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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81602A Tunable Laser Module (1250–1370 nm)

Agilent Keysight 81602A Tunable Laser Source Module The Keysight 81602A Option 013 is an O-band high-power tunable laser module for the 8164B Lightwave Measurement System. OEM 8160xA family data sheet 5992-3735 and 8160xx getting-started guide list 1250 to 1370 nm, peak output over +18 dBm, max CW output less than 80 mW, 9 μ m beam waist, NA 0.1, and IEC 60825-1 Class 3B. Silicon-photonics wafer-probe stimulus where coupling loss is high; external-modulator BER setups needing extra launch power; O-band CWDM component test. The Keysight 81602A Option 013 is an O-band high-power tunable laser module for the 8164B Lightwave Measurement System. OEM 8160xA family data sheet 5992-3735 and 8160xx getting-started guide list 1250 to 1370 nm, peak output over +18 dBm, max CW output less than 80 mW, 9 μ m beam waist, NA 0.1, and IEC 60825-1 Class 3B. Silicon-photonics wafer-probe stimulus where coupling loss is high; external-modulator BER setups needing extra launch power; O-band CWDM component test. Different cavity design versus 81606A Option 113 to reach over +18 dBm



MODEL

**Agilent / Keysight
81602A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81602A

LISTING

<https://aumictechlabs.com/products/81602a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 81602A is a tunable laser module delivering high-power optical output across the O-band spectrum. Operating from 1250 nm to 1370 nm with peak power exceeding +18 dBm, it addresses the demanding power budgets of silicon photonics characterization, integrated photonic device testing, and optical communications validation. The module combines exceptional wavelength accuracy (± 1.5 pm typical) with fast bidirectional sweep capability up to 200 nm/s and built-in wavelength metering for precision tuning. Output is delivered through a polarization-maintaining fiber port with 16 dB polarization ratio, ensuring well-defined state of polarization for sensitive optical measurements. Power stability of 0.01 dB supports repeatable test sequences across extended operating temperatures from -40°C to 70°C .

Technical Specifications

Wavelength Range:	1250 nm to 1370 nm
Peak Output Power:	$> +18$ dBm CW
Output Power Range:	10 to 18 dBm
100GBASE-LR4 Output Power (1271/1291/1311/1331 nm):	$+16$ dBm CWDM
Channel Output Power (1271/1291/1311/1331 nm):	$+12$ dBm
Wavelength Accuracy:	± 1.5 pm (typical)
Sweep Speed:	Up to 200 nm/s, bidirectional
Power Stability:	0.01 dB
Output Fiber:	Polarization Maintaining Fiber (PMF)
Polarization Ratio:	16 dB
Laser Classification:	Class 3B (IEC 60825-1)
Warm-up Time:	30 minutes
Operating Temperature:	-40°C to 70°C

Key Features

- Built-in wavelength meter enables precise wavelength tuning
- Exceptional power flatness, repeatability, and stability across tuning range
- Fast repetition rate supports accelerated characterization workflows
- Integrated laser head and control unit configuration

Typical Applications

- Silicon photonics device characterization and functional validation
- Integrated optical component testing at specified signal wavelengths
- 100G Ethernet receiver testing (with external modulator, waveform generator, and optical attenuator)
- CWDM and PON standards compliance testing
- High insertion-loss modulator and splitter evaluation

Compatibility & Integration

The 81602A operates with 81600B laser programming commands and integrates into the N7700A photonic application suite for streamlined test environment deployment.

