


Aumictech

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 83430A Lightwave Source

Agilent Keysight 83430A Lightwave Digital Source up to 2.5 Gb/s The Agilent 83430A is an SDH/SONET-compliant DFB lightwave digital source converting digital or analog inputs to a preset optical output through STM-16/OC-48 (2.488 Gb/s). OEM 83430A product overview lists wavelength options (1310 plus or minus 20 nm or 1550-window ITU channels plus or minus 1 nm), 10 dB plus or minus 1 dB extinction ratio, 1.3 mW minimum peak coupled power in digital mode, and 50-2500 Mb/s digital range. Receiver sensitivity, dispersion penalty, and WDM channel testing of TDM/WDM optical receivers from OC-1 through OC-48. The Agilent 83430A is an SDH/SONET-compliant DFB lightwave digital source converting digital or analog inputs to a preset optical output through STM-16/OC-48 (2.488 Gb/s). OEM 83430A product overview lists wavelength options (1310 plus or minus 20 nm or 1550-window ITU channels plus or minus 1 nm), 10 dB plus or minus 1 dB extinction ratio, 1.3 mW minimum peak coupled power in digital mode, and 50-2500 Mb/s digital range. Receiver sensitivity, dispersion penalty, and WDM channel testing of TDM/WDM optical receivers from OC-1 through OC-48.



MODEL

**Agilent / Keysight
83430A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83430A

LISTING

<https://aumictechlabs.com/products/83430a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 83430A is a directly modulated DFB lightwave source engineered for high-speed optical receiver and system characterization. It delivers SDH/SONET-compliant digital and

analog modulation across data rates from OC-1 (52 Mb/s) to OC-48/STM-16 (2.488 Gb/s), supporting TDM and WDM test applications. The 83430A functions as both a standalone optical source and as a core instrument in integrated test benches for sensitivity analysis, dispersion measurement, and transceiver waveform validation.

Technical Specifications

Laser Type: DFB directly modulated

Wavelength: 1309.0 nm and 1309.6 nm; user-selectable with ± 1.25 nm adjustment or ± 1 nm center wavelength

Data Rate Support: 52 Mb/s (OC-1), 155 Mb/s (OC-3/STM-1), 622 Mb/s (OC-12/STM-4), 2.488 Gb/s (OC-48/STM-16)

Optical Output Power: 1.35 mW average (AC digital In); 0.7 mW average (Analog In); +8.1 dBm maximum (6.5 mW)

Modulation Bandwidth: Up to 1.3 GHz (AC digital In); up to 70 MHz (Analog In)

Modulation Inputs: Analog In (AC coupled), Digital In (AC coupled), Digital In (DC coupled)

Extinction Ratio: User adjustable

Laser Classification: IEC Class 1

Optical Interface: FC/PC (standard Agilent interface)

Key Features

- Directly modulated architecture minimizes setup complexity for standard optical testing
- Adjustable extinction ratio enables optimization for receiver sensitivity and jitter tolerance measurements
- Multiple modulation input configurations support both digital and analog test signals
- User-selectable wavelengths with fine adjustment capability accommodate fiber and component variations

Typical Applications

- Optical receiver sensitivity and power penalty characterization
- Dispersion testing on single-mode fiber links
- Transceiver waveform analysis including filtered conformance masks and eye diagrams
- Jitter tolerance assessment of high-speed receivers
- Digital, WDM, and analog signal validation up to 2.5 Gb/s

Compatibility & Integration

The 83430A integrates with Agilent/Keysight measurement systems including the 71603A Error Performance Analyzer, 83446A Lightwave Clock/Data Receiver, and 83480A Digital Communications Analyzer for end-to-end optical system characterization.

83430A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Lightwave digital source (modulatable DFB)
Series Family	Agilent 83430A
Digital Bit Rate Range	50 to 2500 Mb/s
Supported Sdh Sonet Rates	52, 155, 622, and 2488 Mb/s (STM-0/OC-1 through STM-16/OC-48)
Wavelength Adjustment Range	plus or minus 1.25 nm (plus or minus 1.8 nm typical)
Extinction Ratio	10 dB plus or minus 1 dB
Extinction Ratio Adjustment	less than 8.2 dB to greater than 13 dB
Peak Coupled Power Digital	1.3 mW minimum (plus 1 dBm)
Analog Ac Coupled Input	0.1 to 2500 MHz, inverting, 2 Vpp max, 50 ohm
Digital Ac Coupled Input	50 to 2500 Mb/s, non-inverting, 0.7 to 1.5 Vpp, 50 ohm
Digital Dc Coupled Input	0 to 2500 Mb/s, non-inverting, ECL levels, 50 ohm / minus 2 V
Digital Threshold Adjustment	plus or minus 0.2 V
Fiber	9/125 um single-mode
Laser Safety	21 CFR 1040.10 Class 1, IEC 825-1 Class 1
Line Power	90 to 132 V or 198 to 264 V AC, 47 to 63 Hz, 50 W
Operating Temperature	0 to 55 C
Storage Temperature	minus 40 to 70 C
Weight	3.6 kg (8 lb)
Dimensions	102 mmHx 213 mmWx 368 mmDForm Factor: System II half-width chassis

