   a) A permanent connection to the DC supply wires and
   b) a connection to the bias current monitoring circuit.

2. Unit has a base plate, which can be attached to a test fixture or bolted to another piece of equipment. The HP 83440B H10 uses the IGE1-4408 detector

3. This special has a 1 meter long patch cord, with angled ST connector attached.

4. Unit has a special PC assembly.

The purpose of these changes are to provide: 1) A separate fiber cable is not required for the customer to connect unit, 2) Convenient mounting, 3) PC Assembly provides the ability to monitor photodiode bias current and 4) the feedthru capacitors allow direct connection of DC supply and one if connected to the bias current monitoring circuit.

MANUAL CHANGES NECESSARY TO DOCUMENT THE HP 83440B OPTION H10

UNDER: Specifications and Characteristics

Special HP 83440B Option H10 Performance Specifications:

Measured Frequency Response to 6 GHz, Relative to DC: $\leq$ -3 dB electrical.
This is actual production test line measured value, and does not include $\pm$ 1.5 dB measurement uncertainty.

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Standard Performance Specification:

All notes in HP 83440B/C/D Technical Data Sheet apply.

Time Domain

Conversion Gain (min, into 50 ohm load):
1300 nm: 35 V/W
1550 nm: 32.5 V/W

Frequency Domain

DC Responsivity (min):
1300 NM: 0.70 A/V
1550 nm: 0.65 A/W

Bandwidth:
See "Special Performance Specification" listed above

Noise:
2 uW RMS max, equivalent optical noise power

Dark Curent:
50 nA maximum

Maximum Safe Input Power:
10 mW (Peak) +10 dBm (Peak)

Maximum Operating Input Optical Power (Compression Point):
+2 mW (Peak) +3 dBm (Peak)

Wavelength Spectral Response:
1000 nm – 1600 nm

Add:

Optical Power Monitor Output Pin (OPT MON):

The OPT MON Pin allows the bias current in the photodiode to be monitored. The characteristic output voltage as a function of the current out I_{out} is: 1.0 V/mA

UNDER: General

Change:

The **DC Bias Input** information to read:

Connect +12 V to +15 Vdc supply to the pins labeled: "+12/+15 Vdc" and "GND"

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UNDER: Mechanical

Substitute:

Use the outline drawing of the HP 83440B Option H10 supplied with this manual supplement for the drawing in the manual.

UNDER: CONTENTS

(The HP 83440B H10 is not supplied with any DC bias cables.)

REPLACEABLE PARTS

SERVICE, Replaceable Parts:

Qty	Description	Part Number
1	Mounting Plate	83440-20011
1	Body	83440-20010
1	Stud (p/o Base Plate)	0570-1372
1	Spring	83440-20013
1	PC Assembly	83440-60037
1	Technical Data Sheet	83440-90005
1	Manual Modification	83440-90014
3	Cap Fixed CER 1000pF 200V	0160-2437
2	Screw 440 .375 FLPD	0624-0592
A/R	Wire #24 300 V O (black)	8150-0447
A/R	Wire #24 300 V 2 (red)	8150-0449
A/R	Wire #24 300 V 5 (green)	8150-0452
1	Warning Label	5181-5737
1	ID Label, SP	83440-80003 or 80005
2	Gold Plated Screw	83440-20009
1	Adapter Term. SMA F	1250-2318
1	DC-6 Ghz Detector Component	1GE1-4408

