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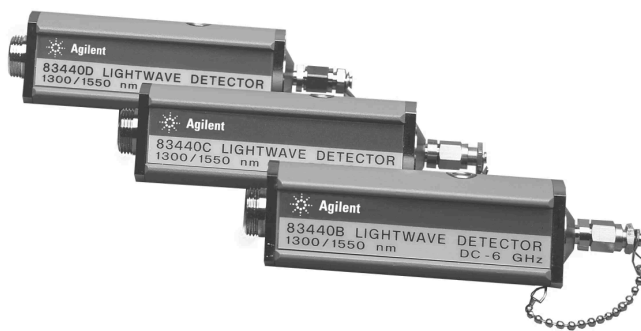
Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 83440C DC-20 GHz Lightwave Converter ,Broad 20 GHz bandwidth (3 dB opt)

The HP 83440C is a hermetically sealed InGaAs lightwave converter (optical-to-electrical detector) in the 83440 family used to display optical waveforms on a high-bandwidth electrical oscilloscope. OEM 83440C product literature lists 1000-1600 nm InGaAs photodiode, 2.4 mm electrical output, and DC-coupled high-speed O/E conversion; bandwidth options in the 83440 family span 6 GHz (83440B) through 20 GHz and 32 GHz-class 83440C configurations. Optical eye and pulse measurements on sampling or real-time oscilloscopes; transmitter waveform fidelity at 2.5-10 Gb/s-class rates depending on installed bandwidth option. Application Rates Class: 2.5 Gb/s to 10 Gb/s optical eyes depending on BW option Hermetic Seal: hermetically sealed photodiode package Polarization: unamplified photodiode (no TIA in basic 83440 converter) Damage Level: see 83440C operating manual maximum optical input



MODEL

**Agilent / Keysight
83440C**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83440C

LISTING

<https://aumictechlabs.com/products/83440c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 83440C is a DC-coupled optical-to-electrical converter delivering direct optical-to-electrical signal conversion across DC to 20 GHz. This unamplified InGaAs photodiode probe mounts directly to instrument front panels, eliminating cable-induced signal degradation

and distortion. The hermetically sealed detector achieves 22 ps pulse response (FWHM) and operates across the 1000 nm to 1600 nm wavelength range, making it ideal for 1300 nm and 1550 nm applications.

Technical Specifications

Bandwidth: DC to 20 GHz (3 dB optical)

Photodiode: Hermetically sealed, unamplified InGaAs PIN-diode

Pulse Response: 22 ps FWHM

Wavelength Range: 1000 nm to 1600 nm

Optical Interface: Agilent universal optical interface; compatible with 9/125 μm single-mode fiber

Electrical Output: 3.5 mm microwave coaxial connector, 50 Ω unterminated

Bias Voltage: +10 V to +15 V DC

Power Consumption: < 18 mVA

Operating Temperature: 0°C to 55°C

Weight: 0.14 kg

Key Features

- Fast 22 ps pulse response minimizes temporal distortion
- Low pulse aberrations for accurate waveform capture
- Integral bias regulation simplifies DC supply requirements
- Captive RF connector cap protects against ESD at RF pin (200 V susceptibility)
- Compact probe form factor for direct instrument integration
- Unamplified detection preserves signal integrity

Typical Applications

- High-speed optical communication system characterization
- Laser output performance testing
- Optical modulator analysis for fiber optic telecommunications

Compatibility & Integration

Mounts directly to oscilloscopes, spectrum analyzers, and network analyzers. DC bias cabling options (83440-60004, 83440-60005, 83440-60006) available for power supply integration. AC-coupled instruments require external bias tee (e.g., Agilent 11612A) unless equipped with 50 Ω termination. Optical connector adapters available for non-standard interfaces.

Features & description

From manufacturer datasheet

Polarization: unamplified photodiode (no TIA in basic 83440 converter)

Damage Level: see 83440C operating manual maximum optical input Responsivity: see 83440C specification table (do not invent A/W) Documentation: HP 83440C lightwave detector operating/product literature Predecessor: 83440A/B lower-bandwidth converters Mounting: converter body with optical connector interface Measurement Domain: time-domain optical waveforms via electrical scope Calibration: factory O/E conversion; confirm optioned bandwidth on the label Notes On Bandwidth: read the option label for warranted 20 GHz vs 32 GHz 83440C path Notes Identity, InGaAs, 1000-1600 nm, 2.4 mm, and DC-coupled O/E from HP 83440C lightwave detector literature. Warranted bandwidth, responsivity, and damage-level numbers belong on the 83440C specification table for the installed option; they are not invented here.

83440C Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Lightwave detector (O/E converter)
Series Family	HP 83440A/B/C lightwave converters
Photodiode	InGaAs
Wavelength Range Class	1000 nm to 1600 nm
Electrical Output Connector	2.4 mm
Coupling	DC-coupled optical-to-electrical conversion
Bandwidth Family 83440B	DC to 6 GHz (sibling)
Bandwidth 83440C Class	DC to 20 GHz class; 32 GHz-class optioned 83440C configurations in OEM listings
Optical Fiber Class	9/125 um single-mode
Form Factor	small lightwave converter module/instrument
Use With	high-bandwidth electrical sampling oscilloscopes
Output Impedance Class	50 ohm electrical output
Application Rates Class	2.5 Gb/s to 10 Gb/s optical eyes depending on BW option
Hermetic Seal	hermetically sealed photodiode package
Polarization	unamplified photodiode (no TIA in basic 83440 converter)
Damage Level	see 83440C operating manual maximum optical input
Responsivity	see 83440C specification table (do not invent A/W)
Documentation	HP 83440C lightwave detector operating/product literature
Predecessor	83440A/B lower-bandwidth converters
Mounting	converter body with optical connector interface
Measurement Domain	time-domain optical waveforms via electrical scope
Calibration	factory O/E conversion; confirm optioned bandwidth on the label
Wavelength range	Class: 1000 nm to 1600 nm
Bandwidth	Family 83440B: DC to 6 GHz (sibling)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes On Bandwidth: read the option label for warranted 20 GHz vs 32 GHz 83440C path	
Notes	
Identity, InGaAs, 1000-1600 nm, 2.4 mm, and DC-coupled O/E from HP 83440C lightwave detector literature.	

Warranted bandwidth, responsivity, and damage-level numbers belong on the 83440C specification table for the installed option; they are not invented here.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.