


Aumictech

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81492A – Optical Head

Keysight 81492A Optical Reference Transmitter Module The Agilent/Keysight 81492A is a single-mode electrical-to-optical reference transmitter for the lightwave measurement system platform. It delivers clean NRZ and PAM4 eyes up to 56 Gbaud NRZ and 53 Gbaud PAM4 with internal 1310 nm and 1550 nm lasers plus an external optical input for tunable sources. IEEE 802.3 stressed-eye optical receiver compliance, optical arbitrary waveform generation with AWGs, and general transmission tests with external pattern generators. The Agilent/Keysight 81492A is a single-mode electrical-to-optical reference transmitter for the lightwave measurement system platform. It delivers clean NRZ and PAM4 eyes up to 56 Gbaud NRZ and 53 Gbaud PAM4 with internal 1310 nm and 1550 nm lasers plus an external optical input for tunable sources. IEEE 802.3 stressed-eye optical receiver compliance, optical arbitrary waveform generation with AWGs, and general transmission tests with external pattern generators. NRZ to 56 Gbaud and PAM4 to 53 Gbaud class



MODEL

**Agilent / Keysight
81492A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81492A

LISTING

<https://aumictechlabs.com/products/81492a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 81492A is a reference transmitter optical head that functions as a universal single-mode electro-optical converter for high-speed optical testing and measurement. It generates NRZ and PAM4 signals up to 56 Gbaud with excellent eye quality, supporting IEEE 802.3 compliance testing for 10, 40, 100, and 400GBASE standards. The module's separated signal source and

modulator architecture enables zero-chirp modulation, delivering repeatable and reproducible measurements that reduce production test margins and improve device specifications.

Technical Specifications

Signal Types: NRZ and PAM4

Maximum Baud Rate: 56 Gbaud

Electro-Optical Bandwidth: 40 GHz typical at 1310 nm

Rise/Fall Time: < 9 ps typical

Jitter: < 400 ps RMS or < 6.5 ps peak-to-peak typical

Transmitter Dispersion Eye Closure (NRZ): < 1.5 typical at 53.125 Gb/s, 1310 nm

Transmitter Dispersion Eye Closure (PAM4): < 2.4 typical at 53.125 Gbaud, 1310 nm; < 2.1 typical at 53.125 Gbaud, 1550 nm

Optical Wavelengths: 1310 nm and 1550 nm internal lasers with external tunable laser input and dual-wavelength switching capability

Extinction Ratio: Wide range for maximum test coverage

Key Features

- Zero-chirp modulation through separated signal source and modulator design
- Dual-wavelength operation with remote or manual switching between 1310 nm and 1550 nm
- Automated bias-point and power control when integrated into LMS mainframe
- Remote SCPI control and rapid test reconfiguration
- Front-panel active button for laser activation/deactivation
- Password-protected laser unlock functionality via mainframe

Compatibility & Integration

- Integrates into Keysight LMS mainframe platform
- Compatible with Keysight Optical Receiver Stress Test solutions

Full IEEE 802.3 stressed eye test compliance

Laser sources comply with 21 CFR 1040.10 and WEEE Directive (2002/96/EC)

Fast signal calibration and optimization through Keysight automation software

Environmental Storage and Shipping Temperature: -40 °C to +70 °C

81492A Characteristics / Specifications

PARAMETER	VALUE
Model	81492A
Instrument Type	optical reference transmitter module
Fiber Type Class	single mode
Internal Laser Wavelengths	1310 nm and 1550 nm
External Optical Input	supported for tunable laser sources
Maximum Baud Rate Nrz Class	56 Gbaud
Maximum Baud Rate Pam4 Class	53 Gbaud
Modulation Architecture	external modulator separated from source for zero chirp
Extinction Ratio Range	wide ER range per OEM reference transmitter design
Host Platform Class	8163B 8164B 8166B LMS mainframes
Remote Control	SCPI
Bias Control	automated bias point control
Power Control	automated optical power control
Compliance Role	reference transmitter for IEEE 802.3 stressed eye tests
Dual Wavelength Switching	remote or manual without module swap
Configuration Class 1	single mode dual laser configuration class
Companion Receiver Stress Solutions	Keysight optical receiver stress test suites
Eye Quality Goal	excellent NRZ and PAM4 eye for compliance
Package Style	LMS plug in module
Wavelength Agility With External Input	tunable source dependent
Signal Source Separation	source and modulator separated
Linearity Class	linear transmission for AWG driven optical AWG use
Standards Coverage Class	10G 40G 100G 400GBASE optical stressed eye class
Fiber type	Class: single mode

81492A Specifications

PARAMETER	VALUE
Keysight 81492A Optical Reference Transmitter Module	Overview
Key Features	NRZ to 56 Gbaud and PAM4 to 53 Gbaud class
Technical Specifications	Model: 81492A

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
Model	81492A
Instrument Type	optical reference transmitter module
Fiber Type Class	single mode
Internal Laser Wavelengths	1310 nm and 1550 nm
External Optical Input	supported for tunable laser sources
Maximum Baud Rate Nrz Class	56 Gbaud
Maximum Baud Rate Pam4 Class	53 Gbaud
Modulation Architecture	external modulator separated from source for zero chirp
Extinction Ratio Range	wide ER range per OEM reference transmitter design
Host Platform Class	8163B 8164B 8166B LMS mainframes
Remote Control	SCPI
Bias Control	automated bias point control
Power Control	automated optical power control
Compliance Role	reference transmitter for IEEE 802.3 stressed eye tests
Dual Wavelength Switching	remote or manual without module swap
Configuration Class 135	single mode dual laser configuration class
Companion Receiver Stress Solutions	Keysight optical receiver stress test suites
Eye Quality Goal	excellent NRZ and PAM4 eye for compliance
Package Style	LMS plug in module
Wavelength Agility With External Input	tunable source dependent
Signal Source Separation	source and modulator separated
Linearity Class	linear transmission for AWG driven optical AWG use
Standards Coverage Class	10G 40G 100G 400GBASE optical stressed eye class
Notes	
Capability rows from Keysight 81492A Reference Transmitter data sheet and 81491A/81492A reference transmitter	

module literature. Detailed electrical drive levels and ER tables are configuration dependent on the installed configuration.

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 15, 2026

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