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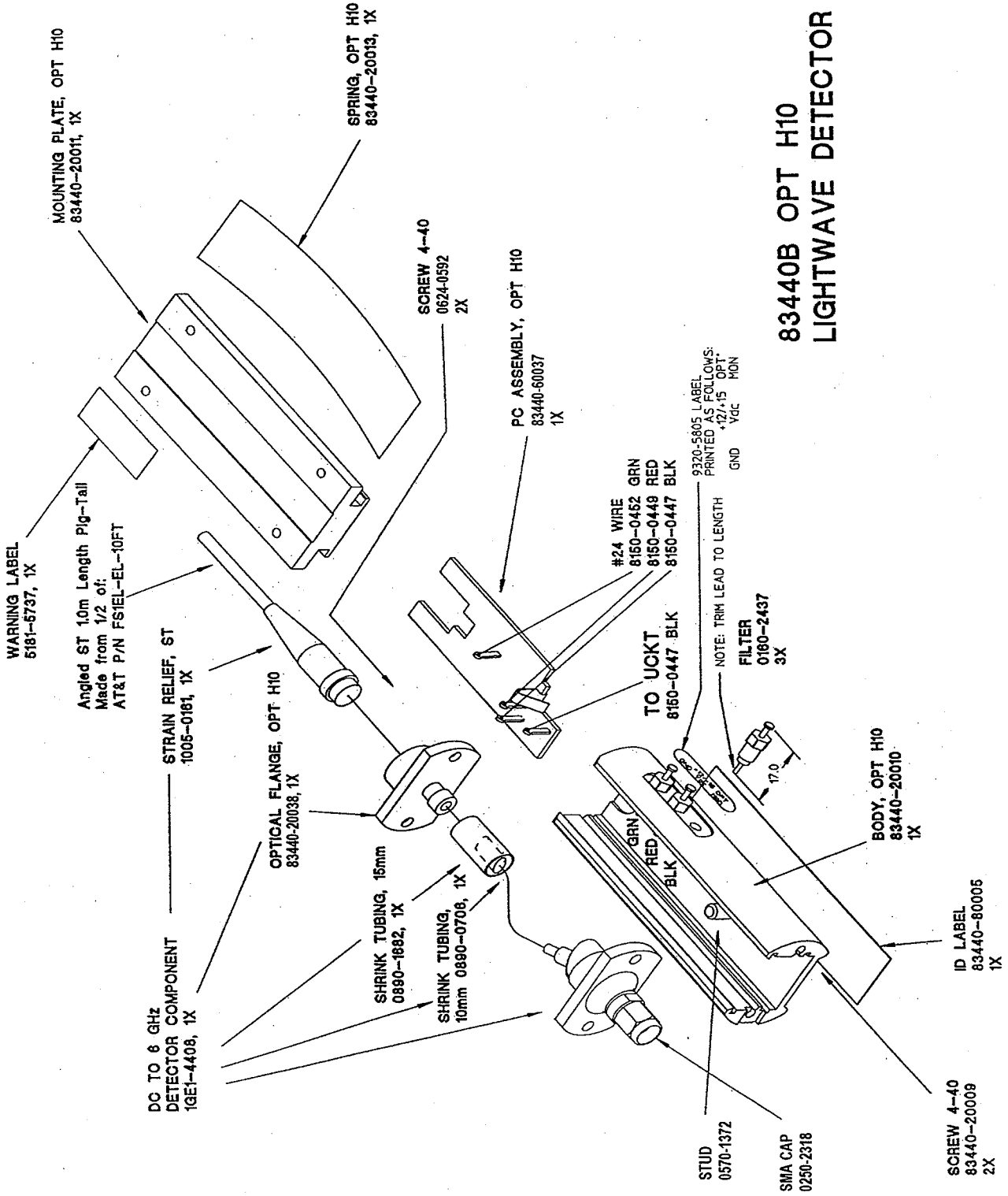


Figure 1. Lightwave Detector Components

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DATA SHEET CHANGES

Data Sheet Identification
Model Number: 83440 B/C/D
Date Printed: March 1993
Part Number: 5091-7422E

ABOUT THIS SUPPLEMENT

Use this supplement to correct your data sheet or to update it for instrument changes that occurred after the data sheet was printed (10/92), "HP 83440B/C/D High-Speed Lightwave Converters, publication number 5091-5536E."

Some material in this supplement should be substituted for material in the data sheet. You can either perform the physical substitution or simply mark your data sheet with reference to appropriate pages in the supplement.

Change instructions are arranged in the data sheet's page-number order. Each instruction is identified by the word "Errata" or with a change number. Errata changes relate to all instruments. Instructions with change numbers relate only to certain instruments. These instruments are identified by serial number or prefix.

CHANGE INSTRUCTIONS

Page 2 Specifications,
Change Specifications:

Instrument:	83440B - Option 050		
Specification		**Change From**	**Change To**
Dark Current		50 nA max, <15 nA typical	Not specified

Page 5 General,
Change General Specifications:

Instrument:	83440B - Option 050		
Specification		**Change From**	**Change To**
Electrical Return Loss		-15 dB, nominal	-15 dB nominal, to 4 GHz

Page 5 General,
Add to Note:

Instrument **83440B/C/D - All Options**

DC Path at RF output : The 83440B/C/D are DC coupled receivers. For proper operation, a DC path to ground is necessary at the RF output.

NOTE

Manual Change supplements are revised as often as necessary to keep manuals and data sheets as current and accurate as possible. Hewlett Packard recommends that you periodically request the latest edition of this supplement. Free copies are available from all HP offices. When requesting copies quote the manual or data sheet identification information from your supplement, or the model number and print date from the title page of the manual

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