83430A Specifications

PARAMETER	VALUE
Applications	Receiver sensitivity, dispersion penalty, and WDM channel testing of TDM/WDM optical receivers from OC-1 through OC-48.
Wavelength options 130/155/350/390/430/462/534/570/605	Class 1 laser
Technical Specifications	Instrument Type: Lightwave digital source (modulatable DFB)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 to 70 C
Operating temperature	0 to 55 C
Operating Temperature	0 to 55 C
Weight	3.6 kg (8 lb)
Dimensions	102 mmHx 213 mmWx 368 mmDForm Factor: System II half-width chassis Notes Numeric rows from Agilent 83430A Lightwave Digital Source product overview specification table (wavelength options, ER, 1.3 mW peak, modulation inputs, environmental). Average analog-mode coupled power is on that same table footnote 7.

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	
Specifications	
PARAMETER	VALUE
Wavelength Adjustment Range	plus or minus 1.25 nm (plus or minus 1.8 nm typical)
Extinction Ratio	10 dB plus or minus 1 dB
Extinction Ratio Adjustment	less than 8.2 dB to greater than 13 dB
Peak Coupled Power Digital	1.3 mW minimum (plus 1 dBm)
Analog Ac Coupled Input	0.1 to 2500 MHz, inverting, 2 Vpp max, 50 ohm
Digital Ac Coupled Input	50 to 2500 Mb/s, non-inverting, 0.7 to 1.5 Vpp, 50 ohm
Digital Dc Coupled Input	0 to 2500 Mb/s, non-inverting, ECL levels, 50 ohm / minus 2 V
Digital Threshold Adjustment	plus or minus 0.2 V
Fiber	9/125 um single-mode
Laser Safety	21 CFR 1040.10 Class 1, IEC 825-1 Class 1
Line Power	90 to 132 V or 198 to 264 V AC, 47 to 63 Hz, 50 W
Operating Temperature	0 to 55 C
Storage Temperature	minus 40 to 70 C
Weight	3.6 kg (8 lb)
Dimensions	102 mm H x 213 mm W x 368 mm D
Form Factor	System II half-width chassis
Specifications	
PARAMETER	VALUE
Instrument Type	Lightwave digital source (modulatable DFB)
Series Family	Agilent 83430A
Digital Bit Rate Range	50 to 2500 Mb/s
Supported Sdh Sonet Rates	52, 155, 622, and 2488 Mb/s (STM-0/OC-1 through STM-16/OC-48)
Option 130 Wavelength: 1310 nm plus or minus 20 nm	
Option 155 Wavelength: 1550 nm plus or minus 1 nm	
Option 350 Wavelength: 1535 nm plus or minus 1 nm	
Specifications	

PARAMETER	VALUE
Wavelength Adjustment Range	plus or minus 1.25 nm (plus or minus 1.8 nm typical)
Extinction Ratio	10 dB plus or minus 1 dB
Extinction Ratio Adjustment	less than 8.2 dB to greater than 13 dB
Peak Coupled Power Digital	1.3 mW minimum (plus 1 dBm)
Analog Ac Coupled Input	0.1 to 2500 MHz, inverting, 2 Vpp max, 50 ohm
Digital Ac Coupled Input	50 to 2500 Mb/s, non-inverting, 0.7 to 1.5 Vpp, 50 ohm
Digital Dc Coupled Input	0 to 2500 Mb/s, non-inverting, ECL levels, 50 ohm / minus 2 V
Digital Threshold Adjustment	plus or minus 0.2 V
Fiber	9/125 um single-mode
Laser Safety	21 CFR 1040.10 Class 1, IEC 825-1 Class 1
Line Power	90 to 132 V or 198 to 264 V AC, 47 to 63 Hz, 50 W
Operating Temperature	0 to 55 C
Storage Temperature	minus 40 to 70 C
Weight	3.6 kg (8 lb)
Dimensions	102 mmHx 213 mmWx 368 mmDForm Factor: System II half-width chassis

Notes

Numeric rows from Agilent 83430A Lightwave Digital Source product overview specification table (wavelength options, ER, 1.3 mW peak, modulation inputs, environmental). Average analog-mode coupled power is on that same table footnote 7.

Ordering Information

OPTION	DESCRIPTION
Option 130	Wavelength: 1310 nm plus or minus 20 nm
Option 155	Wavelength: 1550 nm plus or minus 1 nm
Option 350	Wavelength: 1535 nm plus or minus 1 nm

Laser Safety: 21 CFR 1040.10 Class 1, IEC 825-1 Class 1 Line Power: 90 to 132 V or 198 to 264 V AC, 47 to 63 Hz, 50 W Operating Temperature: 0 to 55 C Storage Temperature: minus 40 to 70 C Weight: 3.6 kg (8 lb) Dimensions: 102 mmHx 213 mmWx 368 mmD Form Factor: System II half-width chassis Notes Numeric rows from Agilent 83430A Lightwave Digital Source product overview specification table (wavelength options,

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
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.