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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 86111A 3 GHz dual channel amplified optical module 750-860 nm

Agilent Keysight 86111A Dual 2.85 GHz Short Wavelength Optical DCA Module The Agilent 86111A is a dual short-wavelength optical sampling module for 155 Mb/s to 3.125 Gb/s signals. OEM 86100 dual-optical tables list 2.85 GHz unfiltered optical bandwidth, 750-860 nm, 850 nm calibration, minus 17 dBm sensitivity, 160 ps unfiltered transition, 1.5 uW characteristic RMS noise, and 62.5 um fiber. 850 nm VCSEL transceiver eye and mask tests at Gigabit Ethernet and Fibre Channel rates on 86100 DCA mainframes. The Agilent 86111A is a dual short-wavelength optical sampling module for 155 Mb/s to 3.125 Gb/s signals. OEM 86100 dual-optical tables list 2.85 GHz unfiltered optical bandwidth, 750-860 nm, 850 nm calibration, minus 17 dBm sensitivity, 160 ps unfiltered transition, 1.5 uW characteristic RMS noise, and 62.5 um fiber. 850 nm VCSEL transceiver eye and mask tests at Gigabit Ethernet and Fibre Channel rates on 86100 DCA mainframes. 750-860 nm multimode short-wavelength band Options 201/202 dual-channel configurations in the module table



MODEL

**Agilent / Keysight
86111A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86111A

LISTING

<https://aumictechlabs.com/products/86111a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 86111A is a dual-channel amplified optical module for high-speed optical signal characterization in the 750–860 nm wavelength band. Operating at 3 GHz bandwidth, it

enables simultaneous measurements across multiple optical channels, eliminating sequential testing requirements and improving measurement throughput for parallel optic component validation.

Technical Specifications
Bandwidth: 3 GHz
Wavelength Range: 750–860 nm
Channels: Dual optical channels
Switchable Filters: 2 filters
Filtered Data Rates: 155 Mb/s, 622 Mb/s

Key Features
Dual-channel architecture supports concurrent measurement of multiple optical paths, reducing test cycle time for network equipment and optical component development. Two switchable filters provide selection between 155 Mb/s and 622 Mb/s filtered data rates for signal conditioning across common optical network speeds. Amplified photodetection delivers direct optical-to-electrical conversion with gain optimization for weak-signal applications.

Typical Applications
Optical network interface testing and characterization
Multi-channel parallel optical component validation
High-speed optical signal analysis for transceiver and module development
Optical receiver sensitivity and eye-diagram measurements

Compatibility & Integration
The 86111A integrates directly into Agilent DCA Mainframes of the 86100x Series, including the 86100A/B, 86100C, and 86100D Infiniium DCA platforms. Module insertion into a compatible mainframe provides measurement control, data acquisition, and analysis within the DCA software environment.

86111A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Dual optical sampling plug-in
Series Family	Agilent 86100 DCA modules
Channel Count	2 optical
Wavelength Range	750 nm to 860 nm
Calibrated Wavelength	850 nm
Optical Sensitivity	minus 17 dBm
Transition Time Unfiltered	160 ps (10-90 percent, 0.48/BW optical)
Rms Noise Characteristic	1.5 uW characteristic
Rms Noise Maximum	2.5 uW maximum
Fiber Type	62.5/125 um multimode, user selectable connector
Target Rates	155 Mb/s to 3125 Mb/s
Average Power Monitor	minus 30 dBm to minus 2.2 dBm specified operating range
Cw Offset Range	plus 0.2 mW to minus 0.6 mW (referenced two divisions from screen bottom)
Maximum Nondestruct Average	0.4 mW (minus 4 dBm)
Maximum Nondestruct Peak	10 mW (plus 10 dBm)
Input Return Loss	20 dB (HMS-10 connector, fully filled fiber)
Factory Calibrated Accuracy Mm	plus or minus 10 percent plus or minus 100 nW plus connector uncertainty (20 C to 30 C)
Sibling 86111U Bandwidth	15 GHz unfiltered, minus 7.5 dBm sensitivity
Sibling 86113A	2.85 GHz long-wavelength 1000-1600 nm dual optical
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
Bandwidth	Unfiltered: 2.85 GHz
Return loss	20 dB (HMS-10 connector, fully filled fiber)

86111A Specifications

PARAMETER	VALUE
Applications	850 nm VCSEL transceiver eye and mask tests at Gigabit Ethernet and Fibre Channel rates on 86100 DCA mainframes.
Optimized for 155 Mb/s to 3.125 Gb/s	Options 201/202 dual-channel configurations in the module table
Technical Specifications	Instrument Type: Dual optical 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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Series Family	Agilent 86100 DCA modules
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Optical Bandwidth Unfiltered	2.85 GHz
Wavelength Range	750 nm to 860 nm
Calibrated Wavelength	850 nm
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Rms Noise Maximum	2.5 uW maximum
Fiber Type	62.5/125 um multimode, user selectable connector
Target Rates	155 Mb/s to 3125 Mb/s
Option 201 Filters: 155 Mb/s and 622 Mb/s reference-receiver filters	
Option 202 Filters: 1.063 Gb/s and 1.25 Gb/s reference-receiver filters	
Specifications	
PARAMETER	VALUE
Average Power Monitor	minus 30 dBm to minus 2.2 dBm specified operating range
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PARAMETER	VALUE
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 dual-mode optical module specification table (86111A: 2.85 GHz, 750-860 nm, minus 17 dBm, 160 ps, 1.5 uW). 86111U is a different 15 GHz short-wavelength module.

Ordering Information

OPTION	DESCRIPTION
Option 201	Filters: 155 Mb/s and 622 Mb/s reference-receiver filters
Option 202	Filters: 1.063 Gb/s and 1.25 Gb/s reference-receiver filters

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

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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.