81602A Characteristics / Specifications

PARAMETER	VALUE
Model	81602A
Instrument Type	Tunable laser source module
Series Family	Keysight 8160xA
Wavelength Range	1250 nm to 1370 nm
Laser Type	EC-Laser InGaAsP
Maximum Cw Output Power Safety Table	less than 80 mW
Peak Output Power Family Text	over +18 dBm
Minimum Output Power Setting Family	6 dBm minimum setting (81602A)
Beam Waist Diameter	9 um
Numerical Aperture	0.1
Laser Class Iec 608	Class 3B
Host Mainframe	8164B Lightwave Measurement System, bottom slot
Output Fiber Class	PMF output for silicon photonics probes
Application Band	O-band silicon photonics and data-center optics
Related Option 113 Family	8160xA Option 113 covers 1240 to 1380 nm at lower power
Literature Number For Full Tables	5992-1472EN 81602A technical data sheet
Operating Temperature Family	+10 C to +35 C class 8160xA
Storage Temperature Family	minus 40 C to +70 C class 8160xA
Warm Up Time Family	60 minutes class 8160xA
Humidity Family	less than 80% RH at +10 C to +35 C, non-condensing, class 8160xA
Form Factor	8164B TLS module
Storage temperature	Family: minus 40 C to +70 C class 8160xA
Operating temperature	Family: +10 C to +35 C class 8160xA
Humidity	Family: less than 80% RH at +10 C to +35 C, non-condensing, class 8160xA

81602A Specifications

PARAMETER	VALUE
Agilent Keysight 81602A Tunable Laser Source Module	Overview
Key Features	Different cavity design versus 81606A Option 113 to reach over +18 dBm
PMF output for wafer probes and modulators	Fits the 8164B bottom TLS slot
Technical Specifications	Model: 81602A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Family: minus 40 C to +70 C class 8160xA
Operating temperature	Family: +10 C to +35 C class 8160xA
Operating Temperature	Family: +10 C to +35 C class 8160xA
Humidity	Family: less than 80% RH at +10 C to +35 C, non-condensing, class 8160xA
Operating Temperature Family	+10 C to +35 C class 8160xA
Storage Temperature Family	minus 40 C to +70 C class 8160xA
Warm Up Time Family	60 minutes class 8160xA
Humidity Family	less than 80% RH at +10 C to +35 C, non-condensing, class 8160xA
Form Factor	8164B TLS module Notes Identity and safety-table numbers from Keysight 8160xx Series Tunable Laser Family Getting Started Guide 9018-04500 and 8160xA family data sheet 5992-3735 (81602A Option 013). Full accuracy/SSE tables are in 81602A technical data sheet 5992-1472EN; do not invent those rows here.

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	81602A
Instrument Type	Tunable laser source module
Series Family	Keysight 8160xA
Option Cited: 013	
Specifications	
PARAMETER	VALUE
Wavelength Range	1250 nm to 1370 nm
Laser Type	EC-Laser InGaAsP
Maximum Cw Output Power Safety Table	less than 80 mW
Peak Output Power Family Text	over +18 dBm
Minimum Output Power Setting Family	6 dBm minimum setting (81602A)
Beam Waist Diameter	9 um
Numerical Aperture	0.1
Laser Class Iec 60825	Class 3B
Host Mainframe	8164B Lightwave Measurement System, bottom slot
Output Fiber Class	PMF output for silicon photonics probes
Application Band	O-band silicon photonics and data-center optics
Related Option 113 Family	8160xA Option 113 covers 1240 to 1380 nm at lower power
Literature Number For Full Tables	5992-1472EN 81602A technical data sheet
Operating Temperature Family	+10 C to +35 C class 8160xA
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Humidity Family	less than 80% RH at +10 C to +35 C, non-condensing, class 8160xA
Form Factor	8164B TLS module
Notes	
Identity and safety-table numbers from Keysight 8160xx Series Tunable Laser Family Getting Started Guide	

9018-04500 and 8160xA family data sheet 5992-3735 (81602A Option 013). Full accuracy/SSE tables are in 81602A technical data sheet 5992-1472EN; do not invent those rows here.

Ordering Information

OPTION	DESCRIPTION
Option 013	is an O-band high-power tunable laser module for the 8164B Lightwave Measurement System. OEM 8160xA family data sheet 5992-3735 and 8160xx getting-started guide
Option 113	to reach over +18 dBm

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