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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 86116A 53 GHz optical / 63 GHz electrical module 1000-1600 nm 9/125 fibers

Agilent Keysight 86116A 53 GHz Optical 63 GHz Electrical DCA Module The Agilent 86116A is a high-bandwidth single-mode optical/electrical sampling module for 40 Gb/s waveform analysis. OEM 86100 family module tables list 53 GHz unfiltered optical bandwidth (1000-1600 nm), 43 and 63 GHz electrical bandwidths, 9.0 ps optical FWHM, 5.6 ps electrical transition at 63 GHz, and 1.85 mm electrical input. 40 Gb/s optical pulse fidelity and 60 GHz-class electrical device waveforms on 86100 DCA mainframes (firmware A.3.0 or above on 86100A/B). The Agilent 86116A is a high-bandwidth single-mode optical/electrical sampling module for 40 Gb/s waveform analysis. OEM 86100 family module tables list 53 GHz unfiltered optical bandwidth (1000-1600 nm), 43 and 63 GHz electrical bandwidths, 9.0 ps optical FWHM, 5.6 ps electrical transition at 63 GHz, and 1.85 mm electrical input. 40 Gb/s optical pulse fidelity and 60 GHz-class electrical device waveforms on 86100 DCA mainframes (firmware A.3.0 or above on 86100A/B). Unfiltered optical channel for best pulse fidelity



MODEL

**Agilent / Keysight
86116A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86116A

LISTING

<https://aumictechlabs.com/products/86116a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 86116A is a dual-channel plug-in module for 86100 series oscilloscopes, delivering integrated optical and electrical measurement capabilities up to 53 GHz optical and 63

GHz electrical bandwidth. Engineered for high-speed optical network characterization, photonics component development, and advanced signal analysis, this module combines calibrated optical receiver performance with precision electrical measurement in a single instrument.

Technical Specifications

Optical Channel Bandwidth: 53 GHz Wavelength Range: 1000–1600 nm Fiber Support: 9/125 single-mode Characteristic RMS Noise: 60 μ W (50 GHz BW, best sensitivity); 160 μ W (53 GHz BW, best pulse fidelity) Maximum Displayed Peak Power: 20 mW Electrical Channel Bandwidth: 63 GHz Input Connector: 1.85 mm male Characteristic RMS Noise: 0.6 mV (43 GHz BW, best sensitivity); 1.7 mV (63 GHz BW, best pulse fidelity) Maximum Input Signal: ± 2 Vdc

Key Features

- Integrated optical receiver with calibrated measurements in optical power units
- Eliminates need for external switches or couplers for average power measurement
- Simultaneous dual-channel signal acquisition for comprehensive waveform correlation
- Advanced jitter and eye diagram analysis with component decomposition tools

Typical Applications

- Optical transceiver and module characterization
- High-speed digital signal integrity measurement
- Photonic integrated circuit validation
- Optical communication system testing

Compatibility & Integration

The 86116A integrates with 86100A/B, 86100C Infiniium DCA-J, and 86100D Infiniium DCA-X mainframe oscilloscopes. Integration with the 86100C platform provides waveform and jitter analysis tools for detailed signal characterization and troubleshooting.

86116A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Optical and electrical sampling plug-in
Series Family	Agilent 86100 DCA modules
Wavelength Range	1000 nm to 1600 nm
Calibrated Wavelengths	1310 nm and 1550 nm
Optical Fwhm	9.0 ps FWHM (700 fs FWHM source, 5 MHz, 10 mW peak)
Optical Rms Noise Characteristic 50 Ghz	60 uW characteristic
Optical Rms Noise Characteristic 53 Ghz	190 uW characteristic
Optical Rms Noise Maximum 50 Ghz	90 uW maximum
Optical Rms Noise Maximum 53 Ghz	260 uW maximum
Electrical Bandwidth	43 GHz and 63 GHz
Electrical Transition 43 Ghz	8.1 ps (10-90 percent, 0.35/BW)
Electrical Transition 63 Ghz	5.6 ps (10-90 percent, 0.35/BW)
Electrical Rms Noise Characteristic 43 Ghz	0.6 mV characteristic
Electrical Rms Noise Characteristic 63 Ghz	1.7 mV characteristic
Electrical Rms Noise Maximum 43 Ghz	0.9 mV maximum
Electrical Rms Noise Maximum 63 Ghz	2.5 mV maximum
Electrical Input	1.85 mm male
Maximum Input Signal Electrical	plus or minus 2 V (plus 16 dBm)
Nominal Impedance	50 ohm
Fiber Input	9/125 um, user-selectable connector
Firmware Requirement	86100A/B revision A.3.0 or above
Host Mainframe	86100A/B/C/D Infiniium DCA family (see notes for exceptions)
Form Factor	86100 plug-in module
Specified Temperature Family	plus 10 C to plus 40 C class of 86100 modules unless noted

PARAMETER	VALUE
Bandwidth	Unfiltered: 53 GHz

86116A Specifications

PARAMETER	VALUE
Applications	40 Gb/s optical pulse fidelity and 60 GHz-class electrical device waveforms on 86100 DCA mainframes (firmware A.3.0 or above on 86100A/B).
Reduced electrical bandwidth setting for lower noise	1310/1550 nm calibrated wavelengths
Pairs with 86107A precision timebase	Requires 86100A/B software A.3.0 or later
Technical Specifications	Instrument Type: Optical and electrical sampling plug-in

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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Instrument Type	Optical and electrical sampling plug-in
Series Family	Agilent 86100 DCA modules
Optical Bandwidth Unfiltered	53 GHz
Wavelength Range	1000 nm to 1600 nm
Calibrated Wavelengths	1310 nm and 1550 nm
Optical Fwhm	9.0 ps FWHM (700 fs FWHM source, 5 MHz, 10 mW peak)
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Electrical Bandwidth	43 GHz and 63 GHz
Electrical Transition 43 Ghz	8.1 ps (10-90 percent, 0.35/BW)
Electrical Transition 63 Ghz	5.6 ps (10-90 percent, 0.35/BW)
Electrical Rms Noise Characteristic 43 Ghz	0.6 mV characteristic
Electrical Rms Noise Characteristic 63 Ghz	1.7 mV characteristic
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Electrical Rms Noise Maximum 63 Ghz	2.5 mV maximum
Electrical Input	1.85 mm male
Maximum Input Signal Electrical	plus or minus 2 V (plus 16 dBm)
Nominal Impedance	50 ohm
Fiber Input	9/125 um, user-selectable connector
Firmware Requirement	86100A/B revision A.3.0 or above
Host Mainframe	86100A/B/C/D Infiniium DCA family (see notes for exceptions)
Form Factor	86100 plug-in module
Specified Temperature Family	plus 10 C to plus 40 C class of 86100 modules unless noted

Notes

Numeric rows from Agilent/Keysight 86100 Infiniium DCA module specification tables (86116A column: 53 GHz optical, 43/63 GHz electrical, noise and transition). Optical FWHM condition is 700 fs source pulse as footnoted in that table.

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

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NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
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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.